

QUALITATIVE FEASIBILITY STUDY OF VISUAL INSPECTION OF ACETIC ACID (VIA)

FOR THE PREVENTION OF CERVICAL CANCER

IN THREE DISTRICT HOSPITALS IN ZIMBABWE



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ABSTRACT

Background: Cervical cancer is the most common cancer in Zimbabwe due to the high prevalence of Human Papillomavirus (HPV). HPV has been causally related to cervical cancer and the progress of this HPV-associated cancer is more rapid in HIV-positive women than in HIV-negative women. With a prevalence of 14.7% of people living with HIV, the impact of cervical carcinoma is severe. Implementation of screening methods in low-resource countries has led to a reduction of 56% in cervical cancer mortality. Visual Inspection with Acetic acid (VIA) screen-and-treat approach turned out to be a low-cost and effective method, and it allows a single-visit-approach. Although acceptability of VIA is high, perspectives of women should be taken into account to accommodate conditions for as women identified as relevant for their health behaviour.

Objective: The aim was to understand the intentions of women and how they overcome barriers associated with VIA screen-and-treat approach for future implementation in three Zimbabwean communities, by using a qualitative study approach.

Methods: Seven focus group discussions were conducted in three different hospital settings and groups differed in socioeconomic status, religious preference, profession, age and geographical spread. Predominantly women participated and all were sexually active.

Results: A thematic framework consisted for 5 prominent themes after two phases of coding and analysing. We identified one leading theme health education and four themes that consisted of: acceptability of the VIA implementation, awareness of cervical cancer, support and traditional healing. These themes address identified barriers, motivations and unravelled perceptions of Zimbabweans regarding the future implementation.

Conclusion: This study identified barriers and motivations that have led to recommendations for future implementation of VIA screen-and-treat in three hospital settings in Zimbabwe. The implementation program should focus on offering health education to everyone involved, with special intention to the husbands and religious leaders. The participants believe that after informing all involved, the program would be highly accepted and embraced for a successful and sustainable implementation.

INTRODUCTION

Cancer of the cervix causes the highest cancer mortality rate in women living in Sub-Saharan Africa (SSA) while it is known that it is a preventable malignancy (Kim, Campos, O'Shea, Diaz & Mutyaba, 2013; De Vuyst et al., 2013). According to Denny et al. (2005) the risk of being affected by cancer of the cervix for a woman living in a low-resource country is two to four percent. In fact, cervical cancer is the most common cancer in Zimbabwe due to the high prevalence of Human Papillomavirus (HPV) in this country (Castellssague et al. 2007).

Numerous studies have shown that HPV has been causally related to cervical cancer (Fukuchi, Sawaya, Chirenje et al., 2009; Mandelbatt, Lawrence, Gaffikin, et al., 2002). In addition, the progress of this HPV-associated cancer is more rapid in HIV-positive women than in HIV-negative women (Anorlu, 2008). With a prevalence of 14.7% of people living with HIV and AIDS, Zimbabwe is experiencing one of the harshest HIV and AIDS epidemics in the world which makes the impact of cervical carcinoma in this country severe (Anorlu, 2008; WHO, 2010).

Women continue to die from the disease, despite the fact that the disease can be prevented by early diagnosis through preventive screening and possibly by vaccination (Chokunonga, 2005; Mupepi, Sampselle & Johnson, 2011). Implementation of screening methods in low-resource countries has led to a reduction of 56% in cervical cancer mortality and the incidence rate of cervical cancer dropped by half between 1990 and 2005 (Pak et al. 2007) and have been confirmed by other studies (Anttila, Nieminen & Hakama 2004; Sasieni, Castanon & Cuzick, 2009). Implementation of a nationwide screening program can lead to substantially reduced incidence of cervical cancer in Zimbabwe (Denny et al., 2005).

Visual inspection with acetic acid (VIA) is one of the screening methods that might be used for implementation in Zimbabwe. The VIA screen-and-treat approach turned out to be a low-cost and effective method, and it allows a single-visit-approach which includes screening and treatment. Several longitudinal studies have shown that this approach eliminates laboratory work and minimises loss to follow-up (Sankaranarayanan et al., 2007).

With this 'screen-and-treat' methodology, an aceto-acid solution is applied to the cervix and abnormal cervical cells can be identified with the naked eye. The aceto-acid solution enlightens the HPV-infected cells and makes these visible at screening. Screen-positive women are treated directly with cryotherapy where nitrous oxide fluid is applied to the lesions and destroys the HPV-infected cells. After treatment with cryotherapy women are advised to abstain from sexual intercourse for four to six weeks, in order to recover from the treatment (Chumworathayi, Blumenthal, Limpaphayom et al., 2010).

Despite that VIA screen-and-treat methodology seems suitable for implementation in Zimbabwe, overtreatment of women without precancerous lesions is seen as a concern in public health. However, findings do not state that overtreatment is harmful in low-resource countries. In Zambia, the VIA screen-and-treat approach has been piloted successfully and numerous studies have shown its efficacy and acceptability in low-resource countries (Mwanahamuntu et al., 2011; Blumenthal et al., 2007; Sankaranarayanan et al., 2007).

Although acceptability regarding VIA approach has been high, perspectives of women should be taken into account. It is a choice for a woman whether she would undergo screening, yet barriers have to be addressed first before

she is able to make this decision. Women will be more likely to undergo screening when measurements are taken to accommodate conditions that they identified as relevant for their behaviour (Denny, Quinn & Sankaranarayanan, 2006). For the VIA methodology to be worthy of implementation, it must address the relevant conditions within feasibility of a specific country (Bowen et al., 2009).

Several researchers acknowledged this concern and conducted studies to identify barriers and motivations towards the VIA methodology in a specific country. For example, Nuranna et al. (2005) stated that African women generally only request care when symptoms appear. As a consequence, approximately 70% of women with symptoms of cervical cancer come to seek care when the disease is in an advanced stage, while this could have been by early screening (Nuranna et al., 2005; Chokunonga, 2005; Mupepi, Sampselle & Johnson, 2011). They conclude that preventive screening is not common practice in African countries, therefore it is considered as a barrier (Nuranna et al., 2005).

In Uganda, barriers were found in privacy issues, anxiety of pain, and women were worried about outcomes of the VIA screening (Busingye et al., 2012). Chigbu, Onyebuchi, Ajah, & Onwudiwe (2013) aimed to determine conditions of 2,312 females who underwent VIA screening in Nigeria. They showed that only 18% of them would join screening if a fee was required. The majority (87%) preferred a single visit approach which included treatment of abnormalities. Barriers consisted of lack of time, belief of additional costs of a second consultation, and anxiety related to waiting for confirmation tests (Chigbu et al. 2013).

Furthermore, a survey-based study in Zimbabwe identified cervical screening behaviour (Mupepi et al., 2011). They found that the majority of females lacked education about cervical cancer and the possibilities of cervical screening. Women found themselves not being encouraged by nurses to access screening. Similar to results from Nigeria, women in Zimbabwe were not able to afford a fee for screening and had no insurances to cover the costs. Also, women living in rural areas faced distance barriers that were too long (Mupepi et al., 2011). In contrast, the majority of women were motivated to undergo the VIA screening. In Nigeria, 86.6% indicated a willingness to return for follow-up visits (Chigbu et al., 2013). Likewise, 91% of women who underwent VIA in a study conducted in Uganda were willing to recommend the VIA-screen-and-treat approach to others, and 97% women were willing to undergo VIA again (Busingye, Nakimuli, Nabunya, & Mutyaba, 2012). In Nigeria women motivated their willingness to return by the screening being free of charge. In addition, support from the husband and involvement of community leaders were found as most frequently reported motivation for undergoing VIA (Chigbu et al., 2013).

This study was built upon previous findings of motivations and barriers towards the VIA screen-and-treat program. The objective of the present study is to understand the intentions of women and how they overcome barriers associated with VIA screen-and-treat approach for future implementation in three communities, by using a qualitative study approach. The methodology consisted of seven focus group discussions as prior method of data collection. Focus group discussions were used to recognize cultural values and to identify ways to address traditional issues within a culture (O'Reilly, 2012).

Findings of previous studies have been integrated in the

concepts of two theories. First, the Theory of Planned Behaviour attempts to reveal why people might make certain decisions (Ajzen, 1991). In the context of this study it suggests that the intention and eventually behaviour of Zimbabwean women may be predictable.

By knowing whether the woman is in favour of undergoing screening (her attitude); how much social pressure there is for the woman (her subjective norms) and whether the woman feels in control of the action (her perceived behavioural control), women will be more likely to undergo screening (Ajzen, 1991).

Although it is a woman's own choice to undergo screening, the intention that leads to the decision to undergo screening might also be influenced by other factors that are not depending on the individual but on the environment.

Environmental factors are viewed as critical in shaping health behaviour (Crosby, Salazar & DiClemente, 2011). For example: a woman will only undergo a screening if there is access to a screening. Which leads to the assumption that the three elements of planned behaviour: attitudes, subjective norms and perceived behavioural control, are highly influenced by environmental factors. Second, Cohen et al. (2000) conducted the Structural Model of Health Behaviour based on environmental factors and created four categories: availability & accessibility, physical structures, social structures and policy, and effects of media and culture. To acknowledge these factors in the context of this study, we adopted the categories of the Structural Model of Health Behaviour and combined the categories with the three elements of

the Theory of Planned Behaviour (Ajzen, 1991). Figure 1 illustrates the relationship of the theories within the conceptual model. According to the conceptual model women's health seeking behaviour is depending on many influences from outside.

This study is part of one of the Ushamwari projects (www.ushamwari.nl). The project consists of the implementation of the VIA screen-and-treat approach in three mission-based district hospitals in urban and rural areas of Zimbabwe. This in collaboration with the Female Cancer Foundation (FCF) and the leaders of the three hospitals. Finally, the outcomes will serve to advice and make recommendations regarding the implementation of the VIA program into the outpatient departments of the three hospitals.

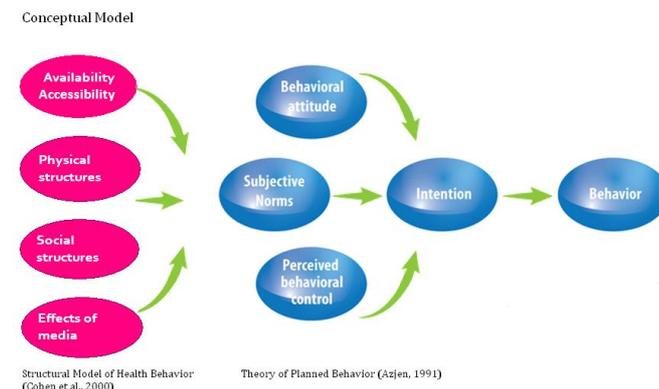


Figure 1. The conceptual model. The two combined theories present the visual construction of the concepts (Creswell, 1994).

METHODOLOGY

STUDY CONTEXT

The present study is the first step in the implementation process of the VIA approach in three mission-based district hospitals in one urban and two rural areas of Zimbabwe. Between April 14, 2014, and June 14, 2014, qualitative data was collected from predominantly female participants and some male participants.

The study site consisted of the catchment areas of three mission-based district hospitals in Zimbabwe, which form part of the Ushamwari network. The Ushamwari foundation is a non-profit organization conducted by three Dutch specialists of the Onze Lieve Vrouwe Hospital in Amsterdam, the Netherlands. The first study location was the St. Joseph mission-based hospital within urban areas of the city Mutare. The hospital was located next to the high-density area Sakubva and has approximately 50 a 65.000 inhabitants.

Second, St. Theresa's hospital lies within the rural areas of the city Masvingo and serves as an important district hospital for small rural clinics within the catchment area of 25.000 inhabitants. The third hospital, Regina Coeli mission-based district hospital is, similar to St. Theresa, an important clinic within the wide rural areas of Nyanga district. Regina Coeli hospital serves a catchment area of 7000 inhabitants (www.ushamwari.nl).

QUALITATIVE METHODS

According to the conceptual model (figure 1), the intention and behaviour of Zimbabwean women whether or not she will join VIA screen-and-treat, is predictable by knowing their attitudes, their subjective norms and their perceived behavioural controls.

In order to investigate these in the form of opinions, arguments and ideas, a qualitative approach was applied for the data collection process.

Focus group were conducted to collect a wide diversity of perceptions. The reason to prior collection of data through focus groups is based on the advantage of generating conflicting perceptions causing women to change their opinions and rethink. Eventually data becomes more creative (O'Reilly, 2012). All groups varied in composition. The groups differed in socioeconomic status, religious preference, age, profession and geographical spread.

Although the focus group discussions have been semi-structured by a set of topics and have been prepared in advance by the researcher, the discussions were open to move into unexpected thoughts to produce new information.

PARTICIPANTS

Seven groups were selected on the basis of contacts of the leaders of the hospitals, each with eight to twelve participants. The selection included women and men who were sexually active. Three out of seven focus groups consisted of male participants together with female participants. They all provided written informed consent. To ensure diversity, all groups differed in background (O'Reilly, 2012). Three groups consisted of hospital staff, nurses and nurse-assistants, one in all of the three hospitals. The fourth group consisted of high socioeconomic status women, who were characterised as being the wives of high-status husbands and received higher education. One group consisted of mothers of young children, living in the community of the St. Joseph hospital, mostly in the township Sakubva, the urban areas

of Mutare. Two focus groups consisted of rural Zimbabweans: young pregnant women living in the catchment area of Nyanga district, and family members and outpatients of St. Theresa hospital living in the catchment area of Masvingo district.

PROCEDURE

Prior to the focus group discussions, health education was given to the participants to provide basic health information on cervical cancer and future implementation of VIA approach in Zimbabwe. The second part of the focus group consisted of the actual discussions and was guided by the concepts derived from the focus group guide (table 1). All sub-concepts were derived from previous studies. The focus group guide was extended after the second focus group session in order to encourage interactions between participants. Outspoken statements were set up to concretise the themes of the original guide (appendix 2).

During the sessions, the participants were invited to agree or disagree with the statements and were asked for their arguments. This format of discussion, wherein the participants had to stand up to the right side of the room when they agreed and to the left if they disagreed, created an open environment wherein the security of being among peers promoted participation in the conversation of taboo topics.

To prevent socially desirable answers the participants were stimulated to feel comfortable in the interactive group situation by the facilitator using ice-breaking sentences and examples of earlier discovered opinions. Also, the facilitator tried to encourage reticent people to become involved by giving the participants the possibility to represent themselves as from another background or religion.

Additionally, in advance to the focus group sessions with the nursing staff, the facilitator had spent time to become familiar with the cultural values of the staff of the different hospitals and to create an *emic* perspective. This insiders-

view was obtained to establish credibility of the community and created awareness within the community of future implementation (Polit & Beck, 2008).

DATA ANALYSIS

The discussions were recorded on tape and video. Video was used to identify participants during the transcribing process. First, the taped focus group sessions were transcribed directly after collection. The researcher used notes for familiarization with the range of issues (O'Reilly, 2012). Second, coding of the transcripts was conducted in two phases. The initial analysing phase consisted of a manual coding using different colours for different coded segments. Some segments got two codes because of their similarities with both codes. The same colours were used during the following phase of coding. In this phase MAXQDA version 11 was used to computerize the same coding process (MAXQDA, 2014). The segments of computerized codes were compared with the existing codes on paper. The majority of segments have got two or more codes during the analysing process. Because of these combined codes, MAXQDA was used to create relationship between the combined codes. These so called data relationship tables are presented in appendix 3, and have shown how often the relationship between combined codes appeared.

The conceptual model was used to build the focus group guide (table 1). Subsequently, the extended guide was created according to the same concepts (appendix 2). Eventually, by using the same concepts during the actual discussion, the themes became related to these concepts. It created a connection between the conceptual model and the results.

Finally, there has been a discussion of themes together with two key stakeholders after the analysing process to create agreement upon final themes and overall findings. The thematic-framework was conducted to summarize the data relationship tables as explained in the results.

Table 1

The Focus Group Guide

Categories

<u>Availability/Accessibility</u>	<u>Physical Structures</u>	<u>Social Structures</u>	<u>Effects of Media</u>
Ability to reach access	Distance to screening	Involvement of opinions	Informed: health education
Fixed fee screen-and-treat	Unintentional activity	Support from husband	Educational level
Physical limitation	Unintentional injury/pain	Support community leader	Gender status
Cooperation other hospitals	Ability of transportation	Support religious leader	Awareness of cervical cancer
Sustainability/Acceptability	Hygienic precautions clinic	Social pressure of not going	Acceptability in media
Integrating in projects	Leave children for time	Consequences of treatment	Empower women
Educating female patients	After treatment no sex	Anxiety or fear	Convincing others

Note: the coloured concepts in this table formed the emerged themes, as explained in the results. All colours are similar to the concepts that are shown in the following figures.

RESULTS

As shown above in table 1, the concepts presented in the initial focus group guide became leading subjects to discuss. During the sessions, some sub-concepts got the attention of the participants directly. The participants showed their expressions and feelings clearly. The statements opened up the discussion, it created a voice to those who do not speak and triggered the reactions.

The analysing process led to the following emerged themes: *health education*, *acceptability*, *awareness of cervical cancer*, *support from husband*, and *traditional healing* (see coloured words in table 1). Two relationship tables were conducted based on the relations found by MAXQDA

(2014). These data relationship tables can be found in appendix 3 and are added because of their important values in have led into the presented results.

One important, all-encompassing theme that emerged was the theme *health education*. During the seven focus group discussions participants called for the provision of health education to all those involved in the forthcoming implementation of the program. This leading theme emerged together with *acceptance*, *awareness* and *support* and was thus found to be the umbrella of the thematic framework as illustrated in figure 2.

THEMATIC FRAMEWORK

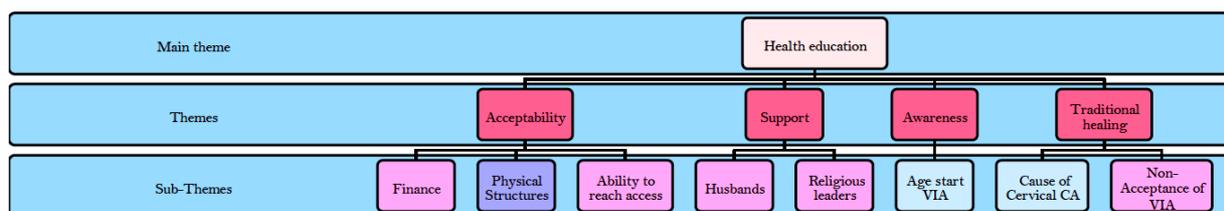


Figure 2. Thematic framework. This figure illustrates the main theme on top, the related themes in dark pink colour and the sub-themes to summarise the results. All colours are similar to the concepts that are shown in figure 3 in the conclusion. The light blue sub-themes present the newly arisen themes, as explained in the results.

HEALTH EDUCATION

Health education appeared to be the most comprehensive theme amongst the emerged themes, and was related to all the four concepts of the conceptual model. First, the participants believed that giving their community members *health education* about the implementation of VIA as prevention for cervical cancer will lead to *acceptability* of the program. Second, the participants argued that *health education* would influence the concept of *physical structures*: if community members know about the benefits and preventive aspects of the VIA screen-and-treat program, they will overcome *physical structures* that might be in their way. For example: transportation and undergoing physical activity to join the screening. Other examples are the physical consequences of unintentional pain of injury, and not having sex for four to six weeks after treatment with cryotherapy.

All these examples were aspects, which Zimbabwean participants stated that they were sure to be able to overcome. However, these all in relation to *health education*; only if women and men both know about negative and positive aspects of the VIA program, they would agree to the program and acceptability would arise. Almost all participants argued that the program should focus on everybody who can become involved in the VIA screen-and-treat program: women, men and religious leaders, to create acknowledgement and support within the entire community.

ACCEPTABILITY

Another major finding was found in the theme *acceptability* of VIA implementation in the community of the participants. *Acceptability* was related to *awareness of cervical cancer*, and formed an important concept in relation to the need for *health education* as shown in appendix 3. However, acceptability led to the involvement of three sub-themes. Physical structures formed a broad theme as presented by table 1. Physical structures consisted of distance to the (mobile) clinic, the unintentional physical activity and energy when going to the clinic, the support from relatives to create time for mothers to leave her family, hygienic precautions of the clinic, and unintentional injury after treatment when found positive, are seen as conditions that should be taken into account within this sub-theme. Closely related to *physical structures* was *the ability of transportation*, especially in the context of the rural communities. *Finance* was related to transportation to the clinic and was an interesting point of discussion, because of the diverse opinions in the different groups.

Physical structures

Acceptability of the VIA program changed in terms of before and after the facilitator's explanation about the abstinence period of four to six weeks without sex after a woman is treated. Although most women did not see any problem or barrier when it comes to joining a program for their own health, some participants clearly stated that lack of *support from their religious leaders* and their *husbands* could lead to non-acceptance of the program.

The influence of others (i.e. husbands and religious leaders) was according to most participants, for some women significant in the decision whether they are able to undergo screening or not. After the explanation of why the abstinence period would be important; for example, to prevent other infections because of the wound created by the cryotherapy; some women stood up and used the opportunity to explain their opinion. All participants agreed on the following exposition of a nurse at a rural hospital related to the abstinence period of no sex after treatment:

I think if you give them [the husbands] information about the screening of this cancer, it is quite positive that you only have to wait four to six weeks than to live with someone who is affected with that cancer for the rest of your life.

The participants believe that health education will provide an indirect empowerment of women becoming able to join the screening and *accepting* the program. Two important sub-themes derived from the theme *acceptability*: *physical structures* and *finance*. The first the sub-theme included: the ability to use transportation.

Finance

Second, the families' financial situation seemed an important barrier. According to the participants, Zimbabweans live their life day-by-day. When it comes to spending a few dollars on transportation costs, even though they are aware of the fact that the screen-and-treat is offered for free, there will be a chance that a woman finds herself not capable of spending these dollars on transportation. In the rural areas the nurses explained:

Financially, for most people in the rural areas it is very difficult to have enough finances for all these programs... The women always have to ask their husbands for money. They do not have any sort of income of their own.

The women from urban areas took this issue into a broader perspective, one of them said:

It is all comes to education, isn't it? Because if you can put it into a perspective that they can understand it, \$5 for transportation over three years as a portion of your income of \$300 a month is actually not very much. Especially when the screen-and-treat program is so successful whereas the treatment [for advanced cervical cancer] isn't, so \$5 today is awful lot of money, but what if it is going to save your life down the line.

Ability to reach access

Being aware of the fact that most women in rural areas have less education, lack of job opportunities and are mainly depending on their husband for any sort of income, a limit of five dollars for transportation costs was acceptable according to the participants. The use of outreach points and small rural clinics to overcome the barrier of high transportation costs seemed to be ideal according to the participants. They stated that nurses working in small rural clinics should be trained and become involved during implementation. Overall, the participants were positively in favour of implementation of VIA screen-and-treat. Especially the fact that this includes a treatment, and will be offered for free made it acceptable to everybody.

SUPPORT

Religious leaders

When participants were asked to explain the influence of religious leaders, it became clear that support from religious leaders is important. All participants are members of a religious community. None of the participants believed that his or her religious leader would not support VIA, because they stated that their church is in favour of their community members health. During one of the discussions, a female participant stood up and argued for the women's right to be responsible for herself and her own decisions:

I have the right to any treatment like every other Zimbabwean person, so I do not need to ask anyone about my own treatment. I can go for any treatment. I have to go for operation myself. He will not go or be there.

However, *support from religious leaders* became an interesting subject of discussion. Participants explained that there is one religious group called the Apostolic, which will not be in favour of undergoing any kind of preventive screening or treatment. Even after addressing all possible barriers and providing comprehensive health education it will not make a difference. Under the participants there were no members of the apostolic community. In the Apostolic religion, members believe in the use of holy water only and some of those communities adopted traditional healing.

Furthermore, the participants described that in the past a lot has been done to involve the apostolic church into Western medicine because they believed that members of the apostolic community should also become empowered to decide for themselves whether or not they seek hospital care. Especially, because participants stated that some apostolic religious leaders do seek health care in the hospitals:

Sometimes there are also some church members of those churches, who come but they do not want to be known by the leaders, they just come privately and they tell the nurses, please do not tell that I have been here.

When participants were asked about how to involve those apostolic leaders, most of them did not believe in any involvement of the apostolic leaders. A few participants tried to argue some ideas. One stakeholder from the rural areas of St. Theresa hospital said:

Maybe if we get word of the leader, if we talk to them. Ask them why they do not come to the hospital, just to find ways of how to communicate and understand the reasons why they do not come to the hospital.

One finding arose clearly: acknowledgement of future barriers in the involvement of the apostolic religious community. Even though all participants of these seven focus groups were positive about the involvement of their religious leaders. According to the focus group members, the involvement of Roman Catholic leaders will not lead to any barrier against the implementation. On the other hand, it will support the *acceptability* and *spreading the word* of undergoing VIA.

Husbands

Special attention should be given to obtain *support from the husbands*. As explained in the paragraph *health education*, support from the husbands may increase acceptability, accessibility, affordability and even availability. One of the stakeholders argued:

The men should be educated about it. Because they are the ones that cause the problem, they say; okay you don't want to sleep with me, I will find another.

However, according to the male and female participants it all depends on the level of empowerment of the woman. Urban women think that rural women are not empowered enough to make their own decision. A nurse-assistant from the urban St. Joseph hospital stated:

In our culture, sometimes you have to listen to your husband. You are maybe divorced if you only make your own decisions. You have to listen, if he does not want me to go, we will do what he wants.

Yet, the rural women thought differently about that and argued the same arguments as the women from urban areas did. The rural women called for the same provision of health education for their husbands:

The thing that might interfere in this program is some of the husbands. They need to be talked nicely for the program. The other is saying that it is no problem; they just allow us to go. So, really, all the husbands they are willing, but there are some, who needs to be talked to and then they say it is okay.

The option of using condoms in abstinence period was not supported. Overall, condoms were not an option because the husbands do not support the use of condoms. Most focus group discussions had similar opinions about the use of condoms. As one of the young pregnant ladies said:

They [the group of young pregnant ladies] are really appreciating the services that are provided by these condoms, they really want to, but the husbands, they

do not want. They say straight away: no. Unless it is like treatment for the cancer, that four weeks, they might say yes, that is a good reason. Not for normally, they say no.

It seemed that rural women understood the abstinence period of four to six weeks after being treated with cryotherapy. But, as said they are depending on their husband so for some of them it would be a challenge to convince their husband. Females living in rural areas, even as the females living in urban areas called for the provision of health education to inform their husbands about the ability to join the program and the possible physical consequences.

AWARENESS OF CERVICAL CANCER

Cervical cancer was perceived as a form of cancer and most participants had heard of the disease. Some participants shared their experiences in the form of sharing stories about cases suffering from cervical cancer. They named some of the symptoms as in pain, vaginal discharge, wounds inside the vagina and lumps at the uterus and at the cervical mouth. Although the medical knowledge of cervical cancer was low, most participants were aware of the high prevalence and increasing incidence of cervical cancer.

Some women had heard about existing cervical screening programs but they did not conceive these screening programs accessible for themselves. Participants gave three main reasons for conceiving screening program as not accessible: because of long waiting periods of more than three months on a waiting list; non-affordability caused by high access fees of forty dollar per screening; and the fact that some screening programs are only offered in the capital Harare or in the city of Bulawayo.

Most awareness of cervical cancer among the participants derived from urban females and from the nurses who joined the sessions. Other participants, mainly from rural areas, referred to the use of vaginal preparations when they thought about cancer of the cervix. Vaginal preparations consisted of herbs and soaps, and were used for sexual purposes and as opener of the birth canal in preparation of giving birth. The next paragraph goes deeply into explanation of these unexpected findings.

Age starting VIA

The outspoken statement that was used to trigger the participants to discussion about at which age should the screening for cervical cancer start, consisted of:

"I think they should start screening women above age of 20 years, because before women should not have intercourse so the change of HPV-infection is just not there..." (appendix 3)

After health education that was given prior to the actual discussion, most participants understood the causal relationship between HPV and cervical cancer. This led to acknowledgement of sexual intercourse, the spread of the HPV epidemic, and the risk of becoming affected with cervical cancer. The women argued for screening starting with all sexual active girls and women. They called for the integration of VIA screening in the existing programs for HIV patients, antenatal programs and using programs set up for teenagers. The participants showed their passion for their young community members and girls who struggle with family planning advice. The nursing staff from all three hospitals argued in favour of young sexually active females. According to the participants, these girls should undergo a health behavioural change.

Giving them comprehensive health education so they will go for cervical screening during the rest of their sexually active lives.

TRADITIONAL HEALING

During the sessions a lot of participants directly started talking about the use of herbs as traditional healing. Traditional healing became a new and unexpected subject of discussion, and thereby became an important finding. In the initial focus group guide (table 1) there are no concepts related to traditional healing, it emerged after analysing.

Cause of cervical cancer

Most participants believed that these traditional herbs and soaps are an important cause of cervical cancer. During the focus groups the women explained that the use of herbs is still very common, even though, stating that they were aware of the fact that using herbs are not preventing any form of cervical cancer.

They use herbs to enhance sexual intercourse especially to satisfy the husband. The belief is that the husbands enjoy a dry vagina to get the feeling that the vagina is tight. Most participants corroborated the following after the explanation of a nurse stakeholder:

Here the African people they believe that during sex, the vagina should be very dry, here it is so that the penetration is hard, the men should actually sweat, trying to penetrate so you activate the feeling, so that the women put herbs inside so they can dry up, but it can cause cervical cancer.

Traditional healing was being related to the main theme health education, to the prevention of cervical cancer, and as being a predisposing factor in causing cervical cancer, according to the participants. This because, as the leader of the nursing school clarified: traditional healers advice the women to use herbs as prevention of cervical cancer, but there is no evidence:

...the end result is that this person comes to the hospital in a late stage. She thinks that cancer is not going to spread, but the end result is that she comes in stage four when it is already too late for any treatment.

Some stakeholders had a strong opinion about the use of traditional healing in the relation to cervical cancer:

It is just a placebo. The patient has a believe that something has happened, but literally it will progress the cancer... and then they do not want to admit that they have got cancer. Because she has been told that she is been treated by traditional healing at the early stage by herbs. But actually what herbs do, it was just a placebo. They do not do anything.

A striking finding was that women from urban areas and nurses often felt that the knowledge of health is low among women in rural areas. Knowledge of health and about cervical cancer would be low, and this, according to the urban women, is associated with the use of traditional healing in the rural areas.

Despite this finding, the nursing staff agreed that after you give explanation to rural residents that they would join health interventions immediately. The participants explained that especially women and children living in

rural areas are faithful to medical therapies, come to appointments and take every opportunity to improve their health.

Conclusion & Discussion

The analysis revealed five main themes and one leading theme: health education was found to be the overall theme. Acceptability of the VIA approach, awareness of cervical cancer, support, and traditional healing were found to be the main themes. In figure 3 an overview of this research can be found.

Health education was the leading theme because of several reasons. First, knowledge of cervical cancer was low among the participants, even though most participants consisted of nursing staff. Second, health education is needed not only to create credibility, acknowledgement and interest of women in the VIA program, but also to obtain support from others to encourage women to undergo VIA screen-and-treat. Third, health education should be focused on educating the husbands and the religious leaders. Without support of religious leaders and husbands some women might not undergo VIA screen-and-treat. Even though empowerment of women is a well-known subject under the women of Zimbabwe, decision-making is still considered as being a task of the men.

A barrier towards VIA implementation in Zimbabwe will be the husbands. Their decisions will count in the overall acceptability of the program and in the number of women undergoing VIA. Women have not become empowered enough when it comes to sexual decision-making. After treatment with cryotherapy women are advised to abstain from sexual intercourse for four to six weeks. It might become a barrier for some women indirectly, because the decision will be made by their husband. This is in line with findings from Nigeria. The main motivation to undergoing VIA screen-and-treat also consisted of support from their husbands (Chigbu et al., 2013).

The majority of Zimbabweans are members of Christian denominations. Evangelical groups such as the Apostolic groups are emerged from the Christian churches. These groups have shown a major increase during the last decade (United States Bureau of Democracy [U.S.B.D.], 2007). Almost all participants were members of the Roman Catholic community. According to them, their religious leader would support the female community members to undergo VIA screen-and-treat. Support from religious leaders can help in spreading the word, and church related groups can be used for the provision of health education. Even though participants' religious leaders will be in favour of VIA, acceptability within the increasing apostolic communities will become a future barrier.

The Apostolic communities use holy water and traditional healing only. Some participants had ideas in how to overcome the barriers that consists within the non-acceptance of VIA. The nursing staff of the two rural hospitals were aware of some apostolic church members who seek confidentially care. It led to the suggestion that some apostolic leaders secretly were in favour of western medicine, even though it is against their religious believing. Therefore a few participants suggested that comprehensive health education for the religious leaders of the Apostolic communities would help. Still, most participants stated that involvement of the Apostolic community members will be a barrier to overcome.

All participants were aware of the practice of herbs that women use as vaginal preparation for different purposes.

The thought of the healing aspect seemed to be in contrast to what is compliance by the nursing staff. This assertion, that the use of herbs as vaginal preparation could lead to cervical cancer, is seen as an important predisposing factor by the participants. Whether or not this is true, this study suggests that all participants are aware of the existence, purposes and practical content of these herbs. Concluding that even when you ask females who are working in western medicine settings, traditional healing remains important for them. They know more about herbs in relation to cervical cancer, than there is knowledge about the incidence and prevention of this disease. This response might have been expected, early findings suggested that the majority of Zimbabweans remains to believe in traditional healing next to their predominant Christianity (U.S.B.D., 2007).

Several findings of previous studies were used to set up the guiding methods and similar themes emerged. When comparing to the outcomes of this study, similarities and differences can be found. For example, in Uganda acceptability of the program was found to be high. Similar to the Ugandans, acceptability was mainly high under the Zimbabweans (Busingye et al., 2012). Acceptability was based on the fact that VIA consists of a single-visit screen-and-treat approach, will be free of cost, and will prevent cervical cancer for women who undergo this screen-and-treat program.

The qualitative approach of this study did not focus on specifically collecting demographic characteristics of the participants. We focused on the potential group of predominantly women and a few men, who will become involved in the implementation. In contrast to previous quantitative studies, we aimed to collect specific motivations and barriers to create an emic overview of the Zimbabwean potential VIA screen-and-treat candidates. Further, from other studies focused on barriers and motivations of women undergoing VIA, we noticed similarities in acceptability and support (Mwanahamuntu et al., 2011; Blumenthal et al, 2007; Sankaranarayanan et al., 2007).

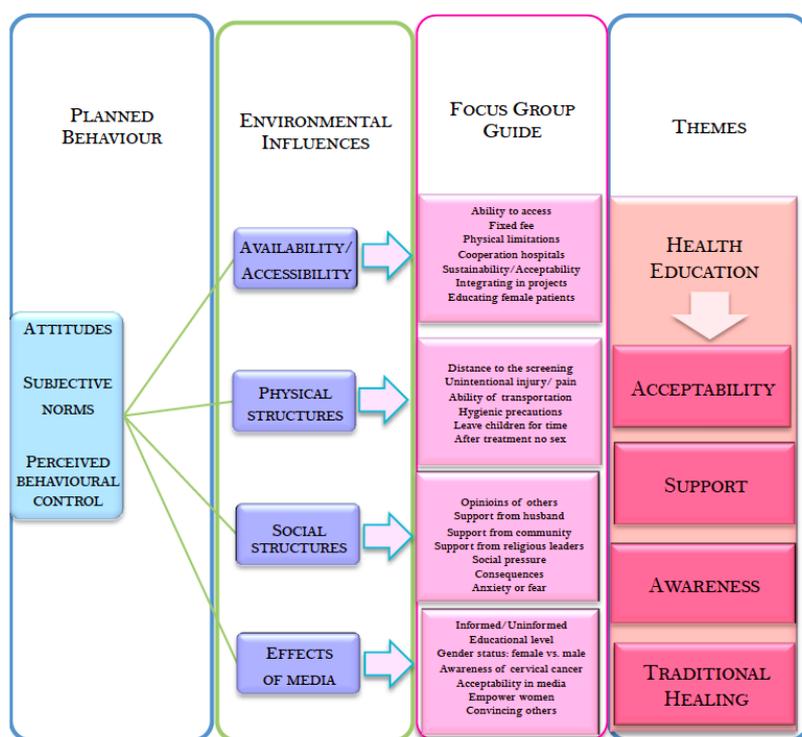


Figure 3. Overview of the study.

Also similar to the present study, Mupepi et al. (2011) have presented the importance of cultural values within the Zimbabwean society, when it comes to cervical screening.

Differences were seen in the importance of traditional healing in relation to cervical cancer. Studies from Uganda, Nigeria, Ghana, Zambia did not discuss traditional healing and the use of herbs in relation to cervical cancer as extended as the present study did.

Additionally, Chigbu et al. (2013) found a significant association between willingness to undergo screening and level of education. Outcomes of this study were not related to level of education, in fact, Zimbabwean participants argued that health education will lead to acceptability and willingness to undergo the program.

When it comes to accessibility Mupepi et al. (2011) stated that in Zimbabwe accessibility of cervical screening would be lower for females living in resettlement villages compared to females from traditional rural reserve villages. These specific geographical findings were not shown in the outcomes of this study. We conclude that after efforts are made regarding information to all involved, women will come and barriers will be overcome. Furthermore, this study followed the recommendations of previous studies (Mupepi et al., 2011; Denny et al., 2006). Denny et al. (2006) stated that country-specific barriers and pitfalls should be taken into account when it comes to implementation of cervical screening program. We conducted focus group discussions to understand Zimbabwean-specific barriers and motivations to make recommendations for future implementation. We believe that implementation of VIA screen-and-treat can substantially reduce the incidence of cervical cancer in the settings of this study.

The present student has several strengths, including the geographical spread of the seven focus group sessions, the involvement of male participants, diversity within the group compositions, the use of two conducted data relationship tables, the combined theories of the conceptual model and the extended literature research towards specific barriers and motivations of the VIA approach within Sub-Saharan Africa.

Additionally, the study had several limitations, some of which were noticed in an early stage. After the first focus group sessions, the disempowerment of women and the uninformed status of the husbands became clear during the transcribing process. We acknowledged this finding and in collaboration with the hospital leaders we tried to create a specific focus group with only male members. Despite the efforts of gathering a group of males only, the word about the screening of cervical cancer was spread quickly and women joined this focus group as well. Further on, the participation of the apostolic community members would have led to more understanding of their

health behaviour and their traditional preferences. All the information about their preferences and health behaviour came from Christian community members.

The main finding was that all participants agreed upon the provision of health education to everyone involved. Health education should be provided to the community leaders, the religious leaders, the women as young as when they started being sexually active and until the age of their menopauses. Special attention should be given to the involvement of husbands in the acceptability of the program implementation.

Even though the Zimbabwean culture is a typical African culture with attention for religion, community leaders, support from males and traditional healing. Zimbabweans are historically well educated and support education as highly important for all involved, as stated by participants of the present study. It shows that country specific solutions should be taken into account to create a successful and sustainable implementation in Zimbabwe. The results of this study might be positively influenced by the study population being members of the communities in and around the three hospitals. Participants from this study were clearly in favour of hospital care instead of seeking traditional healing. Our qualitative approach showed no differences in outcomes of members of different villages. Educated urban women, male nursing staff and young rural females all believed that after receiving health education, an overall acceptability would be reached.

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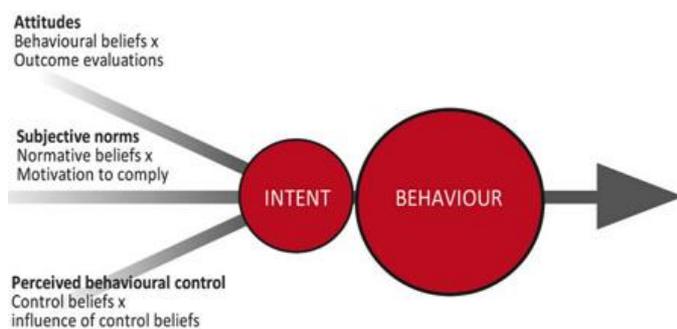
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APPENDIX 1: THE CONCEPTUAL MODEL

The development of a sustainable and successful VIA implementation in Zimbabwe can lead to substantially reduced incidence of cervical cancer in Zimbabwe. Organised and quality based programmes have shown this in the past in many developed countries. However, there are barriers shown in literature found by earlier research and findings suggest that country-specific barriers and pitfalls should be taken into account while implementing VIA approach (Kim et al., 2013).

The aim of the implementation of a screening procedure is to maintain full coverage of the population at risk. By addressing barriers beforehand, a reduction of failure of participants can be prevented. In addition, women will be more likely to participate and undergo screening when measurements are taken to accommodate conditions that women identified as relevant for their behaviour. Behaviour that in case of this study, consist of undergoing VIA screen-and-treat approach to prevent advanced cancer of the cervix. According to Azjen (1991), behaviour depends on the elements of attitudes, subjective norms, and perceived behavioural control. He states that these three elements influence the intention of the individual and becomes the predictor of behaviour. The intention forms the cognitive representation of a person’s willingness to perform a given behaviour and it appears to be the antecedent of behaviour. In addition, the three elements are closely related to each other. Closely related because attitude can help us to predict the behaviour, but in the measurement of attitudes it is necessary to measure people’s subjective norms and their beliefs. Ultimately, perceived behavioural control has also an effect on the intention and behaviour. Perceived behavioural control means people’s perception of the difficulty of performing certain

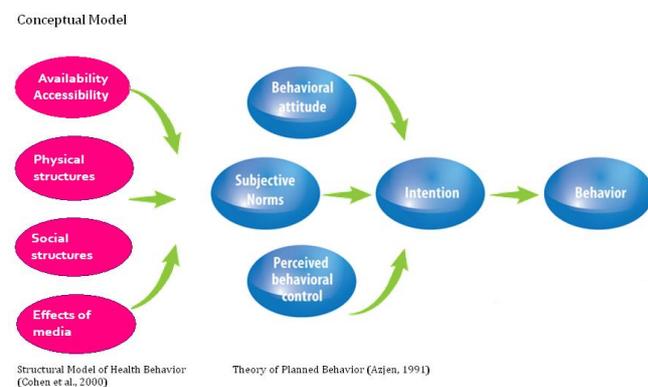


behaviour. In general, all these predictors are involved in the process of formation behaviour (Azjen, 1991).

The theory of planned behaviour attempts to reveal why people might make certain decisions. When this theory is applied to the context of this study it suggests that the intention and eventually behaviour of Zimbabwean women is predictable by knowing: whether the woman is in favour of undergoing

Figure 1: Azjen, 1991.

screening (attitude); how much social pressure is there for the woman to undergo screening (subjective norm); and whether the woman feels in control of the action of undergoing screening (perceived behavioural control) (Azjen, 1991). Although it is a woman’s own choice to undergo screening as described by these examples, the final intention that leads to the decision to undergo screening might also be influenced by other factors that are not depending on the individual but on the environment. Environmental factors might be viewed as critical in shaping health behaviour (Crosby, Salazar & DiClemente, 2011). For example: a woman will only undergo a screening if there is access to a screening. Which leads to the assumption that the three elements of planned behaviour: attitude, subjective norms and perceived behavioural control, are highly



influenced by environmental factors. Cohen et al. (2000) conducted the Structural Model of Health Behaviour based on environmental factors and they created four categories of environmental factors. These are: availability/accessibility, physical structures, social structures and policy, and media and cultural influences. On the next page the conceptual model illustrates the combination of the two theories.

Conditions identified in this study can be integrated in these four categories of environmental factors that

influence women's behaviour whether she will choose to undergo VIA screen-and-treat approach or not.

Behaviour and Health are influenced by access: when access increases, more change in behaviour is likely to appear. The concept of accessibility rises from ability of people to reach access at health care facility and sub-concepts derived from accessibility are location, time and ease of approach (Starfield, 2001). Another important concept in this category is availability that consists of the presence, physical limitation of and the price of the VIA screen-and-treat method in case of this study. In general, people tend to reduce their consumption when the price goes up and increase their consumption when the price goes down, also known as price elasticity as seen in cigarettes sale (Crosby, Salazar & DiClemente, 2011).

Physical environment can influence women's health behaviour by a range of conditions. Distance to the (mobile) clinic for performance of screening, the unintentional physical activity and energy when going to a clinic, the price of transportation to the clinic, the ability of transportation, the support from relatives to create time for mothers to leave her family for some hours, hygienic precautions of the clinic, and unintentional injury after treatment when found positive, are seen as conditions that should be taken into account.

Social structures are the rules and organizations of the societies of the women under study. The influence of opinions of community leaders, village leaders and husbands are seen as critical conditions to be addressed before hand because social structures can lead to reduction in subjective norms and in perceived behavioural control. For example, if a woman does not feel social pressure to undergo screening because the rest of women in the village are not attending she might decide not to go, even when knowing that she is in favour of doing it herself. Her attitude is positive, her perceived behaviour is positive but without the subjective norm she still might decide to neglect her intention and finally the purposed behaviour. But, it becomes more complex. What if accessibility of the VIA screen-and-treat is reduced because of a small fee that the woman has to contribute to the treatment. The aspect of accessibility does not meet the women's identified need of affordability any more. The aspect accessibility, even when a woman is in favour of doing the screening (positive attitude) and feels social pressure to undergo the screening (subjective norm) and feels in control of the action (perceived behavioural control), the environmental aspect of the fee influences the accessibility in such a way that the woman is not able to behave in health-seeking way.

To gain perceptions and ideas of women in the reproductive age, focus groups and semi-structured interviews are conducted to identify conditions that women consider important in their decision-making process whether or not to join VIA screening. Conditions found in literature will be integrated into the concepts within this conceptual model. Eventually a set of topics and questions out of the concepts that will guide us to a better understanding of the situation. Finally, the conceptual model will guide to obtain information that helps to understand the intention of women about health behaviour.

APPENDIX 2:

REVISED FOCUS GROUP GUIDE

SIX OUTSPOKEN STATEMENTS USED FOR FOCUS GROUP DISCUSSIONS:

1. “I believe that there are herbs that prevent cervical cancer, lots of women are using them. I do not use herbs, but I will try them if I they offer me.”
2. “I found that some women of the church are not attending the screening because of their religious leader, I want to convince her, she should go, even without permission of the religious leader..”
3. “I care about my body, so I will undergo screening, but I am worried about the consequences.. They may find advanced cervical cancer, but they do not have a good treatment...”
4. “I think they should start screening women above age of 20 years, because before women should not have intercourse so the change of HPV-infection is just not there.”
5. “I am understanding this lady about the cervical screening and I want to undergo screening. But I can't because of the abstinence period of 4-6 weeks, my husband will not agree.”
6. “If I was the director of the NGO who is responsible for the implementation of a major cervical screening campaign, I will use.. And do... And ask those..”

APPENDIX 3:

DATA ANALYSIS CODING RELATIONSHIPS TABLES

Frequencies	Code name	In relation to code name
16 relations	Informed/Uninformed and Health Education	Support from husband
14 relations	Informed/Uninformed and Health Education	Acceptability
12 relations	Informed/Uninformed and Health Education	New: Spreading the word
10 relations	Informed/Uninformed and Health Education	Awareness of cervix ca
8 relations	Informed/Uninformed and Health Education	New: Holy water, herbs and Muti
7 relations	Informed/Uninformed and Health Education	Integrating in (HIV/TB) projects
14 relations	Support from religious leaders	Social pressure of not going
7 relations	Support from religious leaders	New: Holy water, herbs and Muti
7 relations	Support from religious leaders	Acceptability
10 relations	Awareness of cervix ca	New: Holy water, herbs and Muti
7 relations	Awareness of cervix ca	Acceptability
6 relations	Awareness of cervix ca	New: Spreading the word
6 relations	Awareness of cervix ca	New: Age of starting VIA
9 relations	Acceptability	Support from husband
9 relations	Acceptability	Ability to reach access
7 relations	Acceptability	Empower women
7 relations	Acceptability	Finance: transport or fixed fee for VIA
6 relations	Acceptability	Anxiety or Fear
9 relations	Ability to reach access	Ability to transportation
7 relations	Support from husband	New: Sexual intercourse and condoms
6 relations	Support from husband	Social pressure of not going

<p><i>Acceptability</i> is related to:</p> <ol style="list-style-type: none"> Informed/Uninformed and Health Education (14 relations) Support from husband (9 relations) Ability to reach access (9 relations) Support from religious leaders (7 relations) Finance: transport or fixed fee for VIA (7 relations) Anxiety or Fear (6 relations) 	<p><i>Awareness of cervix ca</i> is related to:</p> <ol style="list-style-type: none"> Informed/Uninformed and Health Education (10 relations) Holy water, herbs and Muti (10 relations) Acceptability (7 relations) Spreading the word (6 relations) Age of starting VIA (6 relations) 	<p><i>Informed/Uninformed and Health Education</i> is related to:</p> <ol style="list-style-type: none"> Support from husband (16 relations) Acceptability (14 relations) Spreading the word (12 relations) Awareness of cervix ca (10 relations) Holy water, herbs and Muti (8 relations) Integrating in (hiv/tb) projects (7 relations)
<p><i>Social pressure of not going</i> is related to:</p> <ol style="list-style-type: none"> Support from religious leaders (14 relations) Support from husband (6 relations) 	<p><i>Support from religious leaders</i> is related to:</p> <ol style="list-style-type: none"> Social pressure of not going (14 relations) Holy water, herbs and Muti (7 relations) Acceptability (7 relations) 	<p><i>Support from husband</i> is related to:</p> <ol style="list-style-type: none"> Informed/Uninformed and Health Education (16 relations) Acceptability (9 relations)
<p><i>Holy water, herbs and Muti</i> is related to:</p> <ol style="list-style-type: none"> Awareness of cervix ca (10 relations) Informed/Uninformed and Health Education (8 relations) Support from religious leaders (7 relations) 	<p><i>Ability to reach access</i> is related to:</p> <ol style="list-style-type: none"> Acceptability (9 relations) Ability to transportation (9 relations) 	<p><i>Spreading the word</i> is related to:</p> <ol style="list-style-type: none"> Informed/Uninformed and Health Education (14 relations) Awareness of cervix ca (6 relations)