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Vlora women`s and cervical cancer screening: a study of awareness and barriers

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Abstract

In the absence of the national cervical screening programme, cervical cancer is diagnosed in the last stage, therefore incurable with high prevalence in deaths. Little is known about the current situation regarding cervical cancer knowledge, awareness and prevalence of screening among women. This cross-sectional study, descriptive and analytical, with the use of conceptual framework Health Belief Model (HBM) will be trying to understand and identify possible perceived susceptibility, reasons, benefits, barriers and cues to action that might explain why women don't get a regular gynecological examination. A structured self administered questionnaire from March to May 2014 was used for the data collection. The participants were 200 woman range 25-65 years old with different socioeconomic and educational level that worked in several public institutions and private enterprise in Vlora city. The number of women ever screened was higher and not significant with educational level. Poor knowledge of symptoms and risk factors for cervical cancer. Significant the association between benefits, waste of time, emotional barriers and cervical screening. The economic barrier and fear of the outcomes remain the leading reasons for low participation. Talks with health operators is the most effective tool for cues to action. Strategies for raising cervical cancer screening, including programs to raise awareness of signs, risk factors and health insurance for service should be targeted at women of all ages and social groups. More research is needed in a larger population of women in order to strength findings.

Keywords: *HBM, cervical cancer, barriers, knowledge, benefits.*

1. Introduction

The cancer disease in general in Albania is an increasing problem. In the absence of the National Cervical Screening Program, cervical cancer is diagnosed in the last stage, therefore incurable with high prevalence in deaths, although the fact that it may detect early (NCCP 2011, p. 30). Refer to International Association Cancer Research (IARC, 2012) the incidence and mortality from cervical cancer in Albania, there were respectively 2.7% and 1.7%. The cervical cancer affects the cervix, the lower part of the uterus. Cervical cancer can affect women of all ages, but is more common in the age group 30-35 years (Sastre-Garau X et al., 1996). Also, according to the American Cancer Society (ACS, 2013) cervical cancer tends to occur in midlife and the risk of dying from cervical cancer increases as women ages. It is caused by sexually acquired infection with certain types of Human Papilloma Virus [HPV] (WHO, 2013). Infection with HPV is common, and in most people the body is able to clear the infection on its own, but sometimes the infection does not go away and becomes chronic, especially when it is caused by certain high-risk HPV types, can eventually cause cervical cancer. Based on evidence, the Papanicolaou (Pap) test is the single most successful cancer screening tool in modern medicine. Screening via regular Pap test, that consists of specimen collection and interpretation of the cellular material decreases the incidence and mortality of cervical cancer (Justin Lappen & Dana R. Gossett 2012; Sengul D et al., 2014). Active and passive cigarette smoking, (Roura E, et al., 2014; Henley SJ, et al., 2014), high number of full-term pregnancies (Muñoz N. et al., 2002) long-term use of oral contraceptives (Moreno V, et al., 2002) and a high numbers of sexual partners like the main risk for the acquisition of HPV infection (Renschmidt C et al., 2013) increases the risk of cervical cancer. Poverty is also a risk factor for cervical cancer. Many low-income women do not have ready access to adequate health care services, including Pap tests. This means they may not get screened or treated for cervical pre - cancers (ACS, 2013). Refer to (WHO, 2013; NCI, 2014) regular screening of women between the ages of 21 and 65 years with the Pap test decreases their chance of dying from cervical cancer. If the screening is both the Pap test and the HPV test it should be repeated every 5 years. But, a little is known about knowledge that Vlora`s women in general have toward cervical cancer, attitudes and factors that influenced them to attend a screening in conditions where the current cervical cancer screening programs and practices in Albania are, however casual or nonexistence (Poljak et al., 2013). The objective of this study is to assess all these factors based on the conceptual framework Health Belief Model (HBM) the most commonly used theory in health education, promotion and screening (National Cancer Institute [NCI], 2005). From "Theory at a Glance: A Guide For Health Promotion Practice (Second Edition, 2005) in a base of HBM there are four concepts: perceived susceptibility, perceived severity, perceived benefits, perceived barriers. HBM suggests that behavior is also influenced by cues to action and self-efficacy. Perceived susceptibility or personal risk is the beliefs that a person has about the chances of getting a condition with potential change strategies to help the individual develop an accurate perception of his or her own risk. Perceived severity represented the beliefs about the seriousness of a condition and its consequences and recommended action. Perceived benefits the beliefs about the effectiveness of taking action to reduce risk or seriousness and explain how, where and when to take action and what the potential positive results will be. Perceived barriers represented beliefs about the

material and psychological costs of taking action with potential change strategies like reassurance, incentives, assistance and correct misinformation. Cues to action represented factors that activate "readiness to change" and provide "how to" information, promote awareness. Self-efficacy represented the confidence in one's ability to take action. Different studies found this model very valid and reliable tool in assessing and understanding the women's health beliefs, respect of cervical cancer and Pap test (Walsh JC, 2006; Tacken MA et al., 2007; Guvenc G et al., 2011).

2. Research methodology

3.4. Participants and study design

This is a cross-sectional study, descriptive and analytic. This research was conducted in several institutions and private enterprise in Vlora from March to May 2014. A representative by 200 healthy woman aged between 25-65 years old with different socio-economic and educational level was the sample design. Informed consent was obtained at the time of data collection, and confidentiality and anonymity were assured.

Inclusion Criteria: Women aged between 25 and 65 years old without history of hysterectomy.

Exclusion Criteria: Women outside the age group 25-65 years old.

2.2. Material and procedure

For the data collection was used the a structured, self administered questionnaire adopted in base of theoretical, conceptual framework HBM refer to survey instrument, the Cervical CAM of Cancer Research UK (2011).The questionnaire was divided into six sections: included general demographic characteristics, knowledge of cervical cancer and Pap test examination, attitudes and belief for cervical cancer and Pap test, practices and behaviors for cervical cancer, Pap test and cues to action toward cervical cancer and screening.

2.3. Statistical analysis

The Epi info 7 software version 7.1.3.10 for Windows (CDC-Epi Info™) was used for the data calculation, including frequencies, means, standard deviations and confidence interval for discrete and continuous study variables. Based on a cross-sectional nature of the study the objective was to summarize the association of independent and dependent variables through bivariate and multivariate analyses. We compared women who had ever had a Pap test examination of all demographic variables and different barriers part of HBM with those who had ever had none. F-test and linear regression was used to compare the two groups' variances to test if there was an association between having a Pap test and different components of HBM part of the questionnaire.

3. Results

3.1. Demographic characteristics

The sample consisted of 200 women, aged between 25 – 65 years old, Mean = 38.27, SD±9. 38

Table1: Demographic characteristics of respondents

Marital status	N	%	Level education*	N	%
Married	166	82%	University diploma	73	36.5%
Single	22	11%	High school diploma	60	30%
Divorced	12	6%	8-year education	38	19%
Widowed	2	1%	Professional education	12	6%
			Master degree	15	7.5%
			PhD degree	2	1%

*According to the educational system in Albania

73.85% (n=144) were employed full time.

84% (n=168) of women responded to live in their own house.

95% of women who responded to the questionnaire live in Vlora and only 5 % live in the country. For all demographic variables no association was found between having a Pap test and not having one, $P > 0.05$.

Table 2 shows the distribution of Pap test rates status of the women by age group.

Table 2. Ever had a Pap test?

Age-group (years)	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60+
Yes (%)	35	5	4	11.5	5	4.5	4	0.5
No (%)	65	17.5	9.5	11.5	9.5	7.5	4	1
Total (%)	100	22.5	13.5	23	14.5	12	8.5	4.5

62.79% (n=54) of women in the study reported to have a Pap test only one time of the past 5 years. The main reason was the lack of symptoms. In these circumstances women in the study retained the screening not necessary even if 77.55% of them plan to have a Pap test in the future. Also 96.48% (n=192) of women reported to make further exams if the results of a Pap test are abnormal. The rest of the women (n=7) reported that they do not have the economic possibility for further examinations.

3.2. Knowledge about cervical cancer and Pap test examination

Table 3 summarizes questions regarding cervical cancer knowledge and Pap test examination of the women in the study.

Table 3. Knowledge regarding cervical cancer and Pap test examination

<i>Variables</i>	<i>N (%)</i>	<i>Cum. Percent</i>	<i>95 % CI</i>
Cervical cancer affected the cervix of the uterus (t)	149 (74.5)	85.50%	[67.87 - 80.39]
Cervical cancer is the second most common cancer of the reproductive tract in women (t)	141(70.5)	75%	[63.66-76.72]
How often is recommended Pap test			
Every 1 year, starting from the age of 20 years (t)	87(43.72)	43.72%	[36.72-50.91]
Every 3 years, starting from the age of 20 years	43(21.61)	65.33%	[16.1-27.98]
Which age group of women is at risk of cervical cancer [30-49] (t)			
The pap test examination is used to check for cancer changes or cells in the cervix (t)	123(65.43)	100.0%	[58.16-72.2]

(t) =the correct answer to the item

Table 4 shows the women's knowledge regarding cervical cancer risk factors. Linear regression and F-test was used to test the association between women screened and not screened.

Table 4. Knowledge regarding cervical cancer risk factors

<i>Variables</i>	<i>N (%)</i>	<i>F-test</i>	<i>P-value</i>
Not going for regular Pap test examinations	84(42.00)	2.34	0.12
Starting to have sex at a young age	82(41.00)	0.02	4
Having many sexual partners	80(40.00)	1.11	6
Having a sexual partner with many previous sexual partners	64(32.00)	0.07	0.78
Infection with Chlamydia	63(31.50)	1.08	0.29
Smoking	63(31.50)	0.18	0.66
Weak immune system	61(30.50)	0.82	0.36
Infection with HPV (Human Papilloma Virus)*	55(27.50)	9.61	0.002
Long term use of the contraceptive pills	49(24.50)	0.009	0.92
I don't know	26(13.00)	0.16	0.68
Other	20(10.00)	5.22	0.02
Having a sexual partner who is not circumcised	20(10.00)	0.0007	0.97
Having many children	11(5.50)	0.38	0.53
Refuse to answer	6(3.00)	1.1	0.29
None of these	4(2.00)	0.71	0.39

Table 5. Knowledge regarding cervical cancer symptoms

Variables	N (%)	95 % CI
Vaginal bleeding between periods	95(47.98)	[40.85-55.18]
Persistent vaginal discharge that smells unpleasant	87(43.50)	[36.50-50.67]
Vaginal bleeding after the menopause	92(46.23)	[39.16-53.42]
Bleeding after sexual intercourse	62(46.23)	[39.16-53.42]
Menstrual periods that are heavier or longer than usual*	105(52.50)	[45.34-59.59]
Persistent diarrhea	111(55.50)	[48.32-62.51]

*p=0.001

3.4. Attitudes and beliefs toward cervical cancer and Pap test examination

Table 6. The association between having had a Pap test and perceived sensitivity*, Perceived risk**

Variables	Yes(%)	No (%)	Variables	Yes (%)	No(%)
You believe that you have cancer lesions			How dangerous is cervical cancer compared with others:		
Yes	13 (15.85)	17(14.41)	More dangerous than others	18(21.95)	22(18.64)
No	38(46.34)	51(43.22)	Equal to others	45(54.88)	60(50.85)
I don't know	31 (37.80)	50(42.37)	Less than others	7 (8.54)	22(18.64)
			I don't know	12(14.63)	14(11.86)
How you judge your risk to get cervical cancer			Chances to heal from cervical cancer		
I have the biggest risk	15 (18.99)	13(11.21)	Good chances	31(37.80)	45(38.46)
I have a low risk	25 (31.65)	41(35.34)	Not so good	39(47.56)	46(39.32)
I don't know	39(49.37)	62(53.45)	I don't know	12(14.63)	27(22.22)

* p - value of all variables >0.05.

**p-value of all variables >0.05, exclude less dangerous than others, p=0.05.

* p-value of all variables >0.05 except those that are written.

** p-value of all variables >0.05, except those that are written.

Table 7. The association between ever had a Pap test and perceived benefits*, emotional barriers**

Variables	Yes (%)	No (%)	Variables	Yes (%)	No (%)
Do you feel satisfied after the Pap test exam			The Pap test exam is painful	7 (8.54)	
I don't know	14 (17.07)	54(46.15)	I don't know	23 (28.05)	69 (58.97)
Yes	66 (80.49)	58(49.57)	Yes		22 (18.80)
			No	52 (63.41)	26 (22.22)
No	2 (2.44)	5(4.27)			
Is useful the regular Pap test examination			Doing a gynecologic exam is uncomfortable/embarrassed		
I don't know	2 (2.44)	27(23.08)	I don't know	0 (0.0)	7 (5.93)
Yes	79 (96.34)	83(70.94)	Yes	24 (29.27)	39 (33.05)
No	1 (1.22)	8(5.98)	No	58 (70.73)	72 (61.02)
Pap test can detect cancer lesions before symptoms					
I don't know	29 (35.37)	69(58.97)			
Yes	49 (59.76)	37(31.62)			
No	4 (4.88)	12(9.41)			

Table 8. Association between having had a Pap test and feelings of anxiety*, economic barriers**

Variables	Yes (%)	No (%)	Variables	Yes (%)	No (%)
If I make Pap test fear of the results, p=0.01			Pap test is necessary if you don't have problems, p=0.05		
Yes	43(52.44)	81(69.23)	Yes		91(77.12)
No	39(47.56)	36(30.77)	No		27(22.88)
				72(87.80)	
				10(12.20)	
Not speak freely for cancer disease, p=0.49			The Pap test examination is expensive p= 0.42		
Yes	51(62.20)	74(63.25)	Yes	43(52.44)	81(68.64)
No	31(37.80)	43(36.75)	No	39(47.56)	37(31.36)
I will be very scared if I reveal to have cancer, p=0.84			Economic impossibility affects regular examination p= 0.26		
Yes	69(84.15)	101(86.32)	Yes	54(65.85)	93(78.81)
No	13(15.85)	25(13.68)	No	28(34.15)	25(21.19)

*Correlation Coefficient: $r^2=0.03$, P-value >0.05

**Correlation Coefficient: $r^2=0.04$

3.4. Cues to action

62.50% (n=125) of women reported that the main source of information regarding cervical cancer are television, radio and internet. 34% (n=68) reported the family doctor/nurse, and for the 26% (n=52) are the posters/brochures. With the same percentage of responses, respectively 23% for each variable are journals/newspapers, friends and family. Correlation coefficient $r^2=0.04$, $p=0.31$.

81.50% (n=163) of women reported that talks with health operators is the best way to provide information about cervical cancer 37.5% (n=75) of women reported promotional campaigns on television / radio and 23% (n=45) of them reported community talks. Correlation coefficient $r^2=0.09$, $p=0.0006$.

4. Discussion

For our analysis and estimation we concentrate on a sample of 200 normal healthy women. The mean age 38.27 years, range 25-65, $SD\pm 9.38$. Having had a Pap test status of women in the study was 35%. The majority of women screened, 11.5% of them were in the age- group 35-39 years old. 65% of women in the study never had a Pap test [Table 2]. This is consistent with other studies done in less developed countries where cervical screening programmes are absent. Also, the introduction of cervical screening programs in developing countries is associated with increased participation and drastic reduction of cervical cancer cases (Sigurdsson K. 1999; Vaccarella S, et al., 2013). It found no significant association between socio-demographic characteristics and cervical screening. All various socio-demographic variables [Table 1] had equal perceived barriers of HBM model include education level, marital and working status. This is in contrast with other studies were women with a lower educational level reported being screened less than those with high educational level. Different studies also

found that , the most significant predictors of Pap test use, were marital status (being married), the lack of barriers, a family history of the cancer, older age, and increased perception of seriousness (Boonpongmanee C, et al., 2007; Berardi R, et al., 2013).

Table 3 shows the knowledge regarding cervical cancer and Pap test examination. The results show that the knowledge of women in the study may consider good. It found no statistical significance between women who had had a Pap test and those who never had a Pap test. This is in accordance with cues to action, part of HBM because having information regarding a disease, promote awareness (Second Edition, 2005).

In contrast, the women's knowledge regarding cervical cancer risk factors [Table 4] and cervical cancer symptoms [Table 5] is poor. The two groups of women (screened and not screened) are without statistical significance differences about risk factors of cervical cancer. Only 27.50% of women recognize HPV infection as a risk factor for cervical cancer, $p=0.002$. Also, 31.50% of them reported smoking as a risk factor. Not going for regular Pap tests, starting to have sex at a young age and having many sexual partners appear in the same percentage of answers respectively 42%, 41% and 40%. About the symptoms knowledge, in the questionnaire was included a symptom that there is not part of cervical cancer symptoms like persistent diarrhea, and 55.5% of women reported that as a symptom of cervical cancer. Linear regression shows that there are not differences between two groups except symptom of menstrual periods that are heavier or longer than usual, $p=0.001$. In accordance with previous studies risk factors like smoking, starting to have sex at a young age are reported in very low levels (Nadarzynski T, et al., 2012; Laranjeira CA.2013).

The results [Table 6] demonstrates that perceived sensitivity and perceived risk to cervical cancer and health motivation is quite low , $p>0.05$. Even if HBM suggests that personal risk is associated with condition with potential change strategies to help the individual develop and accurate perception of his or her own risk, .and a study conducted by Lee et al (2002) identified that a large proportion of women who do not have regular smears have a low perceived susceptibility. Factors perceived as lack of sensitivity and negligence about cervical cancer were found in previous studies (Ersin F, et al., 2013)

The association between perceived benefits, emotional barriers and ever had a Pap test [Table 7] reported statistically significant, $P\text{-value}=0.0008$, $P\text{-value}=0.006$. The results are coherent with HBM model and other studies where the relationships between patterns of multiple health behaviors and use of recommended cancer-screening tests was demonstrated (Meissner HI et al., 2009)

Feelings of anxiety, economic barriers and their association with cervical screening [Table 8]. reported without statistically significance. Was observed a higher percentage of women who were afraid of the output of Pap test examination. Also most of them report that not speak freely about the disease of cancer. Fear, inadequacy of health insurance and financial problems were frequently addressed in previous studies (Ersin F et al.,2013). It is evidence that the type and status of health insurance are one of the most important determinants in cervical cancer screening (Hsia J, et al., 2000).

Regarding variables which represented cues to action and the results of our study are in accord with other studies. The most powerful tool to enhance the readiness to change, to provide information and to promote awareness remains talks with health operators and promotional campaigns on television and radio. The influential role of health operators like motivators for women to attend cervical screening is evidenced (O'Connor M, et al., 2014). A study conducted by Espersen MM & Holten IW (2005), reveals that general practitioners have a great potential role to help women to overcome the barriers for cervical screening.

5. Conclusion

This study identified a series of women's barriers for cervical screening. Most of the perceived barriers identified were statistically significant. These perceived barriers (as cited in the study were previously studied using the Health Belief Model) influenced attendance rates at cervical cancer screenings globally.

The number of women screened was very low. Poor knowledge of symptoms and risk factors for cervical cancer was evidenced. The results of study suggest that HBM is a very useful framework to find and build strategies for raising cervical cancer screening. Including programs to improve awareness of signs, risk factors and health insurance for the service should be targeted at women of all ages and social groups. Also, we as nurses must find effective ways to encourage women to speak freely about cancer because with information we can save lives. More research is needed in a larger population of women in order to strengthen findings.

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