RESEARCH COMMUNICATION

Knowledge, Behavior and Beliefs Related to Cervical Cancer and Screening Among Turkish Women

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Abstract

Objective: The aims of this study were to explore Turkish women's knowledge, behavior and beliefs related to cervical cancer and screening. **Methods:** The study was performed in two cities in the East of Turkey between September 2009 and April 2010, with a sampling group of 387 women. Data were collected by means of an interview form with the Health Belief Model Scale for Cervical Cancer and Pap Smear Test - Turkish Version. **Results:** Women in the research group were found to have poor knowledge, inadequate health behavior and low/medium level false beliefs regarding cervical cancer screening. There was relation between health beliefs and characteristics of women and particularly education (F = 10.80, p = 0.01). Similarly, it was found that Pap smear barriers were influenced by demographic characteristics and that women with low-level education (p = 0.001), divorced women (p = 0.05), women with low-income(p = 0.05), women who gave their first birth when they were 18 or younger (p = 0.05) and women not applying any contraceptive method at all (p = 0.01) were determined to have negative Pap smear barriers. **Conclusions:** Primarily the knowledge, attitudes and beliefs of women in the target group should be evaluated to increase their participation in cervical cancer screening and to prepare effective education strategies.

Keywords: Cervical cancer screening - pap smears - knowledge - behaviors - beliefs - Turkey

Introduction

Developed countries have seen a dramatic decrease in the incidence of, and mortality from, invasive cervical cancer in the last 50 years because of mass routine screening with the Pap smear (Brotto et al., 2008). In contrast to this striking result, cervical cancer is the second most common cancer among women and the leading cause of cancer death in developing countries due to inadequate use of the screening services. According to data published by the Turkish Ministry of Health for the year 2008, cervical cancer ranked third among genital cancers, with 763 cases and an incidence rate of 2.2 (Ministry of Health, 2008).

Cancer of the cervix is a preventable disease, as it is pre-detected by a long, treatable pre-invasive stage that can be detected with routine cervical screening, of which the Pap smear remains the primary tool. Early detection and treatment of cervical cancer through screening programs significantly reduce the morbidity and mortality of these diseases (Word Health Organization 2005; Mosavel et al., 2009). However, some studies have reported that early detection practices are affected by poor knowledge, wrong behaviors and beliefs related to cervical cancer screening in women (Paskett et al., 2004; McMullin et al, 2005; Lee

et al., 2007; Brotto et al., 2008; McFarland, 2009) Such behaviors and beliefs may have a significant impact on the women's decision to take preventive action against cancer of the cervix. For example, in the studies on the issue (Yu & Seetoo, 2003; Juon et al., 2004; Paskettet et al., 2004; Lee et al., 2007) reported that lack of knowledge and confusion about breast and cervical cancer screening would lead to inadequate use of screening services. Another studies (Paskettet et al., 2004; Brotto et al., 2008; Lee et al., 2008) found that most of the women have the unhealthy behaviors, do not have Pap smear test regularly and do not fulfill the requirements for the test results to be accurate. Another important factor that affects applications for early diagnosis of cervical cancer is women's beliefs. The studies carried shown that social beliefs and values contribute to women's level of participation in screening for breast and cervical cancer and create a barrier to the Pap test behaviors and screening. (Matin & LeBaron, 2004; Paskett et al., 2004; Donnelly, 2006; Wong et al., 2008;). When we examine the researches made on this issue in different regions and groups in Turkey, we come to realize that the number of these researches is limited and that they are related to the rate of women applying Pap smear (Özmen, 2004; Akyuz et al., 2006; Yucel, 2006). According to the results of these studies, the rate of women

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applying Pap smear does not reach to the aimed level and the reasons for this are stated as socio-demographic characteristics, attitude to a gynecologic examination and the awareness of the women of cervical cancer aas well as the Pap smear test.

This investigation was performed at two Cities, located in Eastern region of Turkey. In each of these two cities, there are Medical Faculty Research and Practice Hospitals serving Eastern Region. Despite the fact that service is given in these hospitals for early diagnosis and treatment of cervical cancer, majority of the women are inadequate use of screening services. Accordingly, low awareness of the women for cervical cancer screening and inefficient utilization of health services may be affected by poor knowledge, wrong behaviors and beliefs related to cervical cancer screening in women. And the poor knowledge, wrong behaviors and traditional values of the women may create a barrier to the Pap test behaviors and screening. But it is not known cause of this case and literature review didn't find studies carried this region.

Nurse practitioners (NPs) have an opportunity to affect the incidence and mortality of cervical cancer by improving screening practices of women. While preparing their initiations, it is extremely important for nurses to know the knowledge level, the health behavior and health beliefs of the women living in the region in order to improve their participation in cervical cancer screening and increase their benefiting from the services offered. At the same time, this information may help in planning nursing initiatives that are created to support and encourage women at the first step to improve their participation in cervical cancer screening. Currently, education of women is focused on in programs carried out to increase the participation of women in cervical cancer screening education. In studies on the efficiency of training shown that culturally specific educational programs are more effective for raising the level of knowledge and correcting the wrong information (Jandorf et al., 2008; Hacihasanoğlu and Gozum, 2008; Holroyd et al., 2004). Accurate health care information and communication by health providers are importance to gain the true knowledge and the health behaviors and to change the false beliefs. Therefore, NPs need to address the knowledge, attitudes and beliefs of the women about cervical cancer screening.

The purpose of the present study is to explore the knowledge, behaviors and beliefs related to cervical cancer and screening among Turkish women. It was hypothesized that early detection practices and inefficient utilization of cervical cancer screening would be affected by poor knowledge, wrong behaviors and beliefs related to cervical cancer screening in women

Materials and Methods

Study design and sampling method

The study was designed as a descriptive type to reveal the knowledge, behaviors and beliefs related to cervical cancer and screening between September 2009 and April 2010. This investigation was performed in Erzurum and Erzincan located in Eastern region of Turkey, two closely neighbor provinces with similar socio-cultural characteristics, and have lower educational and socio-economic level (Turkish Population and Health Research 2008). Low education together with low socio-economic status brings along low awareness for the protection of health, ineffective use of health services and traditional values and practices. Because, according to Turkish Population and Health Survey (2008), health indicators in this area are far behind other areas of Turkey.

Sample

For the sample, women were recruited from the outpatient clinics of the gynecology and obstetrics departments of the hospitals, where patients applied for their gynecologic examination, control and antenatal care. During this period of study, we visited the outpatient clinics for two days (Thursday and Friday) every week and we interviewed the women who were waiting for examination or control/check up/follow up or who had already completed medical procedures. Women included in the scope of sampling in the study were selected with random sampling method and married or divorced agreed to participate in the study included in the research. The sufficiency of the sample size was evaluated by the power analysis, and it was determined that an study group with 347 participants, each represents the population by 80% power in 95% confidence interval. But this number was raised to 10 % (387) for unresponsive probability.

Collecting Data

Interview Form and The Health Belief Model Scale for Cervical Cancer and Pap Smear Test –Turkish Version were used to collect the data.

Interview Form: This form was developed by the researchers as a result of the literature review. The first part consisted of questions related to demographic characteristics (age, length of employment, marital status, level of education, the age of first marriage, number of abortions, income status, family history of cervical cancer, and use of contraceptive method).

In the second part, however, there were questions as to the participants' knowledge and behaviors related to cervical cancer and screenings. This section consisting of multiple-choice and open-ended questions was created in reference to the web site of American Cancer Society. And evaluation of questions specified in Table 2 and related to the knowledge level of the participants was performed by researchers. Such questions as 'What is Pap smear test for?', 'Who has this test performed?' and 'How often do they have it performed?' made up the multiple choice questions. As they had one right answer, it was evaluated as 'She knows.' Or 'She does not know.' The questions, such as 'What kind of behaviors cause cervical cancer?', 'What are the symptoms of cervical cancer?', 'What should be done for Pap smear test to yield an accurate result?' and 'What are you known about cervical cancer vaccine?' made up the open-ended questions. These questions covered the topics that the women frequently heard from the TV or read in newspapers, magazines or through health care training. Therefore, they were expected to give at least 4-5 answers about each question. If a woman was able to write 1-3 correct answers, she was

considered as "she does not know". If she was able to give four or more correct answers then she was considered as 'she knows'. The assessment of the answers to the questions regarding the location of reproduction organs was made in a similar way. The women were asked to write the names of reproductive organs (vulva, vagina, uterus, tubes and ovaries) pictured on the interview form and indicated by the arrow. Those being able to write only 1-3 names were considered as "she does not know". and those being able to write 4-5 names were considered as 'she knows'.

Health Belief Model Scale for Cervical Cancer and Pap Smear Test -Turkish Version: It was used to determine women's beliefs regarding cervical cancer and screening. This scale was developed by adapting Champion's Breast Health Survey (Champion, 1993; Guvenc, Akyuz, & Açikel, 2010) on breast cancer screening. Factor analysis of Scale for Cervical Cancer and the Pap Smear Test yielded five factors: Pap smear benefits and health motivation, Pap smear barriers, seriousness, susceptibility, and health motivation. Cronbach alpha reliability coefficients for the five subscales ranged from pap smear benefit/health motivation 0.86; pap smear barriers 0.82; seriousness 0.78; susceptibility 0.78; and health motivation 0.62. Scale contains a total of 35 items in the scale categorized as follows; Pap smear benefit/ health motivation (8 items), Pap smear barriers (14 items), seriousness (7 items), susceptibility (3 items), and health motivation (3 items). The scale is a Likert type instrument scoring from 1 to 5 where 'strongly disagree' corresponds to 1 point, 'disagree' to 2 points, 'neutral' to 3 points, 'agree' to 4 points, 'strongly agree' to 5 points. Higher point values indicate that perceived susceptibility, and/or perceived seriousness is increasing.

The reliability of these subscales (as utilized in this study) ranged from pap smear benefit/health motivation 0.83 , pap smear barriers 0.79, seriousness 0.79, susceptibility 0.74 and health motivation 0.83.

Data of the study were gathered from among the married or divorced women, because sexuality in our society is still a taboo and can only be accepted within the familial environment. Accordingly, single women have hardly been done as having their Pap smear tests performed; they even cannot express this clearly even if they do so. The interviews were conducted at a silent and available part of the hospitals. To ensure standardization of data collection, data were collected by two of the researchers (AS and SK) (one person in each city) conducting the study. They were started after the preliminary interviews with 4-5 women, and the interviewers used everyday language, avoiding medical terminology as much as possible. Each of the interviews lasted approximately 40-50 minutes.

SPSS 13.0 for Windows Version (Statistical Package for Social Science for Windows) package program was used for the analysis of the quantitative data of the research. Analyses performed were descriptive statistics (means, standard deviations, ranges, and frequencies), independent t test, and analysis of variance (ANOVA).

Ethical principles

After Institutional Review Board approval had been obtained, data were collected. The purpose of the investigation was explained to the participants and attention was paid to the fact that they were willing to participate. Furthermore, it was explained to the participants that they had the right to withdraw from the investigation and the information would be kept strictly confidential. Also, participants were told that their decision of whether to participate in the research would not affect the healthcare services given to them.

Results

Demographic Characteristics

Analyzing the demographic characteristics of the cases, it was seen that their average age was 34.9±10.2, 38.2 % were graduates of high-school, 97.4 % of them were married, 35.7 % were unemployed, 68.5% had equal income and their spending, the age of their first marriage (78.0 %) was 19 and over, 76.5 % haven't had abortions, and 42.9% have not used effective contraceptive methods (Table 1).

Knowledge about cervical cancer and screening

Half the women (57.9%) did not know the place of their reproductive organ, especially where their cervix, uterus is. Thus, they did not know where cervical cancer

Table 1. Descriptive Features of Study Participants

Descriptive features	N (n=387)	%
Educational status		
Literate	35	9.0
Primary school graduate	106	27.4
Secondary school graduate	98	25.3
High-school	148	38.2
Marital status		
Married	377	97.4
Widowed	10	3.2
Occupational status		
Employed	138	2.6
Unemployed	249	35.7
Total income		
My income does not meet my outcome	79	20.4
My income meets my outcome	265	68.5
My income exceeds my outcome	43	11.1
Age at first birth		
≤ 18 age	85	22.0
≥ 19 age	302	78.0
Abortus status		
0	296	76.5
1-2	91	23.5
≥3	0	0.0
Use of contraceptive method		
Never	166	42.9
Condom	83	21.4
Intrauterin vehicle	86	22.2
Oral contraseptive	44	11.4
Tube ligation	8	2.1

could develop. Similarly, half the women (57.1%) were not aware of the causes of cervical cancer. And those who knew them stated that they had obtained this knowledge from the media, internet, posters at hospital and the trainings given by health staff. Most women (70.0%)

knew the frequency of cervical cancer and who should have a test performed (65.6). However, only half of them know how often this test should be conducted (56.3%). The other half had wrong information that it should be conducted every 5-10 years. In order to obtain correct results from the Pap smear tests getting to be made, tests are important in applications. Majority of the women in study (66.1%) had some knowledge that would make the test result wrong, which was that vagina should be washed before the Pap smear test. They had wrong information about the HPV injection which has been emphasized in our country recently, and most women (82.9%) regarded this injection as the female children's only protective method against cancer, dismissing the other risk factors. During the interviews, most women have stated that 'no matter at what cost it may be, I will have my daughter take this injection and thus, she will be completely protected from cancer' (Table 2).

Behaviors about cervical cancer and screening

Majority of the women (74.4%) stated that didn't have knowledge about cervical cancer and screening. Majority of the women in the study (96.6%) did not have smear

Table 2. Knowledge Status Related to Cervical Cancer and Screening of the Participants

Knowledge status	Knowledge	
	Has	Has not
Location of reproductive organs	163 (42,1)	224 (57,9)
Causes of cervical cancer	166 (42,9)	221 (57,1)
Frequency of cervical cancer	271 (70,0)	116 (30,0)
Knowledge about cause what they have pap smear test		
	269 (69,5)	118 (30,5)
Knowledge about whoever have pap smear test		
	254 (65,6)	133 (34,4)
Knowledge about what interval they must have pap smear test		
	218 (56,3)	169 (43,7)
Applications for conclusion of true pap smear test		
	131 (33,9)	256 (66,1)
Knowledge about cervical cancer' vaccine		
	66 (17,1)	321 (82,9)

test conducted regularly. So far the rate of the women who had this test was so low (29.5%). When the women in this group were asked about the reason for them to have this test, most of them (83.0%) stated that they did so upon their doctors' recommendation or as a routine practice of the hospital where they had gone. 92% of these women said that they had obtained normal test results but it was determined that they had not carried out the pre-test requirements for the result to be true. Of these wrong practices, the most common is the belief that vagina should be washed before the examination so that there will not be smell during examination and smear test. The reasons that disturb women most of all in conducting smear are as follows; male doctor (25.3%), examination desk (24.3%), embarrassment (19.6%) and fear of pathological results (17.6%) (Table 3).

Beliefs about cervical cancer and screening

In our study, women had a moderate level perceived benefit (32.2±6.3) for cervical cancer screening. They did not under believe the regular health practices and having

Table 3. Behavior Related to Cervical Cancer and Screening of the Participants

Behaviors	N (n=387)	%
Story of cervical cancer in family		
Yes	22	5.7
No	365	94.3
Cervical cancer and screening		
I have knowledge	99	25.6
I do not have knowledge	288	74.4
Having a smear test at regular intervals		
Yes	13	3.4
No	374	96.6
I have never had a smear test so far		
Yes	115	29.5
No	272	70.5
Why? (n=115)		
At her own will	32	27.8
Others	83	72.2
(doctor request, routine practice of institution)		
Smear test result (n=115)		
Normal	92	80
Others (infection, doubtful, etc,)	23	20
Accurate Pap smear test result practices (n=115)		
Done	17	14.8
Undone	98	85.2
Disturbing points in having a smear made		
Male doctor	98	25.3
Desk	94	24.3
Embarrassment	76	19.6
Fear of pathological result	68	17.6
Speculum (examination tools)	39	10.1
Smear brush	4	1.0
No problem	8	2.1

Pap smear test made to be protective against cervical cancer. According to lower perceived seriousness (24.7 ± 5.3) the women did not believe it very much that cervical cancer would cause negative side effects and that it would affect all their lives and relationships. The women who participated in the study had a lower perceived susceptibility (7.5 ± 2.3). According to this finding, they thought that it was rather unlikely for them to have cervical cancer in the future or at a later period of their life. According to another finding of the study, women had a lower perceived health motivation (9.6 ± 2.7). Therefore, they did not have such adequate motivation as going on a well-balanced diet, doing exercises, and going for controls regularly in order to protect their health. Furthermore, women have more negative Pap smear barriers (36.7 ± 9.0) (Table 4). These barriers consisted of fear/anxiety for

Table 4. Health Beliefs Related to Cervical Cancer and Screening of the Participants

Beliefs	X±SD	(min-max values)	Cronbach
Pap smear benefit/Health motivation			
	32,21±6,25	(8-40)	0.83
Pap smear barriers	36,73±9,04	(14-70)	0.79
Seriousness	24,68±5,28	(7-35)	0.79
Susceptibility	7,50±2,32	(3-15)	0.74
Health Motivation	9,64±2,55	(3-15)	0.83
Total İtim	110,77±14,43	(48-170)	0.81

Table 5. The Data Concerning the Comparison Between Descriptive Features of Study Participants and Health Beliefs Related to Cervical Cancer and Screening

Descriptive features	Pap smear benefit/ Health motivation X (±SD)	Pap smear barriers X (±SD)	Seriousness X (±SD)	Susceptibility X (±SD)	Health Motivation X (±SD)	TOTAL X (±SD)
Educational status						
Literate	31,31±5,55	43,83 ±12,09	25,51±4,30	7,06 ±2,46	9,49±2,55	117,20±17,55
Primary school graduate	31,46±5,79	38,76±7,83	24,97±5,58	7,59 ±2,44	9,38±2,52	112,17±14,18
Secondary school graduate	32,02±6,02	36,17±7,90	23,96±5,46	7,14±2,11	9,50±2,57	108,80±15,04
High-school	33,09±6,77	36,73±9,04	24,68±5,27	7,50 ±2,31	9,64±2,55	110,77±12,91
	15.965	40.08	2.952	6.375	2.282	10.8
P	0.001	0.001	0.399	0.095	0.516	0.013
Marital status						
Married	31,31±6,14	36,58 ±8,97	24,72±5,20	7,51±2,30	9,68±2,54	110,80±13,94
Widowed	28,70±8,97	42,30 ± 10,49	23,30±7,95	6,90±2,80	8,20±2,57	109,40±28,32
F	1424	1208.5	1690.5	1592	1239	1809
P	0.186	0.05	0.057	0.039	0.062	0.082
Total income						
My income does not meet my outcome						
	31,78±7,23	38,04 ±10,06	25,47±5,97	7,52 ±2,39	8,96±2,75	111,77±19,21
My income meets my outcome						
	32,19±5,94	36,82 ±8,81	24,50±5,06	7,42 ±2,33	9,26±2,41,	110,74±13,05
My income exceeds my outcome						
	32,21±6,24	36,73±9,04	24,68±5,27	7,50±2,31	9,64±2,55	110,77±14,43
F	2.272	5.867	3.24	0.384	6.983	1.441
P	0.25	0.05	0.198	0.825	0.03	0.486
Age at first birth						
≤ 18 age	30,96±6,74	39,81 ±9,72	25,14±5,39	7,02 ±2,31	9,27±2,63	112,21±18,24
19 age ≤	32,57±6,03	36,73 ±9,04	24,68±5,27	7,50 ±2,31	9,64±2,55	110,77±14,63
F	0.368	2.373	0.016	0.696	7.606	7.606
P	0.037	0.05	0.001	0.365	0.13	0.297
Use of contraceptive method						
Never	32,24±5,95	38,04±8,77	24,83±5,47	7,54 ±2,50	9,75±2,54	112,39±14,05
Condom	33,71±4,99	34,80±8,73	24,88±4,76	7,55 ±2,28	9,99±2,36	110,93±14,01
Intrauterin vehicle	31,48±5,46	36,65±9,61	24,92±5,14	9,51±2,49	9,51±2,49	109,92±13,82
Oral contraseptive	30,80±9,35	34,91± 8,68	23,66±6,23	9,18±2,78	9,18±2,78	105,93±17,68
Tube ligation	30,13±6,24	36,73±9,04	24,68±5,27	7,50± 2,31	9,64±2,55	109,75±16,91
F	8.54	13.74	2.351	0.542	4.246	7.331
P	0.129	0.01	0.799	0.991	0.515	0.197

having Pap smear test fear of gynecological examination, preferring female physicians, giving priority to problems rather than Pap smear test.

The data concerning the comparison between descriptive features of study participants and health beliefs related to cervical cancer and screening

We found education to be important in the total scale while studying the relation between the women's health beliefs and their demographical characteristics (F = 10.80, p = 0.01). Women's beliefs towards cervical cancer screening were influenced by the level of education. As the educational level rose, the women came to believe more in the fact that regular health applications and having Pap smear was protective against cervical cancer and their barriers towards having Pap smear made decreased. When the relation between the sub-dimensions of health belief scale and the demographic characteristics was studied, especially Pap smear barrier was determined to be related to demographic characteristics. Women with low-level education (p = 0.00), divorced women(p = 0.05), women with low-total income(p = 0.05), women who gave their first birth when they were 18 or younger(p = 0.05) and women not applying any contraceptive method at all (p =

0.01) were determined to have negative Pap smear barriers (Table 5).

Discussion

This study describes the knowledge, behaviors and beliefs of the women living in the East of Turkey related to cervical cancer and screening.

This study found a relatively low level of knowledge about cervical cancer and cervical cancer screening among Turkish women, which is consistent with the findings from other studies (Lee et al., 2007; Ackerson and Gretebeck, 2007; Ho et al, 2005; Gupta et al., 2002). According to the findings of the present study, majority of the women have poor knowledge about the following questions: In which part of the body does cervical occur? What leads to the occurrence of this sort of cancer? What can be done to prevent it? What is Pap smear test? How often should it be applied? What should be considered for the test to yield a positive result?

It is regrettable that women should be little informed about such a type of cancer which is possible to protect against and detect early and which is commonly seen in

the developing countries. Why it is to our regret is because the fact that they have poor knowledge about it will affect their use of Pap smear in a negative manner. In the studies on the issue (Hong, & Seetoo, 2003; Juon et al, 2004; Lee et al., 2007; Paskett et al, 2004), it has been determined that lack of knowledge and confusion about breast and cervical cancer screening would lead to inadequate use of screening services. For example, it was reported in a study by Lee et al. (2008) that the low level of knowledge affects the use of Pap test. Some similar results have been obtained in our study. Half the women interviewed do not know who should have the Pap test conducted and state that it should be conducted every 5-10 years. These data show how important it is, for the sake of an increase in the participation in cervical cancer screening, to make up educational entrepreneur strategies, to raise the level of knowledge, and to correct the wrong information. The results of the research carried out by Gözüm, et al., (2010) and Hacıhasanoğlu & Gözüm (2008) in the region where our research was made show similar features. In their study, they changed with different education patterns the health beliefs of the women towards breast cancer screening and increased their knowledge of breast self-examination. In another study on the efficiency of training (Prog Community Health Partnersh, 2008), culturally specific educational programs are more effective and this education increases the frequency of breast and cervical cancer screening.

According to another finding of the study, most of the women do not have Pap smear test regularly. In this respect, the results of researches conducted in different regions of Turkey on different groups have similar characteristics. This rate was found to be 12%, by Ozmen (2004), 24% by Yucel (2006) and 51% by Akyuz et al. (2006) in their survey. On the other hand, those who have the test (a request ordered by the doctor, routine institutional practice, etc.) do not fulfill the requirements for the test results to be accurate. The behaviors of having a regular Pap smear test are quite significant in preventing the morbidity and mortality of cervical cancer. Although this service is offered free of charge, women do not have this test of keep reluctant to do it. In literature (Gupta et al., 2002; Holroyd et al., 2004; Fernandez et al., 2009), traditional values as well as the level of knowledge are reported to be important in the application of such health behaviors as Pap test. In a study on various women of different ethnic groups, such as Indian, Indo-Canadian, Canadian, East Asian and Euro-Canadian Women (Brotto et al., 2008), Pap test behaviors of the Indian and East Asian women groups were found as lower than those of the Euro-Canadian women. Reviewing the results of these studies, we see that traditional values are important and they affect health behaviors. According to our observations in the research area on women's health behavior the permission of the husband and mother–in-law may be significant for a married female ingoing to a health center and having health screening. Similarly, due to the social values and beliefs, some women in this region might be wash their vaginas, especially after a sexual intercourse. They report that by doing so, they feel cleaner and fulfill their religious practices more peacefully. In contrast to

their belief, the process of washing damages and destroys the flora of vagina and pre-Pap test washing affects the ability to take accurate results. As reported in our study and two other studies (Matin & LeBaron, 2004; Paskett et al., 2004; Wong et al., 2008;), religious and cultural factors create a barrier to the Pap test behaviors and cervical cancer screening. Matin and LeBaron (2004), examined the immigrant Muslim women's utilization of preventive health care against breast and cervical cancer and determined that these women's religious and cultural values, such as virginity and bodily privacy, play a preventive role in their reference to such health care. Among the behaviors affecting among the factors that affect the Pap test behaviors are the male doctor and the feeling of embarrassment. Women in Turkey stated in the research made by Guvenc et al. (2010) that they preferred to see a female physician and that they were embarrassed to have a smear test. The reasons for the barrier are reported, as in some other studies (Kim et al., 1999; Nguyen et al., 2000; Paskett et al., 2004; Dohan et al., 2007; Allahverdipour & Emami, 2008), to be caused by religious and cultural factors. Wong et al. (2008) reported, for example, that due to religious affiliation and cultural beliefs, Muslim women in particular felt most comfortable with female health care providers. Research has shown that easy access to female doctors contributed to the increased likelihood of receiving a Pap smear test (Nguyen et al., 2000; Holroyd et al., 2004; Paskett et al., 2004; Wong et al., 2008). According to the results of our study and these studies, embarrassment, stigma towards pelvic examination, and anticipation of pain and disturbance during the procedures have been found as factors that prevent the regular Pap test behaviors. Therefore, accurate health care information and communication by health providers may be important to close the gap between women's subculture and that of health professionals, thereby eliminating the feelings of stigma and pain perception toward cervical screening.

The Papanicolaou (Pap) smear test for cervical screening is a widely used and effective means to reduce the morbidity and mortality rate due to cervical cancer through early detection. Despite these benefits, many women have never been screened or are not screened at regular intervals. Though there are many reasons for it, it is reported to be largely caused by the beliefs resulting from religious and cultural values (McMullin et al., 2005; Donnelly, 2006; Lee et al., 2008; Wong et al., 2008; McFarland, 2009; Montgomery et al., 2010). According to the health belief model (Guvenc & Açikel, 2010), the higher the women's positive beliefs are about perceived benefits of Pap smear test, susceptibility, seriousness and health motivation, the higher their participation in regular Pap smear test practices is. In our study, however, it was determined that women's beliefs about this issue are at a medium level. As mentioned in other studies (Kim et al., 1999; Ackerson & Gretebeck, 2007; Lee et al., 2008; Dang et al., 2010), the most important reason for this is explicable by lack of knowledge. We have found similar results in our study and determined that women's health beliefs were largely influenced by their educational level and women with low level of education had negative

health beliefs towards cervical cancer screening. These results indicate how important education is in making women acquire positive health beliefs and behaviours. The results of Hacihasanoglu's study (Hacihasanoğlu and Gozum, 2008) demonstrate that the education offered is effective in terms of increasing accurate perception, and leads to positive health behaviors.

According to health belief model, (Guvenc & Açikel, 2010), again, the high beliefs about Pap smear barriers cause negative behaviors in having the test. In our study, it was found out that women have a moderately high level of beliefs about Pap smear barriers. Again, considering to the results of our research, we determined that there was relation between Pap smear barriers and the demographic features and that women with low-level education, divorced women, women with low income, women who gave their first birth at a very young or early age, and women not applying any contraceptive method had negative Pap smear barriers.

The studies on the issue (Dohan et al., 2007; Allahverdipour & Emami, 2008) have yielded to similar results, emphasizing that lack of knowledge, cultural values and religious beliefs cause a significant barrier. Especially in Eastern and Asian societies, barriers are significantly caused by the privacy of woman's body, their lack of a say on their own lives, their traditional roles in meeting the needs of their family before their own needs and their thought that there is no need for them to see a doctor in the absence of any symptoms for a diseases. Education that addresses culture-specific beliefs could be effective in increasing cervical cancer screening utilization among Turkish women. Culture-specific information could focus on not only the importance of receiving screening when one does not have symptoms but also the strategies to overcome the emotional discomfort and practical difficulties.

Potential limitations of this study should be considered. The research was carried out on a small group of samples in the eastern region of Turkey and this sampling group is insufficient in terms of to reflecting the entire region. Moreover, there are traditional, social, cultural, and economic differences within the country. When the women in this region are compared with the ones in the west, it appears that their educational and socio-economic levels are lower. Therefore, they may have different beliefs and attitudes from the women in the west. Further research with a larger sample including women from various geographical areas is needed.

In conclusion and recommendations, according to the data, the women in the research group have poor knowledge, inadequate health behavior and low/medium level false beliefs regarding cervical cancer screening. In view of these results: Knowledge, attitude and beliefs of the women in the targeted group should be evaluated in order to increase the participation of women in cervical cancer screening and to prepare effective teaching strategies; the knowledge, cultural beliefs and structural barriers influence cervical cancer screening and Health Belief Model Scale for Cervical Cancer and Pap Smear Test may help to develop strategies to enhance compliance with cervical cancer screening and Pap smear follow-up;

culturally specific educational programs prepared taking into consideration the knowledge, attitudes and beliefs of women will increase participation in units serving for cervical cancer screening and encourage women in this regard; educational programs, counseling, outreach programs, and community-based interventions will help to improve the uptake of Pap smear in Turkey.

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