

Original Article

Evaluation of the PAP Smear Test Status of Women and Affecting Factors

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Abstract

Objective: This study was conducted to determine the status of women regarding participation in Pap smear testing and affecting factors.

Method: The study was planned as cross-sectional and descriptive. The sample of the study consisted of 192 women who applied at a family health center in Istanbul between January 1 and May 30, 2015. "Personal Information Form" and "Health Belief Model Scale" were used to collect the data.

Results: It was determined that the average age of women was 36.02 ± 7.59 , and 33.3% had university and post-graduate degrees. It was determined that 83.9% of the women had knowledge about the pap smear test and 66.1% had previously got it. It was determined that there was a statistically significant difference between the average of education level, working status, smoking and gynecological infection status of the women and the average score of the Health Belief Model Scale. In addition, in the women who had Pap smear test, the health motivation score averages were found to be lower in the subgroups of the Health Belief Model Scale, while the mean perception score of obstacle perception was low.

Conclusion: Factors affecting women's pap smear test awareness were found to be educational level, working status, smoking status, and gynecological infection status in the findings obtained from this study. It is of great importance that the community is informed about these reasons, as these can be prevented.

Keywords: Pap Smear Test, Cervical Cancer, Health Belief Model

Introduction

Cervical cancer is the fourth most common cancer in women worldwide after breast and colorectal cancers and is an important public health problem (Ferlay et al., 2012). In Turkey, it is the most common gynecological cancer (Waxman, 2005; Gul, 2005). According to the 2012 GLOBOCAN cancer incidence report of International Agency for Research on Cancer (IARC), the incidence of cervical cancer was 5.5 / 100.000 in Australia, 4.4 / 100,000 in West Asia, and variable rates due to differences in color and origins in the United States were reported (White Race: 7,7/100.000, Latin / Hispanic: 12,5/100.000, African / American: 10,7/100.000) and in Turkey, it was reported as 4.3/100.000 (Ferlay et al., 2013). It is also the second most common diagnosed cancer and the third most common cancer type of causing death in women living in underdeveloped countries. In 2012, it was determined that 527,624 new cases were diagnosed, 265,672 patients were lost, and this rate was 7.5 per 100,000 in all female deaths related to cancer (Bruni et al., 2017).

The most important factor determining prognosis in cervical cancer is early diagnosis (Shekhar, 2013). Early diagnosis is the most effective way to reduce the mortality and morbidity rate and extend the life span in cervical cancer. The presence of a preinvasive stage of cervical cancer, the ability to detect and effectively treat patients at this time is an important feature of this disease and allows screening and early diagnosis (Kanbur & Capik, 2011).

Ensuring that the diagnosis of Pap smear screening test, which enables the early diagnosis of cervical cancer, to be recognized, is an important intervention for public health and especially for women's health (Ozan & Ertem, 2011). When the general principles are fully followed, diagnosis of preinvasive cervical lesions and appropriate treatment and morbidity due to cervical cancer can be reduced by 70% (Ozdemir, 2011). However, cervical cancer in developing countries remains a major problem because of the lack of regular scans (Ertem, 2009; Naik et al., 2012).

According to the World Health Organization, the incidence of cervical cancer can be reduced by 64% with a Pap smear test performed every 10 years (Soler et al. 2000). The annual pap smear test is expected to reduce a woman's risk of dying from cervical cancer from 40/10000 to 5/10000

(Soler et al. 2000). For this reason, one of the most effective ways to prevent women's death due to cervical cancer is to identify risk groups and take precautions for them. It is also an important health problem that how the cervical cancer and the Pap smear screening test which is useful for early detection of cervical cancer are known by the society and are applied by large masses. Therefore, this study was conducted to determine women's status of getting pap smear test and affecting factors.

Method

This descriptive and analytical study was carried out in the family health center of a region with a moderate socio-economic level in Istanbul. The universe of the study consisted of all women between the ages of 15 and 49 who applied to a family health center in Istanbul between January,1 and May, 30, 2015.

For the obtained data to be representative of the universe, it was calculated with a 95% confidence level and an acceptable 5% error margin, using a sample formula with unknown number of elements at an adequate number. According to Turkey United Database 2013, the rough rate of cervical cancer was determined as 5.2/100.000 (Turkey Cancer Statistics 2016). Accordingly, the sample size is calculated as 192. A total of 192 women who agreed to participate in the study and met the inclusion criteria formed the sample of the study.

The criteria for inclusion in the study consisted of being at the age of 18-49 and being literate, volunteering to participate in the research and being involved in the family health center where the study was conducted. Women with inadequate communication and mental impairment and inactive sexual life were excluded from work.

Data Collection Tools: "Personal Information Form" and "The cervical cancer and Pap Smear Test Health Belief Model Scale" were used in the collection of data.

Personal Information Form: The Personal Information Form was developed by a review of the literature. The form consists of a total of 21 questions including questions about the socio-demographic characteristics of women and the level of knowledge about pap-smear, which was developed by researchers by reviewing the literature.

The cervical cancer and Pap Smear Test Health Belief Model Scale: This scale was developed by Guvenc et al. (2011) as a 5-point Likert-type scale. This scale has 35 items in five subscales of susceptibility to cervical cancer (1-3 items), seriousness (4-10 items), health motivation (19-21 items), Pap smear benefits/health motivation (11-18 items) and Pap smear barriers (22-35 items). All items of the subscales have the following five-point Likert-type response choices: completely disagree (1 point), disagree (2 points), neutral (3 points), agree (4 points) and completely agree (5 points). Each of the subscales was evaluated separately. There was no total score; instead, five subscale scores were obtained for each participant. High scores indicate increased likelihood of developing cervical cancer and a serious attitude towards and high motivation to have a Pap test. Excluding subscale of barrier perception, all other subscales were positively related to behavior of having a Pap test. The high score of barrier perception shows that participants have high barriers for having the Pap test. In this study, the internal consistency coefficient Cronbach Alpha value of the cervical cancer and Pap Smear Test Health Belief Model Scale was found to be 0.80.

Evaluation of the Data: The data were calculated with the descriptive statistical analyses of number, percentage, mean and standard deviation by using the SPSS 18.0 (Software Statistical Package for the Social Science). The distribution of the data was evaluated by the Kolmogorov Smirnov test. Comparisons between groups were evaluated using the Mann Whitney U test and Kruskal Wallis test. The “p” values below 0.05 were considered as statistically significant.

Ethical Aspect of the Research: Istanbul Bakirkoy Dr. Sadi Konuk Education Research Hospital Clinical Research Ethics Committee report and the conformity and permission letter were received from the institution in order to conduct the research. After informing the women about the study, verbal consent of the women was taken. The women who was going to participate in the study were informed about the individual information will keep confidential and “privacy principle” was protected.

Limitations of the Research: The study conducted with women in only one family health center. Therefore, findings of the research can not

be generalized to all women in Turkey. In addition, the use of a scale to collect data in this study limits the responses of mothers with expressions on the scales.

Results

The average age of the women included in the study was determined as 36.02 ± 7.59 and 33.3% had university graduate and post-graduate degrees. When the working status of women was examined, it was determined that 39.1% were working, 60.0% were housewives and 67.7% had equal income to their expenses. When the obstetric characteristics of the women participating in the study are examined, it was found that the number of pregnancies was 2.19 ± 1.27 and 8.4% of the women had previously lost pregnancy. The age of first sexual intercourse of the participants was found to be 22.55 ± 4.08 (Table 1).

It was determined that 83.9% of the women who participated in the study had information about the Pap smear test and 66.1% had got the Pap smear test before. It was found that the average score of health motivation which was subgroup of Health Belief Model scale was higher, their average score of the perception of the obstacle was found to be lower (Table 2). It was also determined that 81% of the women had information about cervical cancer, 3.6% had a family member with a cervical cancer diagnosis and 41.7% had information about HPV vaccination.

When the contraceptive methods applied by the participants were examined, it was found that 39.6% of them were not using any protection method. It was determined that 24% of the women were using condoms, 13% were using intra uterine device (IUD), 9.9% oral contraceptives, 6.8% coitus interruptus and 1.6% were using monthly injections. It was determined that 4.2% of the women had tube ligation and that menopausal women (1%) were not using any method.

It was determined that there was a statistically significant difference between the education level of the women participating in the study and the mean scores of benefit, motivation, obstacle and health motivation scores from the subgroups of the Health Belief Model Scale (Table 3). When the sensitivity of women was examined, it was determined that only the smokers had a significantly higher sensitivity score.

Statistically significant differences were found between the variables such as the working status of the women and the status of gynecologic infection, and the average of the benefit and motivation scores (Table 3).

Table 1. The Socio-Demographic and Obstetric Characteristics of Women (n:191)

	Mean± SD	Min-Max
Age	36.02±7.59	20-49
First Marriage Age	22.69±4.22	14-39
Age of first sexual intercourse	22.55±4.08	14-39
Gravida		
Parity	2.19±1.27	0-5
Abortion	1.62±1.00	0-4
Curettage	0.44±0.70	0-3
	1.61±1.00	0-4
Education	n	%
Primary Education	57	29.7
Secondary Education	13	6.8
High school	58	30.2
Higher Education	64	33.3
Working Status		
Employed	75	39.1
Unemployed	117	60.9
Income		
Low	42	21.9
Moderate	130	67.7
High	20	10.4
Marital Status		
Married	186	96.9
Single	6	3.1
Smoking		
Yes	44	22.9
No	148	77.1

Table 2. The relation between Health Belief Model Scale Subscales and Pap Smear Test Status

	Pap Smear Test Status		Test
	Yes (n:127) Mean± SD	No (n:65) Mean± SD	
Susceptibility	7.96±2.30	7.59±2.16	z: -.841 p: .400
Seriousness	24.31±5.14	23.40±5.23	z: -.983 p: .326
Benefits/Health Motivation	31.21±5.93	32.51±5.41	z: -1.689 p: .091
Health Motivation	9.81±2.40	8.84±2.82	z: -2.724 p: .006
Barriers	32.49±9.69	36.34±8.99	z: -2.958 p: .003

z: Mann Whitney U

Discussion

This research was conducted to determine women's Pap smear test status and the factors that affected them. In the literature, Pap smear testing rates were found to be 93% in the United States, 74% in Korea and 83% in Serbia (Sirowich et al., 2005; Juon et al., 2003; Kesic et al., 2005). In our country, in the studies conducted in different groups and different regions, these ratios are around 27.8%, 30.3%, 41.9%, 51% and 52.3%, respectively (Cimke, 2016; Bal, 2014; Alan, 2004; Akyuz et al., 2006; Guvenc, 2013). The rate of pap smears (66.1%) was found to be higher in our study as a result of many studies conducted in our country. Public Health Agency of Turkey, carried out by community-based cervical cancer screening program be initiated on May 29, 2007, it lends support to the high ratio of a pap smear in the study. As a matter of fact, the rate was higher in other studies after community based screening program. It may also explain the fact that different studies have been conducted with women in different regions and cultural characteristics.

When the relationship between the level of education of women and the scale of health belief model was examined, it was determined that the level of education have increased and motivation and health motivation increased and the perception of obstacle decreased. The results of studies similar to the findings of our study are in the literature (Hewitt et al., 2004; Couture et al., 2008; Sadler et al., 2010). In Bal's study, women with a level of education over 8 years had higher

benefit motivation and health motivation and lower disability perception (Bal, 2014). Jia et al. (2013) found that women with high levels of education were more susceptible to having cancer screening tests when they were working with women living in areas with high cervical cancer risk (Jia et al., 2013). Wellensiek et al. (2002) found that 87% women with low levels of education did not have the pap smear test because they did not know it (Wellensiek et al., 2002). It can be said that as the level of education increases, awareness also increases and practices are affected positively. Unlike our study, it was determined that there was a negative correlation between education level and pap smear status in Akyuz et al., (2006) study. This is thought to be due to the nature of the sample.

In working women's cervical cancer and pap smear test were found to have higher scores on health belief model scale and benefit and motivation perceptions. Women with weak socioeconomic status have problems accessing basic health care and preventive services, diagnosis and treatment facilities. Women without regular income are more unconcerned about health problems because their priorities are to provide basic living needs. Reasons such as low level of education due to poverty, ignorance, lack of awareness of the person caused by social norm insufficiency affect women's perceptions of utility and health motivation in pap smear test. The findings of our study support the literature.

Smoking women were found to have higher cervical cancer and pap smear test Health Belief

Model Scale scores and sensitivity. Women who smoke are twice as likely to risk cervical cancer than women who do not smoke. Smoking is thought to cause premalignant changes by interacting with HPV (Acikgoz et al., 2011; Cancer Fact & Figures, 2016). Women who smoke in the study are thought to have a high awareness of cervical cancer and pap smear test because they are aware of the fact that they are at risk group. Indeed, personal risk or sensitivity is an important perception of health behavior in individuals (Hayden, 2009).

The cervical cancer and pap smear test were found to be significantly higher for the women with gynecologic infection, with a statistically significant higher benefit and motivation perception on the scale of the health belief model. Women who have gynecological infection are applying to health institutions with complaints such as vaginal discharge, bleeding, itching and burning sensation and pain during sexual intercourse. During this application, health personnel are informed and guided by pap smear test. As a matter of fact, in the study of Akyuz et al., it was found that there was a significant relationship between the status of gynecological examination of women and having Pap smear test (Akyuz et al., 2006). Therefore, the presence of infection increases the frequency of women going to the gynecological examination, and accordingly, the purpose and frequency of the pap smear test and the presentation of the testimony affects women's awareness.

Conclusion and Recommendations

According to the findings obtained from this study, it was determined that the factors affecting women's pap smear test awareness were education level, working status, smoking and gynecological infection status. The widespread use of the Pap smear test, which is extremely important in cervical cancer screening, and the awareness raising of women in this regard, especially at a young age, will help protect women's health in the long run and help early detection of cancer. Emphasis is placed on preventive health services especially in primary care and development of projects that will increase the education of women in the field of health is of great importance in terms of women's health. Furthermore, knowing that the behavior of Pap smearing can vary according to different cultures, groups and sociodemographic

characteristics, will affect positively service delivery and reaching that service.

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Table 3. The Comparison of Health Belief Model Scale and Subscales According to Attributes of Participants

		Susceptibility	Seriousness	Benefits/Health Motivation	Health Motivation	Barriers
		Mean± SD	Mean± SD	Mean± SD	Mean± SD	Mean± SD
Education	Primary Education(n:57)	7.87±2.16	24.29±4.31	30.92±5.31	8.70±2.75	36.96±9.42
	Secondary Education(n:13)	7.46±2.02	23.76±5.01	30.07±3.52	8.23±2.24	39.92±5.10
	High school(n:58)	7.93±1.96	23.51±5.42	31.29±6.83	9.84±2.52	33.74±10.27
	Higher Education(n:64)	7.46±2.48	23.31±5.77	34.21±4.24	10.08±2.35	29.75±8.10
		KW:1.407 p:.704	KW:0.438 p:.932	KW:18.770 p:.000	KW:11.259 p:0.010	KW:25.541 p:.000
Working Status	Unemployed(n:117)	7.93±2.09	23.80±4.95	31.36±5.90	9.31±2.69	34.77±9.90
	Employed (n:75)	7,41±2.34	23.53±5.58	33.18±4.91	9.70±2.42	32.24±8.91
		z: -1.285 p: .199	z: -.008 p: .994	z: -2.302 p: .021	z: -.835 p: .404	z: -1.799 p: .072
Smoking	Yes (n:44)	8.27±1.95	23.52±6.04	31.63±6.85	9.88±2.85	34.20±9.95
	No(n:148)	7.56±2.25	23.75±4.93	32.20±5.18	9.34±2.50	33.66±9.51
		z: -2.102 p: .036	z: -.240 p: .810	z: -.026 p: .979	z: -1.283 p: .200	z: -.244 p: .807
Status of gynecologic infection	Yes(n:64)	7.95±2.65	23.89±5.12	33.06±5.84	9.89±2.63	32.67±10.45
	No (n:128)	7.62±1.95	23.60±5.25	31.59±5.43	9.26±2.56	34.34±9.12
		z: -.669 p: .504	z: -.064 p: .949	z: -2.306 p: .021	z: -1.462 p: .144	z: -.954 p: .340

KW: Kruskal Wallis Test, z: Mann Whitney U