

## RESEARCH ARTICLE

# Barriers and Facilitating Factors Perceived in Turkish Women's Behaviors Towards Early Cervical Cancer Detection: A Qualitative Approach

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### Abstract

**Background:** The aim of the present study was to investigate perceived inhibiting and facilitating factors concerning cervical cancer early diagnosis behavior in Turkish women over the age of 40. **Materials and Methods:** The study was carried out by qualitative focus group interview with 35 participating women, in the period between April-June 2010. A semi-structured interview questionnaire based on the Health Belief Model and the Health Promotion Model was used. Content analysis was applied to the study data. **Results:** Barriers such as lack of knowledge of women as regards to the cervical cancer and early detection, lack of sensitivity-negligence, forgetting, fear, inadequacy of health insurance and transportation, financial problems, inability to get an appointment, lack of female doctors, embarrassment, fatalist approach were frequently addressed. As for facilitating factors, these included provision of information, health professionals showing interest and tolerance, free services, provision of transportation means and reminding telephone calls. **Conclusions:** Focus group interviews were found to be effective in determining inhibiting and facilitating factors concerning cervical cancer early diagnosis behavior. In line with the results of the study, preparation of structured national and regional education programs and their addition to curriculum programs may be effective in realizing and maintaining positive early detection behavior.

**Keywords:** Cervical cancer - barriers and facilitating factors - early detection - health promotion models

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### Introduction

Cervical cancer early detection studies are of great importance in terms of protecting and promoting the women health. Cervical cancer is the cancer type which constitutes the 12% of total cancer cases observed in women throughout the world. Ranking second among the most common cancer types seen in women, cervical cancer is especially seen in the developing countries. Almost 80% of deaths occur in these countries (World Health Organization, 2002). It is also one of the ten most frequently observed cancer types observed in our country, about 1300-1500 new cases are diagnosed annually. According to the data of Turkey Health Statistics (2006), incidence rate of cervical cancer is 1.25 per one hundred thousand (<http://www.saglik.gov.tr>).

Early detection plays a crucial role in preventing cancer. Cervical cancer screening with pap smear is a cost-effective method which is effective in terms of cancer prevention and cost. Incidence rate of invasive cervical cancer declined in the developed countries through the use of routine pap smear screening test (Akyüz et al., 2007). There are many health behaviors reducing the risk of cervical cancer but none of them is as effective as routine

pap smear screening (Smith et al., 2003).

Being aware of the knowledges, beliefs and attitudes of women regarding the early detection behaviours is effective on getting women to learn and adopt the relevant practices (Champion and Skinner, 2008). Health Belief Model (HBM) and Health Promotion Model (HPM) can be used effectively in determining the impeding factors that women perceive. In the Health Belief Model, the individual considers the positive and negative results of the behavior in the perceived barrier. As a consequence, individual turns the behavior into an action or not (Hochbaum, 1958). The most distinguishing part of the model is said to be the perceived barriers (Champion and Skinner, 2008). According to the Health Promotion Model, barriers perceived by the individual effect directly or indirectly the maintenance of health behaviors. It is stated that even though it is not frequently used in cervical cancer, Health Promotion Model explains the 75% of the positive behavior changes in studies conducted as regards to exercise, sexually transmitted diseases and nutrition (Pender et al., 2006).

Psychological, structural, institutional and socio-cultural factors are effective in realisation of early detection behaviors (Remennick, 2006). As the levels of

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knowledge and risk perceptions increase, the number of those undergoing a pap smear screening also increases (Akyüz et al., 2006). Results of study indicate that the ratio of women who apply for the early cervical cancer detection is low. It was emphasized in these studies that financial problems and lack of health insurance for access to transportation and service were placed near the top among the impeding factors (Facione et al., 1997; Remennick, 2006). Moreover, fear of cancer, negligence, shyness, lack of knowledge as regards to cancer and early detection, health perception of the individual, negative experiences with the health personnel, sex of the health personnel, transportation difficulties of the healthcare organisation, complaints about getting an appointment and waiting in the queue, cultural and traditional practices are also counted among barriers (Juon et al., 2003; Van Til et al., 2003; Fang et al., 2007; Wong et al., 2009). McFarland (2003) stated in his study that knowledge levels of women are insufficient as regards to the cervical cancer and pap smear test and they have limited access to sources necessary in order to undergo the test. Walter et al. (2004) also determined that the possibility of undergoing pap smear test reduces as individual gets older but there is not a significant relationship between bad health situation and undergoing pap smear test. Taylor et al. (2002) detected that the individuals without a health insurance undergo pap test less frequently while younger individuals, married people and those perceive their health situation as good undergo pap test more frequently. In Turkey, no study was found concerning the pap smear test screening on the elderly. However, in a research conducted on 19-61 age group, it was stated that working status, education level and lack of knowledge of women influence the decision regarding the pap smear test (Akyüz et al., 2006). Levels of early detection behaviors of women are relatively low in Turkey and there are limited information in this regard (Nahcivan and Secginli, 2007). Due to inadequate information and encouragement as regards to cervical cancer performed by doctors and health personnel, the ratio of women undergoing the pap smear test reduces (Mandelblatt and Yabroff, 2000). Consciousness of the individuals in this issue is of great importance in early detection of the cervical cancer. Awareness and motivation of individuals can be raised through consciousness raising activities. Public health nurses have an important role in the education of the community. If public health nurses identify the individuals at the high risk of cervical cancer and determine the screening barriers, mortality rate of cervical cancer can be reduced, life quality can be increased, lifetime can be prolonged, health care expenses can be reduced. It has been reported in the studies that cervical cancer screening rates of women can be increased through determination of the barriers and then trainings provided to eliminate such barriers (Işıklı et al., 2007; Lee-Lin et al., 2007).

There are a limited number of nursing studies conducted in order to determine the factors impeding the realisation of early detection behaviors displayed in Turkey in order to prevent cervical cancer. Thus, determination of the barriers by nurses, development of education programs supported by models and their

application are important.

In this study, the objective was to examine the impeding and facilitating factors perceived by women over 40 years concerning the pap smear test within the theoretical structure of Health Belief Model and Health Promotion Model through the phenomenological research method.

Study questions, what are the women's perceived barriers as regards to the cervical cancer early detection behaviors? What are the women's facilitators in terms of cervical cancer early detection behaviours?

## Materials and Methods

### *Type of the study*

The present study was carried out by focus group interview method qualitatively.

### *Study place and characteristics*

This study was conducted in the period between April 2010 and June 2010 in Narlıdere Region of İzmir Province. In the region, Narlıdere Municipal Pakize Ateş Women's Counseling Center in cooperation with the Department of Public Health Nursing, School of Nursing, DEU, provide health related services to women and their families. Focus group interviews were performed at Pakize Ateş Women's Counseling Center and recommended place by municipality.

### *Study sample*

The study populations consisted of 10,639 women aged over 40, and living in Narlıdere Region. Inclusion criteria were used for sampling. Women who were voluntary to participate in the study and over 40 years of age, spoken Turkish, not diagnosed as cervical cancer, not hysterectomy, not practiced pap smear in the last one year were included in the sampling. We approached women through address list obtained from Narlıdere district and neighborhood address system. Women to be interviewed were selected at random from the address system and the interviews were finalized only when the satisfaction level was reached as required by the nature of the qualitative study. Four focus group interviews were conducted, a total of 35 women were approached. Around 6-10 women participated in each focus group interviews.

**Table 1. Sociodemographic Characteristics of the Participants**

Characteristics	Participants	
	No. (n=35)	%
Age (X±SD)	52.20±11.01	
Education	Illiterate	14 40.0
	Literate	3 8.6
	Primary school graduate	9 25.7
	Secondary school graduate	0 0
	High school graduate	5 14.3
	Graduate	4 11.4
Income	Income equal to expenses	10 28.6
	Income less than expenses	23 65.7
	Income higher than expenses	2 5.7
Total	35	100

Sociodemographic characteristics of participants are shown in Table 1.

#### *Data collection*

In this study, semi-structured interview questionnaire prepared in the guidance of the Health Belief Model and the Health Promotion Model were used. The interview questionnaire consisted of open-ended questions and experts were asked for opinion. Some of the questions are hereby: "What are the methods you know for early detection of cervical cancer?, What are your reasons for not practicing pap smear?, Which requirements of you should be fulfilled to make pap smear easier for you? Interviews were carried out as single sessions. Interviews were continued until any new data was obtained. At the point that no new data was obtained (data saturation), interviews were terminated.

#### *Structuring Focus Group Interviews*

Women determined through the official address system of the district were visited at their homes, and asked for their consent to participate in the study after the aim of the study was explained. Women accepted to participate in the study were invited to the meetings at predetermined time and location. By telephone calls, women were reminded of the time and place of the meeting in the morning of the meeting day. Focus group interviews were carried out by two researchers who were educated on the subject. Tape recorder and interviewer notes were used during face-to-face interviews. Before using the recording device, women were asked for consent for recording interviews, and at the beginning of the recording, asking for the consent and aim of the study were repeated. At the time of interviews, the observer research assistant noted interactions among women. At the same time, food and beverages were offered in order to increase participation of the participating women in the interviews. Focus group interviews were lasted for approximately 30 minutes.

#### *Data analysis*

Deductive content analysis methodology was used in the analysis of the study data. Content analysis process consisted of analysing tape-recorded data into written text, editing data, identifying significant data volumes, creating matrix analysis, encoding data of the matrix analysis in order to determine the barriers and the facilitators regarding cervical cancer early diagnosis behaviors, reviewing the data encoded according to the matrix analysis, reporting the analysis process and the results (Polite and Beck, 2004).

#### *Research validity*

Validity of a qualitative research is evaluated with reliability and transferability (Elo and Kyngas, 2008). Reliability of this study was tested by including the expert opinions in the analysis of data and the participants' confirmation. For transferability, criterion sampling, sample selection criteria and the data collection method were clearly defined.

#### *Research reliability*

Reliability is evaluated with consistency and

verifiability in a qualitative research (Yıldırım and Şimşek, 2006). For reliability of the study, according to the criteria met, study data was submitted directly with a descriptive approach, more than one researcher were included in the same study, more than one researcher worked in obtaining data, different researchers cooperated in the analysis of the data obtained, in the data analysis pre-established and in detail defined conceptual framework was used. HBM and HPM were used in the conceptual framework. In the end of the interviews, all data recorded was played for two times to confirm accuracy and precision of the texts, consequently reliability of the data was achieved. For the verifiability of the study, the position of the researcher, the characteristics of the participants, the social environment of the research, conceptual framework and data analysis method was clearly defined.

#### *Research ethics*

In order to carry out the research study, approval and informed consent were taken from Narlıdere Municipality and the Ethical Committee of School of Nursing, DEU. In order to approach address and telephone information of 40 women living in the region, approval was taken from Narlıdere district. Oral consent was taken from the participating women which met the inclusion criteria of the study sampling.

## **Results**

Main categories of the study are impeding and facilitating factors perceived in the cervical cancer.

#### *Cervical cancer screening barriers*

Psychological factors: a majority of women stated that they did not have knowledge about cervical cancer. Participants stated that they received most of their information on the cervical cancer and screening from doctors as an information source and they did not have knowledge regarding the symptoms, causes, risk factors and treatment of cervical cancer. Moreover, they expressed that they would not apply to a doctor without hemorrhage. Women attributed their lack of knowledge to the fact that the health personnel did not make any explanation to them in this regard.

None of the participants could tell correctly when, how and how often the pap smear test would be applied. Their answers to the question regarding the frequency of pap smear were as such: "Doctor recommended me to undergo the test once more after six months or one year.", "Doctor said that it would be good for you if you underwent it frequently". Two women stated that pap smear test should be applied once a year.

The concept which was emphasized in all focus group interviews was lack of sensitivity, negligence. Women counted the following among their reasons of negligence in participating the cervical cancer screenings: they did not have any diseases, they did not think that they would have cancer as they gave many births, they did not care, they did not take serious. One woman made such an explanation, "Here, we are not interested in health. We have headache, we lay and take a medicine and then think that it is over.

We don't see a doctor". In four focus group interviews, forgetting, fear of cancer and death were counted among the reasons of ignoring the screenings. Discomfort caused by the process was expressed among the highly discussed reasons. This was due to the fact that they stated that the examination couch gave discomfort to them. Women explained this discomfort with such expressions: "I did not feel the need to take the test as I did not like the examination couch", "Laying on the examination couch disturbs me."

**Structural factors:** one of the barriers of screening among women is the lack of health insurance. Most of women talked about this barrier. In four focus group interviews, the most highly discussed barrier was the high costs. Women specified that they could not go to the healthcare organisation for cervical cancer screening as the cost was high. Statement of one women was as such: "I can't afford the screening, sometimes I don't have enough money to go to hospital."

Women stated that they wouldn't take the screening test if the center of screening was far away and thus, the transportation was important. Lack of time and long waiting hours are also reasons of not taking the pap smear test. Women expressed that they didn't go to take the test as they did not like dealing with long processes, taking the results late and waiting a long queue. Overcrowding is also one of the reasons under discussion. Another problem is the difficulty of getting appointment. Participants stated that getting appointment was difficult. General expressions of women are as such: "The processes don't finish within one day, I go to hospital for a whole week, it starts on Monday, it finishes on Friday. I can't go out once you enter a hospital. They don't pay attention to you. Supposed that I take the test, I become ill while I am waiting the results." As reasons of not undergoing the pap smear test, most of the women stated that the health personnel did not inform them about the test, they did not show interest to them even if they went and they did not show tolerance. Women made the following explanations in this regard: "Doctor examined through ultrasound but did not request pap smear and I got surprised", "They sit on the table and don't care the patients. They wait before the computer. Even if you wait for hours, they don't ask what your problem is."

**Institutional factors:** women stated that they did not know where the smear test was applied and that they did not go to hospital if not totally compulsory. One woman tried to explain this factor by saying: "I am too hesitant about where to go."

**Socio-cultural factors:** women expressed that their husbands were dominant and they could see a doctor if they allowed. They also stated that they did not want to be examined by a male doctor. In this study, the fetalist approach was frequently encountered. Most of the women believe that everything comes from God. Some explanations of women in this regard are as follows: "This is our life, This is our fate.", "Our husbands don't want a male doctor to examine their wives. They want female doctor. We have a traditional shyness. No man can see, no man can touch. This is also the fear of husbands", "In our culture, no man wants a male doctor to examine his

wife."

**Factors facilitating the cervical cancer screening behaviors:** most of the participants emphasized that information and reminding were important among the factors facilitating the screening. One of the women expressed that "Women in our country don't take the test without information. They take the test only on condition that it has a good explanation. If they are given information, they certainly take it." Furthermore, women stated that it would be easier for them to take the screening test if a center was opened in their regions and they were examined by a doctor in this center on grounds that waiting hours were long and they didn't have enough time. As regards to the appointment problem, they stated that they should be given a specific day or hour and they should take the results within the same day. As a woman said: "If such an appointment system is possible, if they call us to take the test and if the results are given within the same day, women go and take the test." Women stated that it would be perfect if they were allocated a vehicle in order to eliminate the transportation problem. They also specified that they would take the pap smear test on condition that it was reminded by telephone and they were examined by female doctors.

## Discussion

Psychological factors, although some women think that pap smear test is important, most of the women haven't undergone the pap smear test. As in the other studies, women frequently expressed in this study their perception that there was not need for a pap smear screening without occurrence of symptoms in this study (Boyer et al., 2001; GKim et al., 2004; uilfoyle et al., 2007; Wong et al., 2009). A healthy perception of women towards themselves and the fear of having cancer may have prevented women from participating in the screening. Ogedegbe et al. (2005) stated that the healthy perception of an individual towards herself was an impeding factor for participation in the screening. Pender et al. (2006) indicated that health definitions of individuals were important in realisation of health promotion behaviors and they generally realized the importance of their health only when they became ill or they feared from death. In the studies conducted so far, fear was presented as a major factor impeding women to take the test (Pender et al., 2006). Nonexistence of symptoms and nonexistence of a cancer history in the family may be indicators of low sensitivity perceptions regarding cervical cancer (Austin et al., 2002; Ogedegbe et al., 2005; Agurto et al., 2004; Guilfoyle et al., 2007). It was stated in the study conducted by Mete (1998) that women refrained from gynecological examination due to such grounds as lack knowledge, negligence and fear of a unfavorable diagnosis. Lack or absence of knowledge related to cervical cancer may have influenced the sensitivity and seriousness perceptions. Lack of knowledge or incorrect knowledges of women may have prevented women from participating in screenings by reducing their perceptions as regards to seriousness and sensitivity to disease. In this study, being informed and encouraged are of paramount importance. Attitudes of health personnel related to

preventive health services need to be reviewed due to the fact that most women have acquired a majority of their information from media rather than directly from the relevant health personnel.

Structural factors, in this study, suggestion of health personnel and communication with health personnel were listed among major factors impeding women to participate in the screening as in the other studies (Austin et al., 2002; Agurto et al., 2004; Guilfoyle et al., 2007; Were et al., 2011; Arabacı and Özsoy, 2012). Likewise, dissatisfaction with the previous health services related to pap smear test and pelvic examination was also specified as an important factor impeding the participation in other studies (Agurto et al., 2004; Guilfoyle et al., 2007; Abdullahi et al., 2009). Negative attitude displayed by the health personnel might have prevented individuals from taking pap smear test by effecting their sensitivity perceptions.

Institutional factors, we encountered in the study the lack of knowledge regarding the functioning of institutions as a major factor impeding women to go to take the test. Not knowing the functioning of the institution may have perceived by women as a fear factor and may have prevented them from taking the pap smear test. Thus, women who come for examination may be encouraged to take pap smear if nurses explain them the functioning of the institution and what they should do.

Socio-Cultural factors, in the study, the most frequently discussed barrier was privacy/shyness which culturally impeded the participation of women in the cervical cancer screening. Shyness arising from showing a private part of body to an unknown person during physical examination turns into a major barrier is a woman is examined by a male doctor. In the studies conducted so far, sex of the doctor was specified as an important factor impeding the participation in screenings (Van Til et al., 2003; Guilfoyle et al., 2007; Abdullahi et al., 2009). It was detected that shyness increases as the woman gets older and it has a negative relationship with taking the pap smear test (Lee-Lin et al., 2007). Shyness was also listed among the major barriers in other studies (Austin et al., 2002; Agurto et al., 2004; Guilfoyle et al., 2007). It was stated in the study conducted by Mete (1998) that women avoided of gynecological examination due to shyness. Women may have tabus about showing their bodies to other people as they may be more strictly faithful to their beliefs and traditional values. This may be why shyness was expressed among the mostly discussed barriers. Moreover, a majority of women was strictly faithful to their traditions in the region where the study was carried out. Thus, men are dominant and women even can't go to examination without permission of their husbands. This may pose a major barrier for women to take the screening tests. Differently from other studies, inability to take permission from husband was listed among the barriers in this study. In the Turkish culture, especially in older generations, decisions of husbands are important in issues related to health/diseases. This situation affects the perception of women as regards to health, thus we encounter this fact as an important factor that impedes taking the pap smear test.

Factors facilitating the cervical cancer screening

behaviors, women emphasized in the study that informing and reminding were important in taking the pap smear test. In the studies carried out so far, it was stated that training materials prepared for women and reminding means (telephone, mail) played a great role in participation of women in the cancer screenings (Austin et al., 2002; Curbow et al., 2004). The fact that health personnel should recommend women to take the screening test while providing health care (Austin et al., 2002; Van Til et al., 2003; Ogedegbe et al., 2005; Guilfoyle et al., 2007) and should use effective communication skills was emphasized (Agurto et al., 2004; Van Til et al., 2003)

In conclusion, HBM was used as a theoretical approach in many studies. However, the use of HPM is more limited. According to HBM and HPM, health protection and promotion behaviors will develop when the perceived barriers are decreased (Pender et al., 2006; Champion and Skinner, 2008). As a result of the study, barriers such as lack of knowledge of women as regards to the cervical cancer and early detection, lack of sensitivity- negligence, forgetting, fear, inadequacy of health insurance and transportation, financial problems, inability to get an appointment, lack of female doctors, embarrassment, fatalist approach were frequently addressed. As for the facilitating factors, they include providing information, health professionals who show interest and tolerance, free services, providing transportation means and reminding with telephone calls.

Findings of this study indicate that barriers and facilitating factors perceived in realisation of cervical cancer screening behaviors in line with HBM and HPM are important variables. No study was found in world and Turkey where firstly barriers were determined and then, interventions were planned and applied within the theoretical framework of Health Belief Model and Health Promotion Model related to early cancer detection behaviors. Therefore, this study may shape qualitative and randomized controlled nursing studies to be conducted in the future as regards to the early cervical cancer detection behaviors.

Its contribution to nursing, public health nurses are key professionals in recognizing the society and providing health services to the society in line with the obtained data. This study focuses on public health nurses in determining the barriers. Thus, firstly the factors impeding the early cervical detection behaviors should be determined and then, national and regional training programs structured in line with these impeding factors and supported by the facilitating factors should be developed. Randomized controlled studies where these training programs developed as regards to barriers are applied can be carried out.

## References

- Agurto I, Bishop A, Sanchez G, et al (2004). Perceived barriers and benefits to cervical cancer screening in Latin America. *Prev Med*, **39**, 91-8.
- Arabacı Z, Özsoy S (2012). The Pap smear test experience of women in Turkey – a qualitative study. *Asian Pac J Cancer Prev*, **13**, 5687-90.
- Akyüz A, Güvenç G, Yavan T, et al (2006). Evaluation of the

- Pap smear test status of women and of the factors affecting this status. *Gulhane Med J*, **48**, 25-8.
- Austin L, Ahmad F, McNally MJ, et al (2002). Breast and cervical cancer screening in Hispanic Women: a literature review using the Health Belief Model. *Women's Health Issues*, **12**, 122-8.
- Abdullahi A, Copping J, Kessel A, et al (2009). Cervical screening: perceptions and barriers to uptake among Somali women in Camden. *Public Health*, **123**, 680-5.
- Boyer LE, Williams M, Callister LC, et al (2001). Hispanic women's perceptions regarding cervical cancer screening. *JOGNN*, **30**, 240-5.
- Champion VL, Skinner CS (2008). The health belief model. In: Glanz K, Rimer BK, Viswanath KV, eds. *Health Behavior and Health Education: Theory, Research and Practice*. 4<sup>th</sup> ed. San Francisco: Jossey-Bass, Inc. 46-65.
- Curbow B, Bowie J, Garza M, et al (2004). Community-based cancer screening programs in older populations: making progress, but can we do better? *Prev Med*, **38**, 676-93.
- Elo S, Kyngas H (2008). The qualitative content analysis process. *JAN*, **62**, 107-15.
- Facione NC, Dodd MJ, Holzemer W, et al (1997). Help seeking for self discovered breast symptoms, Implications for early detection. *Cancer Practice*, **5**, 220-7.
- Fang C, Ma GX, Tan Y, et al (2007). A multifaceted intervention to increase cervical cancer screening among underserved Korean women. *Cancer Epidem Biomar*, **16**, 1298-302.
- Hochbaum GM (1958). Subsequently modified by other authors. Health Belief Model: [http://www.courseweb.uottawa.ca/epi6181/images/Health\\_Belief\\_Model\\_review.pdf](http://www.courseweb.uottawa.ca/epi6181/images/Health_Belief_Model_review.pdf).
- Guilfoyle S, Franco R, Gorin SS (2007). Exploring older women's approaches to cervical cancer screening. *Health Care for Women Int*, **28**, 930-50.
- Işikli B, Özalp S, Öner Ü, et al (2007). PAP smear screening among married women living in Osamangazi University ALPU training area. *Asian Pac J Cancer Prev*, **8**, 60-2.
- Juon H, Seung-Lee C, Klassen AC (2003). Predictors of regular Pap smears among Korean-American women. *Prev Med*, **37**, 585-92.
- Mete S (1998). The effects of nursing approach to the alleviation anxiety of the women coming the gynecologic examination. *J Cumhuriyet University School of Nur*, **2**, 1-8.
- Kim H, Kim H, Lee KJ, et al (2004). Cervical cancer screening in Korean American women: findings from focus group interviews. *J Korean Acad Nurs*, **34**, 617-24.
- Lee-Lin F, Lee K, Lee S, et al (2007). Cervical cancer beliefs and Pap test screening practices among Chinese American immigrants. *Oncol Nurs Forum*, **34**, 1203-9.
- Mandelblatt JM, Pett M, Menon U, et al (2000). Breast and cervical cancer screening for older women. recommendations and challenges for the 21<sup>st</sup> century. *J Am Med Wom Assoc*, **55**, 210-5.
- McFarland DM (2003). Cervical cancer and Pap smear screening in Botswana: knowledge and perceptions. *Int Nurs Rev*, **50**, 167-75.
- Nahcivan N, Secginli S (2007). Health beliefs related to breast self examination in a sample of Turkish women. *Oncol Nurs Forum*, **34**, 425-32.
- Ogedegbe G, Cassells AN, Robinson CM, et al (2005). Perceptions of barriers and facilitators of cancer early detection among low-income minority women in community health centers. *J Am Med Wom Assoc*, **97**, 162-70.
- Pender N, Murdaugh CL, Parsons MA (2006). *Health promotion in nursing practice*, fifth edition, Pearson Education, New Jersey.
- Polit DF, Beck CT (2004). *Nursing Research. Principles and Methods*. Lippincott Williams and Wilkins, Philadelphia, PA.
- Remennick L (2006). The challenge of early breast cancer detection among immigrant and minority women in multicultural societies. *Breast J*, **12**, 103-10.
- Smith RA, Cokkinides V, Eyre HJ (2003). American cancer society guidelines for the early detection of cancer, 2003. *CA-Cancer J Clin*, **53**, 27-43.
- Taylor VM, Hislop TG, Jackson JC, et al (2002). Randomized controlled trial of interventions to promote cervical cancer screening among Chinese in North America. *J Natl Cancer I*, **94**, 670-7.
- Van Til L, MacQuarrie C, Herbert R (2003). Understanding the barriers to cervical cancer. Screening among older women. *Qual Health Res*, **13**, 1116-31.
- Walter LC, Lindquist K, Covinsky KE (2004). Relationship between health status and use of screening mammography and Papanicolaou smears among women older than 70 years of age. *Ann Intern Med*, **140**, 681-8.
- Were E, Nyaberi, Buziba N (2011). Perceptions of risk and barriers to cervical cancer screening at Moi Teaching and Referral Hospital (MTRH), Eldoret, Kenya. *Afr Health Sci*, **1**, 58-64.
- Wong LP, Wong YL, Low WY, et al (2009). Knowledge and awareness of cervical cancer and screening among Malaysian women who have never had a pap smear: a qualitative study. *Singap Med J*, **50**, 49-53.
- WHO (2002). *Cervical Cancer Screening in Developing Countries, Report of a WHO Consultation*, World Health Organization, Geneva.
- Yıldırım A, Şimşek H (2006). *Qualitative Research Methods in Social Sciences*, Seçkin Publishing, Ankara.