RESEARCH COMMUNICATION

Inhibiting and Facilitating Factors Concerning Breast Cancer Early Diagnosis Behavior in Turkish Women: A Qualitative Study According to the Health Belief and Health Development Models

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Abstract

Aim: The aim of the present study is to investigate the perceived inhibiting and facilitating factors concerning breast cancer early diagnosis behavior in women over age 40. Method: A qualitative focus group interview method was applied with 43 participating women, in the period between March-April 2010, using a semi-structured interview questionnaire based on the Health Belief Model and the Health Development Model. Content analysis was used to analyse study data. Results: Inhibiting factors such as women's lack of knowledge regarding breast cancer and early detection behaviors, lack of health insurance and transportation facilities, financial difficulties, difficulty to make an appointment, scarcity of female doctors, feeling of embarrassment, lack of awareness-negligence, forgetting, feeling of fear, and a fatalistic approach were frequently discussed. Among facilitating factors, informed level, concerned and tolerant health care personnel, free health services, free transportation to hospital, improved appointment system, telephone reminders were included. Conclusion and Recommendations: Focus group interviews were found to be effective in determining inhibiting and facilitating factors concerning breast cancer early diagnosis behavior. National and regional training programs configured in accordance with the data obtained in the study may be effective in the implementation and maintenance of early diagnosis.

Keywords: Barriers - facilitators - health belief model - health development model-nursing

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Introduction

To ensure participation of women in early diagnosis behaviors of breast cancer by regular self breast examinations is among health promoting activities. Health promotion and disease prevention are basic concepts in basic nursing practice (Fawcett and Gigliotti, 2001). Recognizing the level of knowledge, beliefs and attitudes of women regarding breast cancer early diagnosis behaviors is effective in the applications of training and persuading women accordingly (Champion and Skinner, 2008). In this respect, the Health Belief Model and the Health Development Model can be effectively used in determining perceived inhibiting factors concerning breast cancer early diagnosis behaviors of women. According to the Health Belief Model, when perceived barrier, the person evaluates positive and negative consequences of the behavior. Consequently, he transforms the behavior into action or not. (Hochbaum, 1958).

Perceived barriers are stated as the most powerful criterion of the model (Champion and Skinner, 2008). According to the Health Development Model, the perceived barriers of the individuals are important in maintaining the health behaviors directly or indirectly (Pender et al., 2006). Even though the Health Development Model is not widely used in breast cancer applications, it explained only 75% of the behavior changes in the studies conducted (Pender et al., 2006).

Psychological, structural, institutional and socio-cultural factors are effective in breast screening rates and also directing women towards breast cancer early diagnosis behaviors (Lee et al., 2007; Remenninck, 2006). Psychological factors include fear of cancer, lack of information about early diagnosis applications, feeling of embarrassment, lack of sensitivity, disruption of family comfort, fear of losing the breast, fear of death, fear of change in the body image (Boraya et al., 2005; Champion et al.,2000; Maxwell et al., 2003; Ogedegbe et al., 2005; Park et al., 2007; Paskett et al., 2006). Among structural factors, lack of health insurance, transportation problems, shortage of time, high costs are identified (Ogedegbe et al., 2005; Champion et al., 2000). Difficulties in understanding the health care system and language barrier between women and health care providers are specified as institutional factors (Remennick, 2006). When we refer the socio-cultural factors; more dominant men in some cultures, dependent position of women upon men, subservient position of women in the family and at home

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and lack of female caregivers (Borrayo et al., 2005; Remennick, 2006), false beliefs and perceptions, and fatalistic approach is seen (Ogedegbe et al., 2005).

In addition, it is stated that facilitators (giving information, reminder letters, reminder telephone calls and mails, informative brochures, a home visits, combined interventions) are effective in the implementation and maintenance of the early diagnosis behaviors (Bonfill et al., 2009; Champion et al., 2002; Kwok et al., 2005) and underlined that individuals should be conscious in this respect (Oliver Vazquez et al., 2002; Gölbaşı et al., 2007). Lee et al (2007) reported women's breast screening rates would be increased by determining the barriers, and along with appropriate trainings and facilitators. Therefore, it is important that barriers should be identified, educational programs supported by models sould be structured and implemented by nurses in order to increase awareness regarding breast cancer early diagnosis in women, and maintain this behavior on a regular basis (Oliver-Vazquez et al., 2002).

In this phenomenological study, it is aimed to investigate the perceived barriers and facilitators of women over age 40 with regard to breast self examination (BSE), clinical breast examination (CBE) and mammography within theoretical context of the Health Belief Model and the Health Promotion Model.

The study questions with regard to BSE, CBE and mammography were: What are the women's perceived barriers?; What are the women's facilitators?

Materials and Methods

Study Place and Characteristics

The present focus group interview method qualitative study was conducted in the period between 17 March and 04 April 20101 in Balçova 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 Group and Samples

The study environment consisted of 10 639 women aged over 40, and living in Balcova Region. Criterion sampling method was used. Women who were voluntary to participate in the study and over 40 years of age, not diagnosed as breast cancer, not practiced mammography in the last one year were included in the sampling. We approached women through adress list obtained from Narlıdere district and neighborhood adress system. Five focus group interviews were conducted, a total of 43 women were approached. Around 7-11 women participated in each focus group interviews. Sociodemographic characteristics of participants are shown in Table 1.

Data Collection

In this study, semi-structured interview questionnaire preapared in the guidance of the Health Belief Model and the Health Development 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 breast cancer?, What are your reasons for not practicing BSE?, Why don't you regularly go to doctor for clinical breast examination?, Which requirements of you should be fulfilled to make mammography screening 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 45 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 breast 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

Table 1. Sociodemographic Characteristics of the Participants

Characteristics	Number	%
Education		
Illiterate	25	58.1
Literate	2	4.7
Primary school graduate	12	27.9
Secondary school graduate	2	4.7
High school graduate or more	2	4.7
Income		
Income < expenditure	36	83.7
Income = expenditure	7	16.3
Income > expenditure	0	0.0

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. SIM and SGM 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

Barriers regarding Breast Cancer Screening

a) Psychological Factors: Majority of the women stated that they didn't have sufficient information of breast cancer, and as information source about early diagnosis behaviors regarding breast cancer, they pointed out mostly television, also doctors and nursing students. Moreover, women couldn't give sufficient information about early diagnosis behaviors and screening timing. On the other hand, some of the women mentioned about the importance of early diagnosis, even underlined potential life-saving impact. Some of the participants claiming that they knew how to perform BSE, did it wrong. Some others stated they knew how to perform BSE, but did not perform at all, while some others claimed they performed BSE, but did not understand what they were doing. One participant said "*I do not perform BSE not because it doesn't come to my mind, but just because I don't know how to perform*".

Concerning screening timing, almost none of the participating women could state exactly when, how often and how to perform BSE, CBE and mammography. Some of the participating women mentioned about the wory not to feel or detect the mass in practicing BSE. Regarding BSE, some of the women expressed as "*each six months, after each bath, when my sleep fled, as it comess to my mind*", while two of the participants noted that they performed once a month following menstruation in the bathroom. The women indicated they didn't know, even didn't hear about the clinical examination performed by the health personnel, named CBE. According to one of the women, mammography screening should be performed once a year over the age of 40, while for two other women every two years. Concerning lack of information, women blamed health personnel for not informing enough.

The most emphasized concept in all focus group interviews was lack of sensitivity, neglecting. Among the prevalent causes leading to neglect participation in the behaviour of early diagnosis of breast cancer, some of the women discussed feeling no pain, feeling in general healthy, and feeling no need for screening, while a few of others mentioned about deeming it unimportant, radiation exposure in mammography, and ignoring their bodies. Three of the women expressed "*if you don't feel pain you never go for screening*", majority of the women underlined "*neglecting*". Five of the women stated that, although their health status had great importance, they didn't go for screening, but they should. One of the women expressed "*we have to take care of heath, despite being young*". In five of the focus group inteviews, forgetting was pointed out as the most important reason not to perform screening tests. Neglecting, inability to read and write, no one around as a reminder, hectic and intensive housework were other reasons mentioned by different women.

Majority of the women discussed the feeling of fear as a reason not to perform screenings. The fear of receiving a diagnosis of cancer was widely uttered. Moreover, some of the women implied that radiation exposure during mammography may also cause cancer. One of the women expressed this fact as "*doctors don't recommend frequent mammography, because it does have an impact*". Six of the women pointed out the fear of death. Women tried to express their feling of fear with phrases like " *we don't go to doctor for screening, because we are afraid of a disease to occur*" or "*we don't consider disease might occur in our bodies*". Especially in two of the focus group interviews, some discomfort felt during the procedure was discussed. Some of the women had no complaints during screening of mammography, while some other experienced pain or discomfort, and commented as "*with the compression executed in the instrument caused pain and discomfort*".

b) Structural Factors: Majority of the women reported that lack of health insurance and high costs were inhibiting factors concerning early diagnosis behaviors. Women stated they couldn't easily pay for the screening and expressed as " *I want to go to doctor for screening but I can't because I am uninsured*", " *I cannot go to doctor for screening due to financial difficulties*", "*I could once go to private doctor for screening, but I cannot afford it very year*."

Particularly for old women, transportation problems was another barrier. Almost in all focus group interviews, difficulties in obtaining an appointment, overcrowded clinics, uninterested and unconcerned health personnel,

long-lasting procedures, prolonged waiting periods were among the issues frequently mentioned and emphasized. One of the women stated she wouldn't refer to health institutions and expressed as "*We cannot easily make an appointment. Procedures take a long time at the hospitals. They call again the next month. Anyway you get bored and gave up*". Two of the women pointed out difficulties to leave the children at home due to their health problems and go to the hopitals for screenings. Irrelevant and intolerant approach of the health personnel was discussed as another barrier for the women. Some of the participants expressed as " *I didn't go to the doctor again, because they didn't give any paper for the next appointment*", "*I would go if I were recalled for the next year*", " *There is no one to informing me. When I apply to doctors, they don't pay attention and remain indifferent*".

c) Institutional Factors: Difficulties in understanding the health care system is another barrier for women regarding screening. Most of the women reported they didn't previously practice most of the procedures performed and also didn't know where these screening procedures were performed. One of the women expressed her situaton as " I don't know where to go, how to go, and which procedures to conduct".

d) Socio-Cultural Factors: Throughout focus group interviews, one of the barriers for women to participate in the screening programs was underlined as cultural factors. During interviews, women noted that they should inform their husbands before they visited a doctor and moreover they were not allowed by their husbands to be examined by a male doctor. Some participants emphasized they didn't paricipate in the screening programs with the feeling of embarrassment, essentially based on traditional structure of Turkish society and religious beliefs. In fact, one of the women signified that she couldn't benefit from the family health center for two years because of the male doctor on duty. Two other women stated it's not religiously important if the doctor was male or female. She expressed this approach as " *it is not a sin to be examined by a male doctor who became a doctor with the Hippocratic oath. Therefore, it doesn't matter whether my doctor is male or female*". Most of the women participating in the study believed cancer is something from the God. They said " *it occur if it is the inevitable fate*", "*it comes from the God*".

Facilitators regarding Breast Cancer Screening

The participating women discussed their participation in breast cancer screening programs and forwarded their proposals, so that they should be informed by education programs, brochures and the media, as well as by seminars and reminders (telephone reminders, home visits) conducted by health care workers. They implied as "*we would like to have information*", "*seminars should be held*". In addition, having some disease symptoms was indicated as a facilitating factor. Women suggested that providing free health services regarding breast cancer, facilitated transportation facilities, improved appointment system would positively influence their participation in the breast cancer screening programs. Furthermore, they noted they necessarily go to doctor when they are called by the health personnel. They expressed as "*I would go to doctor by compulsion, or a fixed date of appointment*", "*I would like to have telephone reminders*".

The women demanded recommendations for screening programs provided by the health personnel, in a friendly and tolerant approach. One of the women expressed their expectations from health personnel as " i*f we face a genial approach, we wouldn't hesitate going to a doctor, even if it is a male doctor*", "*we might be ignorant, but our doctor should enlighten us in detail, we need information*". Additionally, the women asked to be informed about the procedures in the hospitals, also noted that practicing the screening procedures in a known institution would be more convenient for themselves

One of the participants emphasized that, encouraging women is important to emancipate women from men's oppression, and she pointed out it could be achieved primarily by education. They also noted they would feel better if they could communicate with female doctors with regard to health services. One participant stated "*I wouldn't fell embarrassed when examined by a female doctor*".

Discussion

In order to motivate women to participate in the health improvement activities, it is highly important to recognize the inhibiting reasons for women regarding their participations in breast cancer screening programs. In this present study, the perceived barriers of the women were observed to influence their behaviors. Among the important consequences of this study, insufficient knowledge of women regarding breast cancer early diagnosis and timing of screening should be mentioned. Similar results were also obtained in other studies (Paskett et al., 2006; Park et al., 2007). As information sources, women identified foremost television, doctors and nursing students. In some studies conducted, participating women reported that they generally get informed through media, friends, and acquaintances (Park et al., 2007; Sadler et al., 2007). The reason for media to be so widely used as an information source by the participating women might be the fact that it is an easily accessible tool, whereas the submission of health services to individuals might be inadequate and unsatisfactory. Furthermore, ignorance and wrong information might have an inhibiting role in the participation of women in breast cancer early diagnosis behaviors as a consequence of influencing awareness of individuals regarding breast cancer, and so causing inadequate perceptions of sensitivity and severity.

In the present study, lack of sensitivity along with neglecting and forgetting are substantially important barriers. Sensitivity is considerably effective in perceiving the likelihood of developing breast cancer. Almost all women reported they neglected screening programs, and they were not sensitive on this issue, which is supporting some study data (Park et al., 2007). This might be due to the low levels of risk perception of women. Women mentioned about disregarding, forgetting due to workload, ignorance, discomfort felt during the procedure, inevitable

pain and distress occurred in the procedure, the sense of feeling healthy among the reasons leading to negligence, which are also compatible with the data of other studies (Kwok et al., 2005; Ogedegbe et al., 2005). The sense of feeling healthy is considered very important in practicing health protecting behaviors. On this account, the fear of losing current health status and the accompanying worries may inhibit the participation in the screening programs. As a result of insensitivity and negligence, women forget to conduct screening activities, particularly practicing BSE. According to Pender, the importance attributed by the individuals to their own health status had a direct impact on the realization of their own health behaviors. In the realization of health improvement behaviors, Pender reported that, health definitions of the individuals were considerably important, moreover they generally recognized the importance of their health status whenever they became ill or had the feeling of death (Pender et al., 2006). In this present study, the feeling of fear was identified as a barrier, in concordance with the data in literature (Maxwell et al., 2003; Ogedegbe et al., 2005). On the contrary, the feeling of fear was discussed as a facilitating factor in some other studies (Buki et al., 2004; Borraya et al., 2005; Kwok et al., 2005; Lamyian et al., 2007).

In this study, it is observed that, women had the expectation to be stimulated by the health care personnel to conduct screening procedures in terms of breast cancer early diagnosis behaviors. Similar results were obtained in other studies conducted (Maxwell et al., 2003; Paskett et al., 2006; Ogedegbe et al., 2005; Remennick, 2006; Park et al., 2007). Women who discussed particularly transportation facilities and cost of the procedures had lower socioeconomic conditions. Therefore, providing free transportation facilities may ensure screening behaviors of women. As a barrier detected in this study, difficulties regarding to understand the health care system supports the study data of Remennick (2006). The reasons of women who defined the health system as difficult may be based on the fact that they didn't frequently use health institutions, or else they were illiterate.

Similar to other studies, the dominant position of men, the feeling of embarrassment, lack of female health care personnels, wrong beliefs and perceptions, and fatalistic approach were all discussed in this study, as well (Remennick, 2006). In the implementation and maintenance of health behaviors, cultural characteristics and beliefs of Turkish society have great importance. In some studies conducted, beliefs were recognized as a barrier (Borrayo et al., 2005; Remennick, 2006), while in some other studies as a facilitator (Lamyian et al., 2007; Lee et al., 2007). Additionally, demand of the women for a female doctor support was compatible with the data of other studies (Maxwell et al., 2003; Borrayo et al., 2005). Women's claim for a female doctor may be due to religious factors, or customs and traditions, along with the feeling of embarrassment to show their bodies.

Another finding of the study was "fatalistic approach" and discussed widely among women. In the study of Ogedegbe et al (2005) fatalism was mentioned as an important barrier. "Fatalism" has a place in the religious beliefs of the Turkish society and for some of the women it may lead to the recognition that she doesn't have the control of her own health, therefore, it may prevent women in the participation of screening programs. It can be effective if nurses would communicate with women and explain that fatalistic approach has no impact on health improvement practices. In the implementation and maintenance of health, in order to provide an effective health care service, public health nurse should first diagnose the society. Interviews with the individuals are important in the diagnosis of the society. For this reason, this present study is a guide for public health nurses.

Being informed by the health care personnel is determined as an important facilitator in this study. In the studies based on the Health Belief Model and the Health Development Model, it is oberved that informed and instructed individuals displayed positive health-related behaviors (Pender et al., 2006; Oliver-Vazquez et al., 2002), and referred early diagnosis behaviors (Beydağ and Karaoğlan, 2007; Earp et al., 2002; Gölbaşı et al., 2009; Maxwell et al., 2003; Parlar et al., 2004; Paskett et al., 2006; Taylor, 1998; Tuong-Vi, 2007). In addition to being informed, being reminded by health care personnel (telephone reminders, home visits) was discussed by women as a poitive guidance in terms of participation in early diagnosis behaviors. This finding is also supported by various studies (Bonfill et al., 2009; Champion et al., 2002; Kwok et al., 2005). However, in the study of Bonfill et al (2009) it is reported that home visits as a reminder were not found effective. Furthermore, following focus group interviews, some of the women decided to conduct screening procedures. According to the explanations of the participants, it may be considered that the perceptions of self-efficacy and seriousness of women are influenced positively by these interviews.

In various studies similar to this present study, recommendations regarding breast cancer early diagnosis behaviors of women and using effective communication skills of the health personnel are emphasized as facilitating factors in the delivery of health service (Lamyian et al., 2007; Borrayo et al., 2005). The present study data indicated that, in the context of health services provision, besides the efforts of the health care personnel, evaluating the quality of the health services and searching for effective solutions are mandatory in the process of increasing women's participation in the breast cancer early diagnosis behaviors. Therefore, while providing health services as a public health nurse, recognition and application of the solutions, as well as the barriers, will be a facilitating factor in the implementation of health behaviors.

In conclusion, focus group interviews are observed to be effective in determining barriers regarding breast cancer early diagnosis behaviors. This present study is a guide to public health nurses in determining these barriers. Therefore, after determining the barriers in breast cancer early diagnosis behaviors, national and regional training programs, configured in accordance with these data, may be organized. Randomized controlled studies including training programs for barriers may be conducted.

The facilitators identified in this study are reported to

be effective in the implementation and maintenance of the breast cancer early diagnosis behaviors. Therefore, organization of national and regional breast cancer screening programs by the nurses, in which facilitators are kept in the forefront, furthermore, collaborations with different disciplines, may be effective in the implementation of health services.

In Turkey, we didn't encounter with the studies conducted about breast cancer early diagnosis behaviors, in which the barriers were first identified, and then initiatives are planned and accomplished, within the theoretical framework of the Health Belief Model and the Health Development Model. In this respect, this present study may lead to future qualitative and randomized controlled studies in nursing, regarding breast cancer early diagnosis behavior.

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