Health belief about Mammography among academician women in Chamran University of Ahvaz

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Abstract—Introduction: Breast cancer is the most common cancer and the second major cause of cancer deaths in women. Detection of breast cancer in its early stages is amenable to almost complete cure. Mammography is considered the most exact means to detect breast cancer in the earlier stage, which can reduce mortality of the disease. The aim of this study was to determine the health beliefs of academician women in Chamran University of Ahvaz.

Material and methods: It was a descriptive study which 158 female employees over 35 years in Chamran University of Ahvaz were involved. Data collection in this study is a questionnaire Champion based on The Health Belief Model designed. Data was collected using SPSS (version 17).

Results: The finding showed that 7/18% of the sample had a history of mammography. The results were based on questionnaire Champion showed that women’s knowledge about mammography was at a low level. Perceived susceptibility and perceived benefits were at a medium level. Concerning perceived severity, our results show that perception of studied women was at a low level. In relation to perceived barriers to mammography in women were high level.

Conclusion: Misconception and incorrect beliefs about mammography could result in low rate of participation in mammography, providing educational program to correct wrong health beliefs about this examination is recommended.

Keywords— Breast Cancer, Mammography, Health Beliefs.

I. INTRODUCTION

Breast cancer is the tenth cause of death among different cancers [1]. Breast cancer is known to be the most prevalent cancer among women [2], and it causes a considerable percentage (17 percent) of all cancer-related deaths [3], with one cancer diagnosed in the U.S. every one minute, and one woman dies of it every 13 minutes [4].

The prevalence of breast cancer is increasing in a worrisome rate in Iran [5]. Breast cancer constitutes 24.4 percent of all malignancies in Iran [6] and based on a report from Health, Treatment and Medical Education Ministry of Iran, breast cancer is the most common malignancy among women and its incidence rate is reported to be 36/6 cases per one 1000 women.[7].

Breast cancer causes death in 60-70 percent of people without a clear risk factor [8]. More than 80 percent of breast cancer cases is seen in women who don’t have any risk factor and the incidence of it could be without any sign. [9] Early diagnosis is the basic effort to decrease breast cancer-related deaths [10]. Screening is one of the best ways of early diagnosis [11]. Thus, breast cancer screening and search in people without signs, before any tangible lump appears, is a method by which many women would be saved [12].

Mammography is the first choice for examining the breast lumps and also an appropriate tool for screening and diagnosis [13]. In fact, it can be said that the mammography test is the most sensitive and dedicated screening method, and is used as the best method for identifying patients and early detection of breast cancer in many countries [14]. Screening with the aid of mammography causes a 22 percent decrease in mortality rate of women aged over 50 and a 15 percent decrease in women aged 40-49 [15].

Health beliefs play a considerable role in people’s tendency toward participating in health promotion-related behaviors. [16] One of the well-known educational models in health education is health belief model, which is a psychological pattern [17], and it is widely used in the context of research studies concerned with predicting health-related behaviors. Health belief model has five constructs concerned with behavior which include perceived severity, perceived susceptibility, perceived benefits and barriers, and self-efficacy [18]. The health belief model considers behavior as a function of one’s knowledge and attitude [19]. According to the health belief model, those women who believe that they are prone to breast cancer (perceived susceptibility) and that breast cancer is a serious disease (perceived severity), and those women who have received more benefits and less barriers are more likely to perform mammography (16).

Given the great contribution of health belief, the author decided to do a research about this issue and to analyze this problem from the standpoint of health belief model so he/she could contribute to the planning for cancer control and to the promotion of educational programs.

II. ANALYSIS METHOD

This study is descriptive and periodical one whose population consists of female staff of Shahid Chamran
University, Ahvaz, Iran. To do so, having received the permission of Ahvaz University of Medical Science authorities, the presentation was sent to the president of Chamran University, and the required authorization was issued by the research vice-presidency of the University, and then the analysis was performed on female staff aged over 35. First, 220 women of female staff aged over 35 were considered as research units based on the census method. Having determined the samples, 158 women entered the study according to the research specifications and based on the entry and exit criteria. Data was collected using Champion’s health belief standard questionnaire. The validity and reliability of the questionnaire was confirmed and determined by Hafteinia’s research titled the impact of an health belief model-based education on female staff’s knowledge, attitudes, and performance working at medical science factories around Tehran in the field of breast cancer and mammography.[14]. The questionnaire included 44 questions out of which 12 questions were related to population data including participants’ age, marriage status, education level, the economic status of studied people, as well as history of baby delivery, the age of first delivery, number of children, menopause and the age of it, history of performing mammography and breast self-assessment. 11 questions are related to knowledge and scoring is as follows: 2 points received for every correct answer, 1 point for ‘I don’t know’, and 0 for wrong answers. 3 questions were related to perceived susceptibility, 2 questions to perceived severity, 4 questions to perceived benefits, 10 questions to perceived barriers. Answers to perceived susceptibility, severity, benefits and self-sufficiency related questions were given in a five-choice format based on Likert scale ranging from ‘completely disagree’ to ‘completely agree’. 5 points go to every correct answer which is the highest point. Then, the rest of questions were given 1-4 points respectively based on the correctness of answers. Concerning perceived barriers, 1 point goes to every correct answer, and the rest of questions were given 1-4 points.

The research was done in this way that having received permissions of research units, questionnaires were given to the selected samples. The duration of answering the questions was 15-20 minutes, which was done at the presence of researcher. Then, answer sheets were collected. The statistical analysis of data was done using SPSS software. The average and the standard deviation were calculated for quantitative variables. The results for each construct of health belief model were divided into three categories based on their points: low, medium, high.

III. FINDINGS

The average age of the studied units was 43/66±6/06.56/6% of studied units held a bachelor degree, and 63 % of them were married. The income of 52 participants was below 6,000,000 Rials (Iranian currency), and 106 persons have an income above 6,000,000. The average percentage of people who had mammography was 7/18. The average point of knowledge about breast cancer and mammography was 4/11±2/18. Regarding the constructs of health belief model, the average of perceived susceptibility about mammography was 9/39±2/45. The average of perceived severity was 5/46±1/84, and the average of perceived benefits was 15/11±67 in the studied units. The average of perceived barriers regarding the mammography procedure was 29/79±4/75. By dividing the constructs of health belief model into low, medium and high categories, the results suggested that regarding the construct of perceived susceptibility, the obtained points actually showed that the university female staff’ interpretation of susceptibility levels and proneness to breast cancer is at a medium range (9/39). Concerning perceived severity, our results show that perception of studied women about the issue that they are in grave danger of being exposed to breast cancer was at a low level (5/46). Regarding the people’s perception of mammography advantages and perceived benefits, our results showed that the average of this construct is at a medium level (15). In relation to perceived barriers construct about mammography performance, our results suggest that female staff had a high level of perception about the mammography performance (29/79).

IV. DISCUSSION AND CONCLUSIONS

The findings of this research, which was done to determine the health belief of female staff about performing mammography based on the Champion’s health belief model, suggest that the performance of the studied women is not at a desired level, and that only 7/18 percent of women had already performed the mammography. However, this finding is compatible with other results in Iran. Farshbaf Khalili study (2009) showed that 3/3 percent of the studied women had done mammography. [20]. Similar results were also reported in a study by Ahamadi et al [21].

Undesired performance could be highly related to knowledge level of people, since knowledge and attitudes are stage-setting factors in a health behavior [22]. The results of present study showed that women’s knowledge about mammography is at a low level. Another study by Nachivan and Seccinli (2006) indicates that among women aged 40 and above, 56 percent of them have read or heard nothing about mammography, and only 25 percent of them had done mammography [23]. Also, perceived susceptibility of the researched units in this study is at a medium level, and this could be related to the poor performance of them, because when one considered herself as being exposed to an illness, she would do an preventive action to avoid it. Mishra et al. (2007) also concluded in their study that making people aware may increase their perceived susceptibility and ultimately the screening behavior [16].

Perceived severity of breast cancer means that one find the required belief and perception that this illness is a serious problem, and that it can lead to death or other serious consequences for her [24], with perceived severity being low among female staff, which shows the necessity of education about this issue.

The results of this study suggest that people’s understanding of advantages of using the screening method
for breast cancer is at a medium level. In fact, one will take action when she sees her benefits in a preventive behavior, and she seeks a behavior which is more useful and more effective. Different studies have shown a strong link between perceived benefits and adopting preventive behaviors, and that this is actually the one’s perception of benefits which provides the action path, thus, strengthening this construct could contribute to adoption of preventive behavior. The findings of a study by Marshal and al. (2002) on diabetic patients also show an increase in perceived benefits level after intervention based on health belief model [25].

Regarding perceived barriers, this construct is the most powerful aspect for statement and prediction of health protection behaviors [26]. Senn Hounton study (2005) show that a decrease in perceived barriers has an enormous impact on AIDS preventive behaviors of addicted people [27]. among the most common barriers to performing mammography, which were shown in the present study, are fear of rays’ danger, the cost of mammography, lack of time, and lack of awareness about mammography centers. The point of perceived barriers is at a high level in this study which could be changed by a proper education and by covering the aforementioned barriers as well as explaining how mammography is performed, so that women perceptions about the fear of mammography and barriers to it get changed.

The results of this study showed that participating women have a low level of knowledge and they also had a low level of health belief about mammography. Thus, it seems necessary to plan educational programs regarding mammography to increase the awareness of women and staff about the early diagnosis of breast cancer and to make them adopt behaviors for early detection of this cancer.

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