Breast Self-Examination: Knowledge, Attitudes, and Practices Among Female Health Care Workers in Tehran, Iran

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Abstract: A cross-sectional study was conducted to examine the knowledge of breast cancer, attitudes toward breast self-examination (BSE), and practice of BSE among a sample of female health care workers in Tehran, Iran. Using a purposed questionnaire, a total of 410 women from seven health centers completed the questionnaire. The mean age of the respondents was 32.9 years (SD = 9.5), most (58%) were married, and family history of breast cancer was reported by 11%. Seventy-five percent of the women knew about breast cancer prevalence, but only 27% knew that breast pain is not a symptom of breast cancer. Although 73% of women did know that contact with a relative with breast cancer could not lead to development of breast cancer, the respondents' knowledge of risk factors of breast cancer was not satisfactory. With regard to women's attitudes toward BSE, the majority believed that it is not difficult and time consuming or troublesome (63% and 72%, respectively). Sixty-three percent of the respondents claimed that they know how to examine their breasts, but only 6% performed BSE monthly. The practice of BSE was significantly associated with age (p = 0.01), the level of education (p < 0.0001), personal history of breast problems (p < 0.0001), and knowledge of how to examine the breasts (p < 0.0001). The study findings suggest that the knowledge and behaviors of female health care workers concerning breast cancer is relatively poor and it needs to be improved. Considering the role that health care workers may play in communicating health behaviors to the general public, planning health education interventions for this group of females is essential.

Key Words: breast cancer, breast self-examination, Iran

Although the incidence of breast cancer in developing countries is relatively low, 50% of the world’s breast cancer diagnoses occur in these countries (1). Thus early detection of breast cancer by population-based screening programs would be a potentially useful approach for controlling the disease.

Breast self-examination (BSE) is a simple, effective, and inexpensive method of breast cancer screening, which makes it suitable for all women. There is no clear evidence so far to support a role for routine BSE in the early detection of breast cancer. While the Kotka Pilot Project (2) found that BSE has improved early detection and reduced mortality, the Russian (3), Shanghai (4), and Swedish (5) studies revealed no improvements in stage shifting or mortality reduction. However, it is suggested that BSE may prove to be of particular interest in countries where breast cancer is an increasing problem, but where mammography services are almost nonexistent (6).

In Iran there is not a population-based mammography screening program and thus it seems that BSE may be considered a realistic approach to early detection of
This article reports on data derived from an investigation of the knowledge, attitudes, and practice of BSE among health care workers in Tehran, Iran.

MATERIALS AND METHODS

A cross-sectional descriptive study was conducted to determine whether female health care workers carry out regular BSE and to describe their knowledge of and attitudes toward BSE in seven different health centers in Tehran, Iran. A short questionnaire was used to collect data. The questionnaire contained items on the demographic characteristics of the respondents; knowledge of the prevalence, symptoms, risk factors, early detection, and prognosis of breast cancer; attitudes toward BSE; and questions regarding the practice of BSE and its frequency. The analysis included descriptive statistics and chi-squared tests to examine the association between demographic data (age, educational level, marital status, personal and family history of breast diseases) and BSE.

RESULTS

Sample Characteristics

A total of 485 questionnaires were distributed and 410 women (85%) returned the completed questionnaire. The mean age of the respondents was 32.9 years (SD = 9.5; range 19–58 years) and most were married (58%). The vast majority of the women were paramedics and nursing personnel (91%). A personal history of breast problems or family history of breast cancer were reported by 19% and 11% of the women, respectively (Table 1).

Knowledge of Breast Cancer

Seventy-five percent of the women knew about breast cancer prevalence, but only 27% knew that breast pain is not a symptom of breast cancer. Although 73% of women did know that contact with a relative with breast cancer could not lead to development of breast cancer, the respondents’ knowledge of risk factors of breast cancer was unsatisfactory. Table 2 shows the knowledge of breast cancer among female health care workers in Tehran.

Attitudes Toward BSE

There were six different statements about BSE. Respondents were asked to indicate whether they agreed, disagreed, or did not know. The results are shown in Table 3. The majority believed that BSE is not difficult and time consuming or troublesome (63% and 72%, respectively).

Practice of BSE

In all, 63% of women (n = 257) reported that they know how to examine their breasts. Only 6% of the women performed BSE on a regular basis (monthly), 50% performed it occasionally, and the remaining 44% never performed BSE. The practice of BSE was significantly associated with age (p = 0.01), level of education (p < 0.0001), type of profession (p < 0.0001), personal history of breast problems (p < 0.0001), and knowledge of how to examine the breasts (p < 0.0001), but not to marital status and family history of breast cancer. These indicated that women more than 50 years of age, with higher educational and professional status, positive personal history of breast problems, and those with knowledge of BSE were more likely to practice BSE than other female health care workers.

DISCUSSION

The effectiveness of BSE remains controversial. The American Cancer Society continues to recommend monthly BSE to women (7), but the Canadian Task Force

Table 1. Characteristics of the Study Sample (n = 410)

| Characteristic                        | No. | Percentage |
|--------------------------------------|-----|------------|
| Age (years)                          |     |            |
| <30                                  | 171 | 42         |
| 30–39                                | 128 | 31         |
| 40–49                                | 86  | 21         |
| ≥50                                  | 25  | 6          |
| Mean (SD)                            | 32.9 (9.5) |
| Range                                | 19–58          |
| Marital status                       |     |            |
| Single                               | 165 | 40         |
| Married                              | 236 | 58         |
| Divorced/widowed                     | 9   | 2          |
| Educational level                    |     |            |
| Secondary                            | 104 | 25         |
| Higher education                     | 306 | 75         |
| Type of profession                   |     |            |
| Paramedic                            | 104 | 25         |
| Nursing personnel                    | 270 | 66         |
| General practitioner                 | 36  | 9          |
| History of breast problems           |     |            |
| Yes                                  | 78  | 19         |
| No                                   | 332 | 81         |
| Breast problems (n = 78)             |     |            |
| Breast pain                          | 33  | 42         |
| Benign disease                       | 17  | 22         |
| Others                               | 28  | 36         |
| Family history of breast cancer      |     |            |
| Yes                                  | 44  | 11         |
| No                                   | 366 | 89         |

*None of the respondents had breast cancer.
on Preventive Health Care has announced that physicians should no longer routinely teach BSE as a screening technique for cancer to women aged 40–69 years because it can do more harm than good (8). In contrast, it is argued that a significant number of women find masses when they are bathing or dressing, and BSE once a month may contribute to a woman’s heightened awareness of what is normal for her (9). In a study of 1500 breast cancer patients, it was shown that 81% of women first noticed symptoms themselves (10). Thus one may argue that if women are finding most breast cancers themselves, it is possible that by knowing how to do a more thorough BSE they could find breast cancers of smaller sizes, which in turn may lead to an improved prognosis.

It is well documented that breast cancer beliefs and behaviors vary with several factors such as ethnicity, age, education, and socioeconomic status (11,12). In the present study, this was not investigated thoroughly, but the relationships between age, educational level, professional status, personal history of breast problems, and BSE were highly significant. However, marital status and family history of breast cancer showed no significant association.

The low level of practice of BSE by women in this study (6%), despite their knowledge of the benefits of BSE, was very similar to the practice of BSE by other Asian women living in different parts of the world. A study of south Asian women in Toronto and Chinese

Table 2. Knowledge of Breast Cancer Among Female Health Care Workers in Tehran (n = 410)

|                          | Don’t know n (%) | False n (%) | True n (%) |
|--------------------------|-----------------|-------------|------------|
| Prevalence               | 94 (23)         | 7 (2)       | 309 (75)   |
| Symptoms                 |                 |             |            |
| Painless mass            | 140 (34)        | 35 (9)      | 235 (57)   |
| Multiple masses          | 91 (47)         | 39 (9)      | 180 (44)   |
| Nipple retraction        | 200 (49)        | 41 (10)     | 169 (41)   |
| Breast pain              | 212 (52)        | 85 (21)     | 113 (27)   |
| Milky discharge          | 199 (48)        | 89 (22)     | 122 (30)   |
| Asymmetry of breasts     | 196 (48)        | 59 (14)     | 152 (37)   |
| Bloody discharge         | 168 (41)        | 22 (5)      | 220 (54)   |
| Risk factors             |                 |             |            |
| Age                      | 143 (35)        | 83 (20)     | 184 (45)   |
| Diet                     | 175 (43)        | 103 (25)    | 132 (32)   |
| Personal hygiene         | 143 (35)        | 159 (39)    | 108 (26)   |
| Age at first full-term pregnancy | 217 (53)        | 78 (19)     | 115 (28)   |
| Contacting a relative with breast cancer | 108 (26)        | 5 (1)       | 297 (73)   |
| Positive family history  | 104 (25)        | 48 (12)     | 258 (63)   |
| Prolonged lactation      | 195 (48)        | 16 (4)      | 199 (48)   |
| Overweight after menopause | 254 (62)        | 81 (20)     | 75 (18)    |
| Knowledge of early detection methods | 25 (6)         | 120 (29)    | 265 (65)   |
| Timing of BSE            | 73 (18)         | 156 (38)    | 181 (44)   |
| Knowledge of BSE procedure |              |             |            |
| Palpation with the same site hand | 152 (37)        | 128 (31)    | 130 (32)   |
| Control of nipple discharge | 163 (40)        | 19 (4)      | 228 (56)   |
| Inspection in front of a mirror | 152 (37)        | 39 (10)     | 219 (53)   |
| Palpation between thumb and the other fingers | 172 (42)        | 153 (37)    | 85 (21)    |
| Palpation with the middle fingers of the opposite hand | 177 (43)        | 19 (5)      | 214 (52)   |
| Knowledge of prognosis    | 12 (3)          | 41 (10)     | 357 (87)   |

Table 3. Attitudes of the Respondents Toward Breast Self-Examination (n = 410)

|                                                                 | Agree n (%) | Don’t know n (%) | Disagree n (%) |
|-----------------------------------------------------------------|-------------|-----------------|----------------|
| I do not have any problems in my breasts, so there is no reason to examine my breasts | 59 (14)     | 80 (20)         | 271 (66)       |
| Breast self-examination is difficult and time consuming          | 77 (19)     | 75 (18)         | 258 (63)       |
| Breast self-examination is troublesome                           | 60 (15)     | 56 (14)         | 294 (71)       |
| If I examine my breasts myself, I could not detect abnormalities in my breasts | 187 (46)    | 70 (17)         | 153 (37)       |
| If I knew the benefit of breast self-examination, I would have to do it | 222 (54)    | 60 (15)         | 128 (31)       |
| If I knew how to examine my breasts, I would have to do it       | 215 (53)    | 79 (19)         | 116 (28)       |
women in Hong Kong showed that only 12% and 16% of the respondents, respectively, claimed to practice BSE on a monthly basis (13,14).

Comparing the study findings with those from Africa, for example, Nigeria (15), clearly suggests that there is a significant similarity between performing BSE in these countries that is very different from that of developed countries. This indicates that in addition to other factors, cultural similarities or differences may also contribute to such variations and that there is need for greater effort to enhance BSE in developing countries. Furthermore, an exploratory study of the knowledge and frequency of BSE among 39 Middle Eastern Asian Islamic immigrant women residing in a major metropolitan U.S. city found that none of the participants had examined their breasts monthly for lumps during the past year prior to the study (16). Although the study did not explore the role of religion, it seems that a study of Islamic women’s breast cancer behaviors would be an interesting area for further research.

The results indicated that 46% of respondents believed that if they examined their own breasts they could not find abnormalities. Also, 54% said that if they knew the benefit of BSE they would have done it. In fact, many women were pessimistic about the likely success of BSE and this reminds us that in planning educational programs two important issues should be considered: first, providing materials that show many women have detected abnormalities themselves; and second, explaining the benefits that might be gained by performing BSE.

Finally, it is argued that an ideal screening test should be simple, inexpensive, and effective, and BSE fulfills the first two criteria, and that mammography is not an appropriate technology for screening in the developing world (17). Thus, since health care workers have a professional responsibility to teach others about BSE, it is important to plan interventions that can increase female health care professionals’ awareness of breast cancer beliefs and behaviors. Continuing education programs that focus on BSE practice, sharing of information related to BSE, and providing sessions in which health care workers could teach BSE would be of great importance.

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