

Evaluation of the Role of Health Education in Breast Self Examination

Samim A Al-Dabbagh, MBChB, DTM & H, Dphil (Oxford)*

Asil G Hamdoon, MBChB, MSC**

Muzahim K Al-Khayat, MBChB, FRCS (U.K)***

Objectives: To evaluate knowledge of women towards Breast self examination (BSE). To educate these women about the practice of BSE. To reassess the benefit gained after the education program.

Design and setting : A community based study conducted on women living in urban and rural areas in or around the city of Mosul, Iraq.

Participants: One thousand women in the age 19-65 years.

Results : The study showed that only 1% of women were aware about the technique of BSE. It also found that 11 women were having breast masses at the time of examination which were all turned to be benign lesions.

Re-evaluation of the knowledge and practice of 150 women revealed that all have benefited from the education campaign. It also showed that the degree of knowledge and practice gained were significantly higher in younger women.

Main outcome measures: Evaluation of women in BSE utilizing knowledge, attitude and practice of 1000 women. Implementation of education and training program in the form of personal encounter with each women is the sample. Assessment of knowledge, attitude and practice modification in a sample of 150 from the 1000 women who participated in the education and training programs 5 month after the campaign.

Conclusion: This trial is expected to be used as a model for enhancing the BSE technique in a nationwide screening Program for breast Cancer.

Bahrain Med Bull 1999;21(1): 17-19

Breast Cancer is the commonest malignant neoplasm and a major cause of death among women in developed countries; accounting for one fifth of all female deaths. In Britain, for example, one in each 12 women will develop breast cancer^{1,2}. In developing countries the incidence of breast cancer is increasing¹. In Iraq , breast cancer is the commonest tumor among female accounting for more than 24 % of registered female cancers during the period 1986-1991³.

Several studies have shown that screening for early detection of breast cancer is an effective way to reduce mortality and to improve the prognosis of the disease. In the USA for example a 30% reduction in mortality was achieved over 10-12 years follow up for women aged 50-69 years⁴.

To achieve this aim different methods were used including mammography, periodic examination by health personnel and Breast Self Examination (BSE)⁴⁻⁶. Mammography is

expensive and needs a high technology which together with professional health staff might not be available in developing countries. Accordingly BSE is now started to attract the attention of physician, even in developed countries⁷. This method is cheap and effective and hence it might be a suitable substitute for other methods. In a retrospective study conducted in USA, 35% of breast cancers have been shown to be detected by BSE⁸. Nevertheless few studies have been conducted to evaluate knowledge attitude and practice of women toward this technique^{7,9}. The aim of this work is to evaluate the prevalence of this practice among Iraqi women and to asses the role of health education in improving knowledge and practice of this technique.

METHODS

The study was conducted in and around Mosul city, which is the second largest city in Iraq. Rural and urban women

* Assistant Professor of Community Medicine & Head of Community Medicine Department Mosul Medical College

** Community Physician Nienavah Area Health Authority

*** Consultant Surgeon Department of Surgery Mosul Medical College Mosul , Iraq.

aged 19 years and over were selected for the study. As for rural women, all females in the specified age group who lived in the twin villages of Baweza and Alsadat 15 km to the North of Mosul city were interviewed for the study. Similarly an urban sample was selected at random from three different groups who lived in Mosul city including: primary and secondary school teachers, relatives of patients attending general hospitals and women visited the National Union of Iraqi women .

In the beginning of each visit, the aim of the study was explained, and then a questionnaire was filled individually for each women. It includes information about age, marital status, occupation and education of women and their husbands, then questions were asked about knowledge and attitudes of participants toward BSE. All women were then asked to conduct the test individually in front of the examiner who then assessed the knowledge and accuracy of BSE as mild, moderate and good. A mild degree was given to those who perform only one step of the test (either looking or feeling), while those who were able to perform the test completely were categorized as good. A moderate degree was given to those who performed the test in between the latter specified categories. After that both breasts were examined by the female investigator for breast masses and the accurate technique was then taught to all participants, using that recommended by Iraqi Cancer Society as a standard¹⁰.

Re-evaluation of knowledge and practice of BSE was conducted only on the rural women 5 months after the interview by home visits to all houses in the two selected villages using the same questionnaire and tests as in the first visit. This has been done to maximize tracing of the sample.

RESULTS

A total of 846 urban and 154 rural women aged 19 years and over with an age range of 19-65 years were included in the study. The base line analysis of knowledge was conducted in September 1995 and re-evaluation after the education and training campaign was conducted in January 1996. Table 1 shows that only 10 women know about (BSE) while all the rest had not heard about this practice. No significant effect for age was observed regarding knowledge about BSE. Out of the 10 women who know about BSE only 2 gained grade "good" in practicing the technique. Moreover 7 of those women do the test once or more a month while the rest (3) are not in the habit of doing the examination in spite of their knowledge about it.

Table 1. Knowledge of women about BSE according to age

Age in Years	Knowledge of BSE		
	No	Yes	Total
35+	532	4	536
Less than 35	458	6	464
All women	990	10	1000

OR = 1.7 P = N.S 95% CI = 0.50 - 5.69

The study reveals that 84% of the 1000 studied women had no formal or only primary education. It also found that

knowledge about BSE was associated and significantly affected by women education. Educated women having better knowledge than uneducated one (see table 2). Furthermore, the study also showed that married women has less knowledge about BSE than unmarried one, and the difference was statistically significant (Table 3).

Table 2. Knowledge's about BSE among women according to their educational level

Educational level	Knowledge of BSE		
	No	Yes	Total
No formal+ Primary education	843	1	844
Secondary+ University education	147	9	156
All women	990	10	1000

OR = 51.6, P <0.001 95% CI = 6.39 - 200.30

The study also found that 11 women had breast masses at the time of examination, which were further investigated and found to be fibroadenosis⁴, lymphadenites³, lipoma³ and milk cyst¹.

All those cases were unfamiliar with BSE and all were eager to be educated about the technique. Also 97% of women who were not having breast masses were also eager to know about BSE.

Table 3. Knowledge's about BSE among women according to their marital status.

Marital Status	Knowledge		
	No	Yes	Total
Married	856	5	861
Unmarried	134	5	139
All women	990	10	1000

OR = 6.5 P <0.01 95% CI = 1.93 - 15.70

A total of 150 out of 154 women living in the twin villages were successfully traced 5 months after primary education. All were unaware about BSE before the primary health education and training course.

Table 4. Proportion of women (in percent) according to the level of knowledge gained after the training course.

Knowledge gained	Age in Years		
	<35 %	35+ %	All ages %
Mild	25.88	49.23	36.00
Moderate	44.71	30.77	38.67
Good	29.41	20.00	25.33
All grades	100.00 (85)	100.00 (65)	100.00 (150)

Number in brackets indicate number of women
X² = 8.7 D.F = 2 P<0.05

Table 4 shows that after training course all women have gained information about BSE. It also shows that about 36%, 39% and 25% of women have gained mild, moderate and good knowledge respectively, with younger woman gaining significantly better education than older women.

Table 5 reveals that about 71% of those women were in the habit of doing periodic examination of the breast once a month or more. The rest of 29% have had examined their breasts at period longer than once a month or did not conduct any examination. Table 5 also shows that regular examination was significantly more frequent in women at younger age groups.

Table 5. Proportion of women (in percent) practicing periodic examination after the training course.

Periods between examinations	Age in Years		
	<35 %	35+ %	All ages %
Once per month or more (at least once per month)	81.18	58.46	71.33
Less than once per month or never	18.82	41.54	28.67
All	100.00 (85)	100.00 (65)	100.00 (150)

Number in brackets indicate number of women
 $\chi^2 = 8.3$, $D.F = 2$ $P < 0.001$

DISCUSSION

The importance of BSE as a method for early detection of breast tumors has been adopted recently⁷⁻⁹. Many breast cancers were detected by women themselves and hence it was reasonable to believe that regular, competent BSE may enhance earlier detection and have better prognosis^{5,8}. The technique is simple and can be repeated without requiring a substantial increase in health resources. In addition it is almost cost free in comparison with mammography which might have a substantial burden on the health resources in developing countries⁶. Moreover the controversial aspects about the age to begin and to stop mammography and the desirable frequency of re-screening is still disputable¹¹⁻¹³.

The study reveals that BSE was almost completely unfamiliar to the population where only 1% of the sample have knowledge of it. The study shows that BSE was significantly more frequent among women with higher education. Similar results have been observed in other studies¹⁴⁻¹⁵, slightly higher prevalence of BSE was observed in a preliminary study conducted 5 years earlier in the village of humaydat nearby Mosul. The differences might be due to the presence of a WHO directed health center in that village where probably some education about BSE has been conducted. It might also be due to the differences in the age group, where that study took only women aged over 35 years⁶.

This study found that almost all women who were re-evaluated after the primary BSE campaign have benefited from the education with varying degrees and the degree of benefit was significantly higher among women in younger age groups. Similarly another study conducted in Canada also observed that continuous education about BSE will increase the knowledge and practice gained towards it⁹.

Similar improvement in knowledge, BSE frequency and timing has also been observed in a study conducted in USA using relatively similar methodology to this study¹⁵.

CONCLUSION

The study found that BSE is a community acceptable method for screening of breast tumors, and has overwhelmingly well received by women in this study. An increased frequency and more accurate practice was observed when women were exposed to education about BSE, which was more marked in women at younger age group.

The results obtained from this study support planning of a more extensive and widely covered health education program directed to all women population to enhance the benefit of BSE in the early detection of breast tumors.

REFERENCES

- Burton M. Women's health. Guidelines for promoting breast care. *Nurs Times* 1995;91:32-4.
- Scott RB. Cancer: The Facts. United Kingdom: Oxford University Press, 1981.
- Ministry of health. The commonest ten cancer (1989-1991). Iraqi Cancer Board, Iraqi Cancer Registry: Ministry of Health, Iraq:1990.
- Fletcher SW, Black W, Harris R, et al. Report of the international workshop on screening for Breast cancer. *J Natl Cancer Inst* 1993;85:1644-56.
- Bains CJ, Miller AB, Bassett AA. Physical examination, its role as a single screening modality in Canadian national breast screening study. *Cancer* 1989;83:1816-22.
- Mitra I. Breast screening : the case for physical examination without mammography. *Lancet* 1994;343:342-4.
- Sensiba ME, Stewart DS. Relationship of perceived barriers to breast self examination in women of varying ages and levels of education . *Oncol Nurs Forum* 1995;22:1265-8.
- Benedict S, Williams RD, Hoomani J. Method of discovery of breast cancer. *Cancer Pract.* 1996;4:147-55.
- Baines CJ, TO T. Changes in breast self examination behavior achieved by 8,835 participants in the Canadian national breast screening study. *Cancer* 1990;66:570-6.
- Iraqi Cancer society. Breast self examination . Leaflet No. 3. Iraqi Cancer Society, Mosul: Al-Zahra publication [In Arabic].
- Schapira DV, Levine RB. Breast cancer screening and compliance and evaluation of Lesions. *Med Clin North Am* 1996;80:15-26.
- Miller AB. Breast cancer screening, who should be included. *J Intem Med* 1990;5[Supl]:SI9-22.
- Cody HS. The impact of mammography in 1096 consecutive patients with breast cancer, 1979-1993 : equal value for patients younger and older than age 50 years. *Cancer* 1995;76:1579-84.
- Rimer BK, SchildKraut JM, Lerman C, et al. Participation in a women's breast cancer risk counseling trial Who participates? Who declines? High risk breast cancer consortium. *Cancer* 1996;77:2348-55.
- Ferris DG, Golden NH, Petry LJ, et al. Effectiveness of breast self examination prompts on oral contraceptive packaging. *J Fam Pract* 1996;42:43-8.
- Al Khayat M, Al Dabbagh S, Aboush N. Breast self examination in Iraq - a community based study (JIMA in press).