Breast screening clinic versus health education session as outlets for education in breast self-examination

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SUMMARY A population based programme to educate women in breast self-examination (BSE) was organised as part of the UK Trial of Early Detection of Breast Cancer. Women who responded to an invitation to a meeting were educated in groups and were not routinely screened. Open access clinics offered x ray and clinical examination to all women in the study age group of 45 to 64. Women who presented for screening without prior BSE education were taught individually by clinic staff. Women taught by the two methods were surveyed by post and their BSE practice since education was compared. It was hypothesised that the women taught in clinics, who had been reassured of their breast normality, would practice BSE more regularly and correctly. Results did not confirm this hypothesis. Lower standards of practice and a higher level of anxiety at the time of survey were found in the group who presented at a free access clinic and had received individual teaching at the time of screening.

The Huddersfield Breast Cancer Screening Unit is one of the two centres in the UK Trial of Early Detection of Breast Cancer in which breast self-examination (BSE) is being offered to women in the health district. Women in the study age group of 45 to 64 years are invited to attend meetings at which instruction in BSE is given. All women in the study are informed of the free access clinic facility to which they may refer themselves for examination and x ray. Some women who do not attend an education meeting present at a free access clinic. Because of this, BSE instruction was introduced into the clinical interview.

A school of opinion, exemplified by Mahoney and Stillman, which has its adherents in this country, claims it is particularly effective to teach women BSE in a clinical interview. The reasons that they give include the considerations that confidence is given in a one to one situation with a clinic nurse or doctor, and that the reassurance of breast normality before BSE is practised will ensure good regular practice thereafter. In addition, it is possible to demonstrate the technique of palpation on a woman’s breasts in a clinic situation, and experimental learning is generally thought to be more effective than learning from talk and visual aids.

Group teaching was considered to be the most practical approach for the education of the large number of women in the Huddersfield study populations. The experience of individual teaching of a smaller number of women undertaken in the Huddersfield open access clinics led us to accept the challenge of the hypothesis that the latter method was more effective in encouraging good BSE practice as suggested by Stillman, Mahoney and Baum.

Method

A case control structure was adopted in this study for two reasons. Firstly, the group of women who had been educated in BSE in the clinic situation in the first three years of the programme was small. Women who had been referred for further investigation of a breast abnormality, or had subsequently attended an education meeting, were not eligible for inclusion. In view of the small number of cases it was thought that results would be strengthened if each clinic educated woman was matched with two controls from the meeting educated group. Controls were drawn from women who had had no contact with the Breast Cancer Screening Unit since attending an education meeting.

Data used to match women were obtained from the study population register and from questionnaires completed by clients at the clinic or at an education meeting.

One hundred and thirty one triplets were matched before a follow-up response questionnaire on current
BSE practice was sent out. When the return of these questionnaires was considered to be complete, after a second approach, cases and controls from incomplete triplets were matched. This resulted in 76 triplets being available for comparative case control analyses.

The majority of the results in the next section were obtained from the comparative analysis of the two groups. The case control analysis is referred to in the case of dichotomous variables.

Data were processed using the Statistical Programme for Social Sciences6 package on the Amdahl 470/V7 computer at Leeds University.

Results

DEMOGRAPHIC DETAILS OF RESPONDERS
Two thirds of the women in the study were under 55 years of age when they presented at clinic or attended an education meeting. Thirty per cent of them were from non-manual social class groups, when classified by husband's occupation, 55% were from manual classes, and the remaining 15% were unclassified or unmarried.

COMPLIANCE WITH TEACHING
The most significant difference in the reported practice of BSE between the two groups was that half the clinic educated women neglected to inspect their breasts, compared to a quarter of the meeting educated group ($\chi^2=17.10$ df=3 $p<0.005$).

Women who claimed to practise inspection were asked to indicate whether they used a mirror, stretched their arms up, and pressed hands on hips. Similarly, the three criteria by which their competence in palpation was assessed were: lying down to examine, use of the flat of the fingers, and the examination of the armpit every time.

Palpation of the breasts was practised by a similar proportion of each group. There was a trend towards more thorough palpation in the meeting educated group, judged on three criteria of compliance with teaching, but this trend did not reach a level of significance.

When the overall competence of the two groups in both parts of the examination was compared, 19% of the clinic educated women claimed to use a mirror to inspect their breasts, to lie down to palpate them, and to employ at least one of the other two components of the recommended technique in each part of the examination. Thirty five per cent of the meeting educated women attained this "satisfactory" level of practice. This also shows a trend towards the better compliance with teaching in the meeting educated group.

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Women's confidence in their ability to detect an abnormality in their breasts was examined in conjunction with reported competence in the two parts of the examination. Significantly more women in the meeting educated group claimed positive confidence and satisfactory practice of inspection ($\chi^2=21.42$ df=3 $p<0.005$). Positive confidence and competent palpation was claimed by a significantly higher proportion of the meeting educated women as well, though significance was at the lower level of 2.5% ($\chi^2=10.73$ df=3 $p<0.025$).

Fifty one per cent of the meeting educated women expressed positive confidence and took five or more minutes to perform BSE compared to 32% of the clinic educated group. This difference was significant ($\chi^2=14.16$ df=3 $p<0.005$).

The reported frequency with which women practised BSE did not differ significantly between the two groups. The tendency towards greater compliance with teaching among the meeting attenders was again observed. Fifty two per cent of the meeting educated women claimed to practise with "satisfactory" frequency compared to 39% of clinic presenters. This category of "satisfactory" frequency included women who claimed monthly practice and those who claimed regular practice though at intervals of up to three months. Practice at or less than monthly intervals was classified as "unsatisfactory" in this study, in that it did not comply with the instruction given.

Over frequent practice could be interpreted as a sign of a woman's anxiety about her breast health, and in this context it is worth noting that a quarter of the clinic educated group compared to 12% of the meeting attenders claimed to examine their breasts at less than monthly intervals.

The case control analysis confirmed the statistically significant findings of the comparative analysis and in addition showed that a woman who had presented at a clinic was more likely to have known a cancer patient than were her matched controls ($\chi^2=5.1$ df=1 $p<0.025$). Offered a choice of rates of incidence of breast cancer in the questionnaires, clinic educated women were significantly more likely to choose an inflated rate ($\chi^2=15.15$ df=1 $p<0.001$).

Discussion

The profile of BSE practice obtained by this follow-up survey indicates that women educated in the clinic comply less readily than meeting attenders with the standard instructions regarding technique given in both teaching situations. The clinic group were also more likely to know of a cancer patient, a factor that has been found to be associated with
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The process of breast screening can be daunting for some women, and the anxiety about breast cancer,\textsuperscript{18} and to give an exaggerated idea of the incidence of the disease.

It is clear from this study that neither the one to one relationship with the clinic nurse, recommended by Stillman,\textsuperscript{7} nor the reassurance of breast normality before starting to practise BSE, advocated by Mahoney, will ensure better BSE practice than can be achieved in a non-clinical teaching situation.

Reasons for the variation in the reported behaviour of the two groups may be sought in two main areas: firstly, in the content of the teaching given in the two situations and, secondly, in the receptiveness and motivation of the women themselves.

The same nursing staff were employed to educate women in both teaching situations. Therefore the same technique of BSE and information on frequency was conveyed without teacher variation.

In the 15-minute clinical interview information is given after a clinical examination has been performed. Inspection is advocated and the client's attention is drawn to a leaflet illustrating the technique. Palpation is then demonstrated on the woman's own breasts. The frequency of practice is geared to the woman's own menstrual pattern. Any questions a woman asks are answered, but there is little time to repeat or reinforce teaching points.

In the meetings, which last for approximately three quarters of an hour, the nurse gives a ten minute talk, and this is followed by a film,\textsuperscript{9} which shows the recommended technique of BSE. After the film the nurse restates the important steps in the method of examination. The recommended monthly frequency is discussed fully, to cater for clients who menstruate irregularly or who are postmenopausal. Opportunity is provided for questions and further discussion.

It is tempting to attribute the lack of compliance of women in the clinic educated group solely to the minimal coverage of the points of instruction possible in the time left after the consultation. Certainly, the failure of half of this group to practise inspection might reflect the fact that it is not demonstrated, as is palpation. The direct method of teaching palpation can be said to have been proved successful, in that it resulted in almost as thorough reported practice in this group as did the generally more effective indirect method of teaching employed in the meetings.

It must be remembered, however, that the motivation of women who went to meetings is possibly very different from that of clinic presenters. Women in this study population who came to the meetings declared an interest in learning about BSE, whereas women who came to the clinic had decided to dispense with the education meeting and to use the screening facility available to them instead. They had no expectation of being taught BSE. Since as a group these women displayed a higher level of anxiety at the time of the follow-up survey, it is reasonable to suppose that at the time of screening, their anxiety could have inhibited their absorption of the information offered.

Should the value of BSE as a method for early detection, as suggested by Foster\textsuperscript{1} and Hugely and Brown,\textsuperscript{8} be further supported by clinical evidence from the UK trial and other studies, the question how to inform and motivate large populations of asymptomatic women will need to be addressed by clinicians and health educationalists.

The findings from this study suggest that the group meeting as a method of mass education is a more practical and effective mode of teaching the technique than one to one teaching in a clinical situation.

Conclusion

The experience of the Huddersfield population based education programme indicates that a mass education approach, unsupported by routine screening, can achieve a better standard of BSE practice than can the less practically viable method of relying information in a clinical consultation. These results are attributable both to the lack of scope afforded for effective teaching in the clinical interview and to the lower level of receptivity to education of the women in this study who presented for screening.

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References


Letter to the Editor

Antinuclear appeal from workers in preventive cardiology

SIR—Your readers may have noticed the appearance of a paid advertisement in the American Journal of Epidemiology, which resulted from the efforts of more than 1000 epidemiologists and preventive cardiologists from 67 countries joining in an appeal from the international physicians for prevention of nuclear war and calling on leaders of the five nations now known to possess nuclear weapons to end the dangerous futile, and costly arms race.

Nuclear war has justly been called the final epidemic. Those of us who have made our life work epidemiology and preventive cardiology—to create a scientific foundation for the prevention of epidemic disease in our field—are deeply troubled that the continued nuclear arms race threatens to bring this final epidemic to pass. We who are dedicated to prevention must do everything humanly possible to prevent such a holocaust.

Signers of the appeal have asked the initiators of this effort to bring this action to the attention of the medical community and urge that others add their voices expressing our professional concern at the unprecedented threat to life and health posed by nuclear weapons.

If any readers of your journal wish to support this action, they should write to:

International Physicians for Prevention of Nuclear War
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