

# Evaluation of the "Breast Self-Examination" Film

EDWARD M. COHART, M.D., F.A.P.H.A., AND  
JOSEPH K. HILL, Ph.D.

*Department of Public Health, Yale University, New Haven, Conn.*

DESPITE the fact that organized education for health has become a big business in the United States, there exists an almost total absence of objective criteria by which the success or failure of an educational program or of any specific educational procedure can be measured. In an attempt to reach such objectivity, the general practice has grown up of measuring results in terms of numbers—the number of pamphlets distributed, the number of meetings held, the number of people who have seen a film, etc. We do not for a moment question the utility of enumeration as a tool for exact measurement, but we do very seriously question its value, in the form in which it has been used, as a criterion of the effectiveness of health education.

The "Breast Self-Examination" film, which was produced jointly by the American Cancer Society and the National Cancer Institute, is one of the few health education films which is directed to a very specific behavior pattern, and therefore lends itself more easily to study. In the interests of exploring the possibilities of developing a health education evaluation technique and, more specifically, for the purpose of evaluating the effectiveness of the "Breast Self-Examination" film, this investigation was undertaken.

It is to be hoped that the experimental design described in this paper will prove to be of value to health educators and cancer workers. Care should be taken

to avoid generalizing from the conclusions obtained from this small sample of the New Haven population.

The study was aimed at determining the answers to the following four questions:

1. *Who* sees the film?
2. What do those who see the film apparently learn from it?
3. What do those who see the film do as a result of seeing the film?
4. How effective is the film as an instrument which contributes to the *early case finding* of breast cancer?

In coöperation with the New Haven Cancer Society arrangements were made to show the film to groups of women in the Greater New Haven area. Accordingly, the presidents and program chairmen of women's clubs, church groups, PTA's, women's business organizations, and other organized groups of women were contacted and invited to attend a preview of the "Breast Self-Examination" film. It must be stressed that these groups are the ones usually reached in New Haven for group cancer education and that, except for limitations of sex, no special attempt was made to secure a different or more representative audience for this film than for the other group education activities of the Cancer Society.

The "Breast Self-Examination" preview was held in December, 1950, and was attended by 40 women representing 25 different women's organizations. At this meeting discussion was centered on

two major areas: (1) Breast self-examination as an important health practice for each individual present, and (2) the importance of getting as many women as possible to see this film. The group discussed ways by which their own and other women's organizations could be interested in making arrangements for the viewing of this film.

As a result of this preview, requests for the showing of the film began to come into the office of the New Haven Cancer Society, and the first public showing of the film took place in January, 1951. From that time until the end of May, 1951, the film was seen by more than 600 women in 18 women's groups. In accordance with the decision of the Connecticut State Medical Society, a physician was present at each film showing to answer questions. For the purpose of this study each woman attending was asked to fill out a short questionnaire which called for the person's name, address, occupation, marital status, and, if married, husband's occupation. It was explained that this information was to be used only for the purposes of the contemplated research, and that each individual who furnished this information could expect to receive, after three months and again at some later date, a follow-up questionnaire inquiring about her breast self-examination practices. Five hundred and forty-seven women supplied us with their names and other information which was requested.

Some of the characteristics of this group of 547 women will now be detailed. Eighty-six per cent of them were married; 70 per cent were housewives, 12 per cent nurses, and 10 per cent engaged in secretarial and office work. Information available on the occupation of 444 husbands revealed the following: Fifty per cent of these were in business, management, sales promotion or white collar jobs; 21 per cent were in the professions and teaching; 13 per cent were students; and only 15 per cent

were engaged in various forms of manual labor. A comparison with the labor force statistics for New Haven (1940) reveals that our sample is markedly biased against the manual labor group. In 1940 (the latest census figures available) the group of manual laborers (craftsmen, operatives, service workers, and laborers) constituted at least 40 per cent of the adult male population of New Haven. In our sample, this group has a representation of only 15 per cent. In contrast, the professional and semi-professional workers, who constituted some 5 per cent of the adult male population of New Haven in 1940, comprise 21 per cent of the present sample. These findings are in line with the generally held impression among health educators that present-day health education practices often fail to overcome the hurdles presented by socio-economic barriers.

Another interesting characteristic of this group of women is its age distribution. While figures for the entire group are not available, the age distribution of the 225 women who answered the questionnaire showed that 5 per cent of the women were under 20, 61 per cent were between the ages of 20 and 39, and 33 per cent were 40 years of age or older. Thus, while approximately 50 per cent of the women in New Haven have turned 40, this older group represented only 33 per cent of the film audience.

On the fourth month after each of these 547 women had seen the "Breast Self-Examination" film, she received a letter from the Department of Public Health of Yale University over the signature of the senior author which read as follows:

About three months ago, you were a member of a group that saw the film "Breast Self-Examination." At that time you indicated your willingness to cooperate in a study of the film by leaving your name and address.

Enclosed is a questionnaire which we are

asking you to complete in your own words, and return to us. To make your coöperation as easy as possible, we have enclosed a self-addressed, stamped return envelope.

*Please do not sign your name to this questionnaire.*

The accompanying questionnaire was worded as follows:

1. What did you learn from the film that you did not already know? .....

2. Were you in the habit of examining your breasts at any time *before* you saw the film? Yes ( ), No ( ). If so, please check, in the following list, the person who advised you to do this. Your doctor ( ), A nurse ( ), Friend or relative ( ), Other ( ). Please state .....

3. Did you begin to examine your breasts after you saw the film? Yes ( ), No ( ). If you did not, why? ..... If you did, please write next to each month the number of times during that month that you examined your breasts since you saw the film. Jan. ( ), Feb. ( ), Mar. ( ), etc.

Did you find anything that was unusual? Yes ( ), No ( ).

What did you do about what you found? .....

How long did you wait before you did it? .....

4. Please indicate your age. Nineteen or younger ( ), 20 to 29 ( ), etc.

The questionnaire was answered by 225 women; a response of 41 per cent of the 547 women to whom the questionnaire was sent. Five per cent of these women failed to answer the question which asked what they had learned from the film which they had not known previously. Another 8 per cent stated that they learned nothing or very little. Eight per cent stated they learned about the importance of early detection and regular examination; 3 per cent said they learned about the signs and symptoms of cancer, while 8 per cent gave answers of lesser

TABLE 1

*What Did You Learn from the Film That You Did Not Already Know? Two Hundred and Twenty-five Respondents.*

<i>Answer</i>	<i>Number</i>	<i>Per cent</i>
No answer	11	5
Nothing; very little	17	8
How to examine breasts; that self-examination is possible or easy	154	68
Importance of early detection and regular examination	19	8
Signs and symptoms of cancer	6	3
Other answers	18	8
Total	225	100

TABLE 2

*What Did You Learn from the Film That You Did Not Already Know? Forty-eight Respondents—All of Whom Had Examined Their Breasts Prior to Seeing the Film.*

<i>Answer</i>	<i>Number</i>	<i>Per cent</i>
No answer	4	8
Nothing; very little	10	21
How to examine breasts; that self-examination is possible or easy	23	48
Importance of early detection and regular examination	4	8
Signs and symptoms of cancer	2	4
Other answers	5	11
Total	48	100

frequency. Two-thirds of the group, the exact figure is 68 per cent, stated they learned that breast self-examination is possible or easy, and how to examine their breasts, or both. (Table 1.)

Of the total of 225 who answered the questionnaire on the film, 48, or 21 per cent, stated that they had been in the habit of examining their breasts previously, either regularly or irregularly. This appears to the authors to be an unexpectedly large percentage, and it points up one of the processes of self-selection which determined the composition of this sample. As was to be expected, a relatively large number, approximately a fifth of the women who had been in the habit of examining their breasts prior to seeing the film, stated they learned little or nothing from the film as compared with 3 per cent of the group that had not practised breast self-examination previously. However, despite the fact that these women had been in the habit of examining their breasts prior to seeing the film, 48 per cent of them still indicated that they learned the proper procedure for examination of their breasts from the film. (Table 2.)

What were the factors which caused the members of this group to examine their breasts? Forty-two of the 48 answered the question: "If you examined your breasts before you saw the film, who advised you to do this?" The

two most frequent answers to this question were their doctor and an article in a magazine or newspaper, with 23 per cent giving the first and 19 per cent the second answer. It is interesting that one-eighth of this group stated that no one had advised them to examine their breasts. (Table 3.)

One hundred and seventy-six women who saw the film had not been in the habit of examining their breasts previously; 75 per cent of these women stated that they had learned how to examine their breasts, or that breast self-examination is easy, or both. (Table 4.)

What effect did the film have on the behavior of these 176 women with regard to breast self-examination? One hundred and thirty-five, or 77 per cent, were motivated to examine their breasts at least once, but only 106, or 60 per cent of the 176 women, established the habit of periodic examination for at least 3 months. It is worth noting that 17 of these (10 per cent of the total) were probably indulging in over-examination, since they stated that they were examining their breasts regularly more often than once a month. (Table 5.)

An attempt was now made to see whether any correlation existed between what these women said they learned and what they said they did, but no correlation could be shown. Seventy-eight per cent of those who stated they learned

TABLE 3

*If You Examined Your Breasts Before You Saw the Film, Who Advised You To Do This?  
Forty-eight Respondents.*

<i>Answer</i>	<i>Number</i>	<i>Per cent</i>
No answer	6	13
Your doctor	11	23
A nurse	1	2
Friend or relative	4	8
Magazines, newspapers, etc.	9	19
Others *	17	35
<b>Total</b>	<b>48</b>	<b>100</b>

\* Among the other answers, 6 said "no one," 3 said they "picked it up somewhere," 2 said they had nurse's training.

that breast self-examination was possible and the procedure to be followed in the examination, claimed that they began to examine their breasts after seeing the film; while 76 per cent of those who did not state that they learned how to examine their breasts from the film also claimed that they began to examine their breasts as a result of seeing the film. Thus, the film appeared to motivate breast self-examination in 77 per cent of these women regardless of what they thought they learned.

As was noted previously, 60 per cent of these women said they examined their breasts regularly after seeing the film. What were the reasons given by the remaining 40 per cent for not establishing

the habit of regular breast self-examination? There were 46 women who answered this question. Negligence and procrastination were most frequently given as the reason. Sixteen, or 35 per cent, of the women gave this as their reason. Twenty-six per cent stated that they were receiving periodic examinations from their physicians (many of these women were pregnant), while another 6 per cent merely stated they were pregnant. It is worth recording that a number of the pregnant women volunteered the information that they intended to develop the breast self-examination habit after their pregnancy. (Table 6.)

Of the 135 women who examined their

TABLE 4

*What Did You Learn from the Film That You Did Not Already Know? One Hundred and Seventy-six Respondents Who Had Not Examined Their Breasts Previously.*

<i>Answer</i>	<i>Number</i>	<i>Per cent</i>
No answer	7	4
Nothing; very little	6	3
How to examine breasts; that self-examination is possible or easy	131	75
Importance of early detection and regular examination	15	9
Signs and symptoms of cancer	4	2
Other answers	13	7
Total	176	100

TABLE 5

*If You Did Begin To Examine Your Breasts After You Saw the Film, Write Next to Each Month the Number of Times During That Month That You Examined Your Breasts Since You Saw the Film. One Hundred and Seventy-six Respondents.*

<i>Answer</i>	<i>Number</i>	<i>Per cent</i>
No answer *	41	23
Once only; irregularly; twice in 4 months; more than once a month, but for 1 month only	29	17
Once a month for 3 or more months; a once-a-month pattern in which not more than 1 month has no examinations or more than 1 examination	89	50
Twice or more per month for 3 or more months	17	10
Total	176	100

\* Forty had stated, in answer to a previous question, that they did not examine their breasts after seeing the film.

TABLE 6

*If You Did Not Begin To Examine Your Breasts After You Saw the Film, Why?  
Forty-six Respondents.*

<i>Answer</i>	<i>Number</i>	<i>Per cent</i>
Obtaining periodic examination by private physician	12	26
Pregnant	3	6
Forgot; no good reason; procrastination; negligence	16	35
Other	15	33
Total	46	100

breasts at least once as a result of seeing the film, 7 found something that they thought was unusual. Four women were greatly upset by this finding and 3 were not. All 7 women consulted a physician about their findings, 4 doing so immediately (within 24 hours).

In the final analysis the effectiveness of the "Breast Self-Examination" film as an instrument for cancer control will have to be measured in terms of its contribution to early case finding of breast cancer. This determination presents many difficulties which do not lend themselves to easy solution. In this study an attempt will be made to see whether any significant changes in the stage of the disease at first treatment can be shown to occur coincident with the widespread showing of the "Breast Self-Examination" film. If a significant shift toward the localized stage of the disease on first admission cannot be shown to occur, then it will be quite obvious that the film has failed in its purpose of bringing about the case finding of breast cancer in its early stages. If, however, such a shift can be shown to occur, the cause and effect relationship between the showing of the film and the observed change will still have to be proved.

In an area such as Greater New Haven, with a population of approximately one-quarter of a million people, the annual incidence of breast cancer is such that it will require a minimum of five years' experience to secure an ade-

quate sample. The findings will then have to be evaluated in terms of the trend which existed prior to the introduction of the "Breast Self-Examination" film. That such a trend did in fact exist is borne out by our study of breast cancer in Greater New Haven since 1940 by stage of disease on admission. All the cases seen in the three New Haven hospitals, and this accounts for more than 95 per cent of all cases occurring in the Greater New Haven area, were included in this study.

For the 5 year period, 1940-1944, 44 per cent of the breast cancer cases on first admission for this disease were localized, 43 per cent regional, and 13 per cent metastatic. In the 5 year period, 1945-1949, these figures had become 51 per cent localized, 42 per cent regional, and 7 per cent metastatic. The downward trend in the frequency of metastatic breast cancer was shown to be significant. The upward trend in the relative frequency of localized breast cancer, while not statistically significant in a sample of this size, is certainly very suggestive.

Among the first 50 breast cancer cases seen in New Haven hospitals for the first time in 1951, the percentage distribution was 52 per cent, 46 per cent, and 2 per cent for localized, regional, and metastatic respectively, a distribution which does not differ significantly from that which occurred in 1945-1949. However, as has been said previously, it

is much too soon and our sample is much too small at this time to determine whether any significant change in stage of disease pattern can be correlated with the showing of the "Breast Self-Examination" film.

In conclusion, the following points might be reiterated. An evaluation of the "Breast Self-Examination" film and its use in Greater New Haven revealed the following:

1. The film audience was not a representative sample of the female population in the area. It was weighted in favor of the higher economic and educational levels and the younger age groups. Approximately one-fifth

of the women who came to see the film had examined their breasts previously.

2. Seventy-five per cent of the women who had not examined their breasts previously, and approximately 50 per cent of those who had, said that they learned how to examine their breasts from the film.

3. Seventy-seven per cent of the women who had not examined their breasts previously did so as a result of seeing the film, 60 per cent establishing a regular examination pattern over a period of at least 3 months.

4. Negligence was the most frequent reason given for not establishing a regular pattern of breast self-examination.

5. It is as yet too early to evaluate the effect of the film on early case finding of breast cancer in New Haven.

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## California Adds A County Unit

An ordinance of the Mendocino County Board of Supervisors makes Mendocino the 42nd county in California to receive full-time services from an organized department of public health. The Board had previously requested that a joint review of health resources of Mendocino County be undertaken by the California Medical Association, the California Tuberculosis and Health Association, and the State Department of Public Health. The re-

port of this review, first collaboration of its kind in the state, recommended establishment of a health department, employment of a full-time health officer and of a staff conforming with standards approved by the State Board of Public Health, and the initiation of those services and programs which are required to qualify for state public health assistance. The State Department of Public Health will assist in recruiting professional staff.