Original Research Article

Preferences and Perceptions of Female Patients undergoing Mammography: A Retrospective study

Abstract

Mammography is most important in the detection of breast cancer but due to its intimate nature and the perception that it is uncomfortable and painful; many women do not optimally support mammography as a diagnostic and screening tool for breast cancer. Many factors influence the experience of patients. This research explored the preferences and perceptions of patients regarding mammographer's gender and personality traits as well as students' involvement in mammography. The study was empirical in nature and data was collected using a valid and reliable self-formulated questionnaire. The approach was quantitative and a small qualitative component added dimension to the quantitative results. A no probability, convenience sampling method was employed and questionnaires were distributed in radiography section. Data analysis indicated that while many women accept males in the mammography setting, most prefer female mammographers and students. In general, women accept student presence during mammogram procedures. Personality traits that enhance effective communication and promote patient emotions such as trust, being safe and being cared for are favored by patients. This research adhered to stipulations of the Indian Patients' Rights Charter and the call of the Breast Cancer research into breast health care. The findings serve as benchmarks for patient opinions regarding mammography staff and will be of use in various fields concerning mammography, such as human resources, training and education and quality assurance of care.

Keywords: Mammography; Breast Cancer; Gender; Women; Screening.

INTRODUCTION

Mammography (also known as mastography) is the technique of using low- energy X-rays (usually approximately 26kVp to 30kVp) to examine the human breast for study and screening[1]. Along with all X-rays, mammograms use doses of ionizing radiation to produce images. Breast cancer is mainly diagnosed with Mammography as Breast cancer is an important cause of all cancer deaths and is associated with life span In India the finding and handling of lesions at a very early stage can reduce the breast cancer death rate by 18-22%[2]

A mammogram engrosses a mammographer managing the patient`s bare breasts whereas positioning them to acquire the required X-ray images. To generate breast images with the best possible diagnostic clarity, the mammographer must relate a performance where the breasts are compressed between two inflexible surfaces in order to obtain breast images with the finest potential diagnostic clarity. Many patients describe this compression approach as throbbing or at the very least unpleasant.[3,4].Patients who have not before been notice with breast cancer panic the finding of a malignant or cancer lesion and the linked subsequent events and cure. Patients who have been there analyzing with breast cancer earlier may fear that the mammogram images determination release more tumor growth for these cause; the number of women believe the mammogram examination as a harmful practice. A successful mammography, according to the investigator, entails the creation of the most favorable analytic images, whereas the patient views the test as a positive skill. The ability of the mammographer to establish a faith relationship with the patient in a short period of time is critical to the creation of the most favorable images, which are the foundation of early breast cancer detection and subsequent victorious cure. Mammographers play a vital role in given that a secure and thoughtful mammogram experience by graciousness, encouraging, polite, cooperative, responsive, thoughtful, kind and caring for patients requirement and learning illustrate that patients convey preferences for definite character traits that donate to optimistic perceptions[5] As a result, extreme attention must be paid to all aspects that may affect the successful completion of a mammography examination.[6].

Other factors determining the intensity of pain experienced when compression is applied to the breasts include anxiety. Pain is linked to the menstrual cycle and breast diseases such as breast tumours, fibrocystic illness, and pre-existing breast pain in pre-menopausal women. The presence of underlying diseases, as well as the use of hormone replacement therapy[4,7] Excessive pain and/or discomfort experienced during the compression of the breasts will result in patients not allowing the mammographer to apply optimum compression, which will lead to the production of suboptimal images that may result in a cancer not being detected. Women also fear the outcome of a mammogram. Patients who have not previously been diagnosed with breast cancer fear the detection of a malignant lesion and the associated subsequent procedures and treatments. Patients who have been diagnosed with breast cancer previously may fear that the mammogram images will reveal further tumor growth [8]. For these reasons, many women consider the mammogram examination as a negative experience. It is the opinion of the researcher that a successful mammogram entails the Production of

optimal diagnostic images while the patient perceives the examination as a positive experience. Great attention therefore needs to be given to all aspects that may affect the success of a mammogram examination. This research study focused on the preferences and perceptions of patients with regard to the qualified- and student staff members who participate in mammogram procedures. A study of the literature revealed that not all patients feel comfortable with the Presence of students for training purposes during a mammogram examination. Although the majority of patients (91%) do not object to the presence of female students, a substantial percentage (43%) objects to the presence of male students [6]. In line with this differentiation between male and female students, it was also reported that women express a definite preference for female mammographers (83%). Women feel in general more comfortable and less embarrassed with a mammographer of the same gender. However, the majority of female patients (62%) will allow a male mammographer to conduct the mammogram procedure provided that he is professional, competent and qualified [11].The significant role of mammographers in carrying out successful, completely apparent mammographic procedures will be recognized in India when mammographers turn synchronized by the Health Professions Medical Council. the severe strategy was supplied concerning the training of mammographers and standard for the academic constituent and clinical coverage and capability were particular, severe quality control measures for mammography were initiate by the Directorate of Radiation India (AERB) to ensure the most favorable carrying out of mammography tools. Even although the mammography regulatory program is still in its untimely phases it will ultimately bring the standard of mammography to India.

MATERIALS AND METHODS

The retrospective study was carried out at Maharishi Markandeshwar Hospital, Mullana, Ambala, Haryana in between December to April ,examine of different age groups were as both female and male patients were to be performed with mammography apparatus. Female as well as male patients of age group ≥ 21years old, and who was come near to participate in this study. The lower age limit was 21 while there was no, higher age limit set. As the reason was also to review the information of younger women, and first course their viewing practices while they become skilled for examination. Frequents were ask to entire a self-administered survey or questionnaires in English. A subsequent before and after moment response was requested, and the questionnaires were together upon achievement. For those who were

illiterate, the study plotter could be read the questions to them and record their answer. Collection of all was made indefinite, store, and forbidden by the department. Basic demographic information like race, age, education level, occupation, family income and type of accommodation was collected. Frequents were ask rather they have any past history of friends or relatives with breast cancer. A self formulated strength test was performed on the questionnaire.

The primary division or part of the questionnaire contained questions to review the patients as well as frequents ’basic information advanced knowledge, comprising of questions on the knowledge of breast cancer risk and screening, as well as the thoughtful for mammographic examination (Table 1). These questions were scored as such as point was awarded for a correct response and zero (tick) for wrong or (cross) 'not sure' response. An accurate response was based on Breast viewing in hospitals at Maharishi Markandeshwar Hospital, Mullana, Ambala, Haryana,protocol, and the Ministry of Health(MOH) guidelines on breast cancer examination. The second part of the questionnaire seems at the patient’s awareness of examining mammography and if they frequently perform breast self-examination (BSE).

Individuals who were greater and lesser or equal to ≥40 years old were enquired regarding their viewing examinations and their reasons for and adjoining to being the reviewing mammography. The final and last part of the questionnaire focused on the needs and preferences of the patients with seeming careful to knowledge about breast cancer risk and viewing preferences. Multi varieties of the study investigation were carried out on the statistically important variables, by using logistic deteriorating investigation.

A questionnaire formerly developed and validated to recognize determinants of the use of breast cancer screening methods among female patients in India, was used in this study. Before women were enrolled in the study reported herein, a steer study (n=30) was carried out to validate the questionnaire along with. One of the study goals was to establish if the questionnaire used in India would also be appropriate to women from Maharishi Markandeshwar hospital. Socio-demographic information together using the questionnaire built-in the women’sage (continuous), educational achievement (< high school, ≥ high school), marital status (married,unmarried), occupational status (state civil service, self-employed, homemaker), age at primary pregnancy. All patients were asked whether they had conducted any previous breast scan or not and whether they had undergone an in the earlier year. Patients who were older than 40 years of age were asked if they had undergone

mammography in the previous year, and the applicant who was between 35 and 40 years of age were inquired if they had undergone any mammography in the preceding year.

Thequestionnairealsobuilt-inquestionsaboutthestudyofparticipants'information about breast cancer risk screening strategy and their awareness of the quality of care made available. Patients were requested to evoke their breast cancer information and awareness before they were analyzing with breast cancer, where as mammographers were inquired about their breast cancer information and awareness.

Though possible answers were provided for each question (only 1 was the correct answer), I determined the responses to specify whether patients know the current strategy or not (tick=know; cross=does not know).

Perceptions of the breast cancer viewing technique were elicited through the questions concerning participants' approach to each screening technique. Participants were inquired, "Do you believe that performing a breast scan examination BSE is significant for your health?" Five answers were possible, variety from 1(no, not important at all) to 5(yes, very important). For the experimental screening methods cancer breast examination (CBE, mammography, participants were asked 2 questions:"Are you scared of having a screening technique and "Do you feel embarrassed of having a screening method, Five answers were probable, ranging from1(yes, very scared/embarrassed) to 5 (no, not scared/embarrassed). After the consistency of the panic and disgrace items was confirmed, we reverse-coded the objects and summed the scores to generate a single perception-of-screening uneven for each of the 3 experimental screening techniques.

Women's perceptions concerning the superiority of care established at the health care hospitals they concentrate, which they offer, mammography, were elected with 4 questions: Two of the questions address excellence: "Do you imagine that upon your access to the health center to obtain a screening technique, there were adequate workers and apparatus available to carry out the procedure, and "How do you rate the excellence of service acknowledged when you had your viewing technique, The probable response to these questions were 0 = did not obtain service/do not know; 1 = very low; 2 = low; 3 = okay; 4 = good; and 5 = very good. Two extra items review the women's professed coming uptime to obtain screening and results: "How lengthened did you have to stay before your viewing technique was carried out, and "How long did you have to stay before receiving the outcome of your screening technique The probable response to these questions were 0 = did not take

delivery of service/do not know;1 = no wait at all; 2 = very little; 3 = a little; 4 = somewhat long; 5 = very long. The waiting-time questions were evaluated for consistency.

Questions were codified in the same dimensions. Achievements from all 4awareness items were summed to generate a single perception-of-quality-of-care score.

RESULTS

A self formulated Questionnaire was developed and used to acquire the following Useful, expressive, tentative, and fundamental information from the participants: Frequents indicate their level of education with observation of secondary and tertiary education. As the last two items had moderately low scores, they were amalgamated, which indicated that (n=4) of the respondents had university degrees. The socio-demographic information discovered that overall respondents were females; the overall amount was 30 with an effective rate of 60%.There were 4 age segments, (21 -29 years), (31-39 years), (41-49 years), and (51-60years).The separation of every segment was as showed: 38%, 10%, 6%, and 10% of the entire number correspondingly. The next variable was among alone, married, and others (separated/widowed).Thirty-six percent of the sample consisted of married women, 36% were alone, and10%were separated or widowed. The third group concerned the women's education, vary from primary education and below (24%,) secondary education and(16%) to University and higher, which complete up the greater part, 8%. The fourth variable was regarding occupation, with responsibilities ranging from a housewife. Regarding the pre-mammography questions, they were alienated into 3 segments. The first and main segment regarding women's who predictable the mammography to be hurting, not painful, and those who did not know whether it was going to be hurting or not.

Regarding the mammography pain probability regarding virtual risk factors and whether they were statistically considerable in influencing pain observation, factors were addressed: a history of earlier mammography, history of breast diseases/cancer, history of breast examination treatment, background information of mammography, relations history of breast cancer, marital status, and lactation status. Out of the patients who were expecting a hurtful mammogram, 98% have an earlier mammography practice and this was the main object in the women's pain observation. In the classify of 16%of the women have earlier breast examinations and that were statistically important in determining their pain belief. Approximately 6% of the women have background information concerning mammography, which is the destined analysis about the examination or gathering knowledge from siblings

/relatives/physicians, and that have a statistical consequence on their mammography pain awareness.

Out of the 6% of the women who predictable the mammography to be hurtful, 36% knowledgeable about the same stage of pain as predictable, 9% practiced more pain than they have predicted, and 24% feel less pain. On the other, 18% of the surveyed women did not expect the mammography to be hurtful. Following the mammogram.4% of them did not practice several pain and 6%originate the mammography to be painful. Lastly, 15% of the surveyed women did not know whether the mammography was going to be hurtful or not. After the mammogram, 7% of them found the mammography to be hurtful. The pain scale pre-mammography and post-mammography demonstrates a major difference. While as the table (1) shows the post mammography questions.

Table 1: Post Mammography Questions

Questions	Yes	No	Don't Know	Value
Are you accepting painful mammography?	12	10	8	0.001
Normal pain	10	12	8	
Severe Pain	8	12	10	
less pain	5	22	23	

Discussion:

This research enlarges earlier studies on an aspect that may apprehension the pain perception allied to mammography and whether they were significant, as well as to measure up to the pain knowledgeable with the pain expected. The factors consequential in a painful practice during a mammography examination are of particular significance and should be more careful, as the mammogram is a necessary constituent for the achievement of early breast cancer avoidance campaigns. In our research, 67% of our patients expected hurting mammography before going away for the examiner. Post- mammography, the whole percentage of women who experienced pain was 18%. There was a significant difference in the mean attain of pain ($p<0.001$).The results portrayed a logical age distribution with the lowest number of respondents in the 20-30 years age group, which is statistically the group with the lowest incidence of breast cancer. The breast tissue of the patients in this group is also usually too dense (due to their young age) to be accurately evaluated by mammographic

imaging. Most respondents were in the 40-49 years age group which usually includes those who are referred for their first screening mammogram examination. Almost half (48%) of the respondents were 50 years and older with only a 5% decline from the group 50-59 years to the group 60 years and older. This is meaningful when placed into context with reports from [9] and [8] who report a decline in the number of mammogram examinations done on older women. Of the four ethnic groups that participated in the study, namely Asian/Oriental, black, coloured and white, the white group was best represented at 50% of the respondents. This statistic is similar to that of studies done in America which report that white women have more mammograms performed than any other ethnic group [8],[10],[11].Explanations could also be of a purely demographic nature, namely that most women over 40 years of age, which constituted the majority of respondents, are usually already married, or that the targeted areas are located in or close to suburbs where mostly families reside. 43% of the respondents had tertiary education, while 57% had only a school leaving certificate (matric) or lower level of education. According to [8] and [12] well-educated women are more likely to adhere to recommendations regarding regular mammogram examinations and the researcher therefore proposes that the current finding is due to demographic features and the service areas of the targeted mammogram spots. Regarding History of mammogram 66.4% of the respondents stated that the current mammogram was their first ever. Diagnostic versus screening patient preferences It is important to distinguish between the preferences of screening and diagnostic mammogram patients, as their priorities may differ considerably. While it is expected that a patient attending a diagnostic mammogram will priorities the competence of the mammographer, the patient undergoing a screening mammogram examination may feel more strongly about the physical and emotional discomfort caused by the examination. In the case of a screening mammogram, the patient may therefore be more particular about factors that may exacerbate general discomfort, such as a mammographer of the opposite gender. Results of the current study indicated no statistically significant correlation between the status of the respondents' breast health and their objections to either male or female mammographers. Choice regarding mammographer gender53% of the respondents stated that they would like to have a choice with regard to the gender of their mammographer. The current research did not quantitatively probe the relation between mammographer gender and professionalism. However, responses to the open ended question requesting reasons for the opinions regarding mammographer gender suggest that many patients regard the professionalism displayed by a mammographer as more important than the gender of the mammographer.

Twenty four personality traits were listed on the personality trait scale and when they were analyzed for interrelated factors, four were identified. The researcher named these four factors according to the perceived combined and individual effects the personality traits may have on the perceptions of mammogram patients. The factors are: The trust factor, which includes the following personality traits: courteous, gentle, honest, approachable, informative and considerate. The researcher deduced that these personality traits of a mammographer will foster emotions of trust in the mammogram patient with regard to the mammographer. The care factor, including personality traits such as patient, empathetic, positive attitude, reassuring, supportive and friendly. The researcher believes that as a unit, these traits will convey a caring attitude to patients. The being safe factor which consists of seven traits, namely calm, dedicated, mature, tolerant, sincere, attentive and observant. In the opinion of the researcher these personality traits will enhance a mammographer's ability to make the patient feel safe.

66.6.% and more of the respondents reported experiencing various positive emotions during the mammogram examination, while 13% and less experienced emotions with a negative connotation. When the results of the emotional experience scale were statistically analyzed for commonalities, two distinct factors emerged. The researcher named each of the factors according to the mutual focus each group of emotions brought to mind. The anxiousness factor includes the patient emotions of anxious, embarrassed, (experiencing) pain and stressed, which are all negative emotions. As they were listed on a scale and therefore also have positive values on the opposite end of the scale, it was decided to look for an alternative commonality. It seemed to the researcher as if these four emotions are all related to and will contribute to one key emotion that represents a state of anxiousness in varying degrees. The contentment factor consists of the positive patient emotions of comfortable, trust, content and (feeling) safe and the researcher believes that the collective focus of these four emotions is a feeling of contentment which could be experienced in varying degrees[13]. The researcher accepts that the high score of the contentment factor indicates that at least in the targeted areas, mammographic patient care and communication are of a very high standard which should enhance positive perceptions of mammography and promote high subsequent return screening rates.

CONCLUSION:

Mammography in mmimsr Mullana might currently be in a very encouraging position observes to its perception among female patients if judged by the optimistic reaction to the questionnaire used in this research. Preferences and perceptions of patients are important considerations in the endeavours to promote the adherence of women to suggest screening guidelines and the early detection of breast cancer. As women who qualify for screening mammogram examinations are not motivated by disease, they need an alternative incentive to undergo mammography. A pleasant ambiance, minimal emotional and physical discomfort, and protocols that recognize and respect their opinions are powerful strategies to promote screening mammogram attendance. An identical approach is indicated for women undergoing diagnostic mammogram procedures to minimize their emotional turmoil and assist them with empathy and professionalism on their journey with breast cancer.

Disclaimer regarding Consent and Ethical Approval:

As per university standard guideline, participant consent and ethical approval have been collected and preserved by the authors

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