



Delay in seeking medical care for self-detected breast symptoms in New Zealand women

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Abstract

Aims To investigate the extent of patient delay in new patients with self-detected breast symptoms referred to a specialist breast clinic. To examine the association between delay and sociodemographic factors, the practice of breast self-examination (BSE), how the breast symptom was discovered, and personal experience of breast cancer in family and friends.

Methods Eighty five women referred to the South Auckland Health Breast Clinic completed a questionnaire and interview after arrival at the clinic and prior to their consultation with the medical specialist. Delay was measured as the time interval between initial self-detection of a breast symptom and first contact with a general practitioner (GP) for evaluation of the symptom. Analysis of patient characteristics and delay time was conducted using Pearson product moment correlations, t-test for independent samples and one way analysis of variance (ANOVA) where appropriate.

Results The median delay time between initial breast symptom detection and seeing a GP was 14 days. Of the total sample of 85 women, 40% had seen their doctor within 7 days, 52% within 14 days, 69% within 30 days, and 14% had waited over 90 days. Delay time was not significantly associated with any sociodemographic factors. No difference in delay time was found between the ethnic groups of European, Maori or Pacific women. No difference in delay was shown between those women who performed regular BSE and those who did not. However, women who discovered their breast symptom by chance or through BSE had a shorter delay time than women experiencing breast pain. Although experience of a friend or family member with breast cancer was not significantly associated with delay, there was a trend for women who had a family member with breast cancer to have a longer delay time before seeing their GP.

Conclusions This study is the first in New Zealand to investigate the extent of patient delay for women with self-detected breast symptoms and the factors influencing this delay. The majority of women saw their doctor within one month of self-detection of a breast symptom, however 14% delayed over three months before seeing their GP. Women who had a family member with breast cancer tended to respond to their breast symptom by delaying seeking medical attention, suggesting that risk perceptions of developing breast cancer may influence delay times in seeking medical help. Results from this study are taken from women referred by their GP to a specialist breast clinic. Certainly, further clarification of the factors that influence delay involving broader patient groups is vital to the development of public education initiatives aiming to encourage women to seek prompt medical evaluation of breast symptoms.

In New Zealand, over 1600 women are diagnosed each year with breast cancer, which accounts for approximately 600 deaths a year.¹ Epidemiological data indicate that the

incidence rate for Pacific women tends to be lower than that for New Zealand European, Maori, other European, Chinese, Indian and Asian women. However, Pacific and Maori women initially present with more advanced breast disease than these other ethnic groups.² Studies have shown that a longer delay in presenting with breast symptoms is associated with a lower rate of survival from breast cancer,³ with many women waiting more than three months before seeking medical evaluation.^{4,5} Given the importance of early detection for treatment and subsequent survival, delay in seeking diagnosis of self-detected breast symptoms is an important health issue.

The extent of patient delay for women in New Zealand with self-detected breast symptoms and the factors influencing this delay time have not been investigated. The focus of many international studies has been to determine whether sociodemographic factors such as age, education, socioeconomic and marital status are associated with delay time in diverse samples of women. For example, work in the United States has found that black and Hispanic women are inclined to delay longer than white women.^{6,7} Other studies have reported that the practice of regular breast self-examination (BSE) is significantly associated with prompt medical presentation for breast symptoms,^{8,9} supporting the argument that breast health habits might be predictive of decreased delay and earlier diagnosis by a health professional. However, this relationship is unclear, as other research shows no significant association between regular BSE and decreased delay times.^{10,11} A number of researchers have explored whether personal experience of breast cancer in family and friends influences delay time, with inconsistent results.^{12,13,4}

In this study, we investigated the extent of delay in a sample of women referred by their GP to a breast clinic in South Auckland for specialist investigation of their self-detected breast symptom. We examined the association between delay and sociodemographic factors, practice of BSE, how the breast symptom was discovered, and personal experience of breast cancer in family and friends. In order that the women's responses were not confounded by the distress of diagnosis, they were assessed prior to seeing the specialist and undergoing any diagnostic medical tests.

Methods

Study sample Ethical approval for the study was granted in March 2000, and participant recruitment was carried out over a six-month period. Participants were consecutively-sampled patients attending the South Auckland Health Breast Clinic who had been referred by their GP for specialist evaluation of their breast symptom. Based on previous research,¹¹ we calculated that a sample of 85 would have sufficient power to detect a moderate effect size. The study protocol required that participants needed to be female, have self-discovered breast symptoms rather than those detected through routine mammography or by a health professional, and have no previous history of breast symptoms or breast cancer.

Procedure and measures Patients eligible for the study were identified from the GP referral letter and a discussion with the patient on arrival at the breast clinic. Once informed consent was obtained, participants completed a questionnaire, followed by an interview with a psychologist, prior to their consultation with the specialist. All assessments were completed in a separate room to ensure privacy. The questionnaire included standard demographic questions and a breast symptom checklist. Participants were asked to indicate if they had a family member or friend with breast cancer and whether they regularly performed BSE. Women were asked during the interview to describe how their breast symptom was initially discovered. The number of days between initial symptom detection and when the patient saw their GP was taken from the referral letter to the breast clinic. This time was also verified in the interview by asking the patient how long they had experienced their breast symptom prior to their initial medical presentation. In the few cases in which there was a discrepancy in symptom duration, the patient interview data were used.

Statistical analysis Statistical analysis was carried out using the SPSS for Windows statistical software package. The delay time between discovery of a breast symptom and initial medical presentation was positively skewed and a logarithmic transformation was performed to normalise the distribution for statistical analysis. Analysis of patient characteristics and delay time was conducted using Pearson product moment correlations, t-test for independent samples and one way analysis of variance (ANOVA) where appropriate.

Results

Of the eligible participants referred to the clinic, 13 patients declined to participate in the study. The sociodemographic characteristics of the 85 participants are shown in Table 1. The most common presenting symptom was a breast lump, reported by 78% of the participants. Other presenting symptoms were: breast pain (65%); nipple discharge (20%); nipple indrawn or changed (11%); change in shape or dimpling of breast (7%); and breast infection (1%). Of the women presenting with breast pain alone, no abnormality was detected. Of the seven women diagnosed with breast cancer, one presented with nipple discharge, three with a breast lump, one with a change in breast shape and pain, and two with a breast lump and pain. Nineteen women were diagnosed with a benign breast lump, one with breast infection, and 58 women had no abnormality detected.

Table 1. Sociodemographic characteristics of the 85 participants

Sociodemographic characteristics	Participants
Mean age 38 years (SD = 11.5, range 20–71)	
Ethnicity	
European	49
Maori	13
Pacific	16
Asian/Indian	7
Marital status	
Single/never married	20
Married/de facto relationship	55
Separated/divorced/widowed	10
Employment status	
Homemaker/childcare	27
Employed	40
Unemployed/student/retired	18
Education level	
Primary school	1
Secondary school	66
University qualification	18
Live alone	
Yes	10
No	75
Family member with breast cancer	
Yes	24
No	61
Friend with breast cancer	
Yes	25
No	60
Regularly perform breast self-examination	
Yes	53
No	32

Extent of delay The median delay time for women between discovering the breast symptom and seeing their GP was 14 days. Cumulative frequencies for delay times showed that 40% of the total sample had seen their GP within 7 days, 52% within 14 days, 69% within 30 days, and 14% had waited over 90 days.

Influence of sociodemographic factors on delay Delay was not significantly related to any of the sociodemographic factors including age ($r = 0.01$, $p = 0.96$), marital status (married/de facto vs not married: $t(83) = -1.31$, $p = 0.19$), living alone or not ($t(83) = -0.60$, $p = 0.55$), and education (secondary school vs post-school qualification: $t(83) = -1.26$, $p = 0.21$). No significant differences in delay time were found between the ethnic groups of European, Maori or Pacific women ($F(2,76) = 1.22$, $p = 0.30$), with European women having a median delay time of 11 days, Maori women 14 days, and Pacific women 12 days. A Levene's test found no significant difference in the variance of the groups ($F(2,76) = 2.06$, $p = 0.11$). Twenty six per cent of European, 38% of Maori, and 31% of Pacific women delayed more than 30 days.

Influence of BSE and how breast symptom was discovered on delay Sixty two per cent of participants performed regular BSE. However, no difference in delay was found between those who performed BSE and those who did not ($t(83) = 0.59$, $p = 0.55$). Interview data revealed that there were three main ways breast symptoms were discovered by women: during regular BSE; by chance; and by starting to feel pain in the breast. Twenty two per cent of women discovered their breast symptom during regular BSE, 41% by chance and 37% experienced breast pain. Analysis of the delay times across the three groups revealed a trend ($F(2,82) = 2.83$, $p = 0.07$) that women who experienced breast pain had a longer delay time (median = 30 days), compared with women who discovered their symptom by chance (median = 14 days) or through regular BSE (median = 14 days). In terms of method of symptom discovery, 67% of women experiencing breast pain delayed more than 30 days, compared with 20% of women who discovered their breast symptom by chance and 26% through regular BSE.

Influence of personal experience of breast cancer in family and friends on delay Twenty nine per cent of women had experience of a friend with breast cancer, however no significant difference was found in delay time between those who had a friend with breast cancer compared with those who did not ($t(83) = -0.024$, $p = 0.98$). Twenty eight per cent of the sample had a family member with breast cancer. A trend was found for this group to have a longer delay time (median = 32 days) compared with those women with no experience of breast cancer in their family (median = 14 days) ($t(83) = 1.82$, $p = 0.07$). Forty two per cent of women with a family member with breast cancer delayed more than 30 days, compared with 26% of women with no family member with breast cancer.

Discussion

This study is the first in New Zealand to determine the extent of patient delay for women with self-detected breast symptoms and to investigate the specific factors influencing this delay time. Delay time from initial self-detection to seeking professional medical help was established through patient interviews and the GP referral letter. While the majority of women saw their GP within one month, 14% delayed longer than three months. These delay intervals are comparable to

international data. One study in the United Kingdom found median delay was 13 days, with 17% of women delaying over three months,¹⁴ and another in the United States reported that 12% of patients delayed for longer than three months, with a median delay of 14 days.⁷

In consideration of previous research, we investigated the role of sociodemographic factors and found they were unrelated to delay. Given that epidemiological data indicate that Pacific and Maori women initially present with more advanced breast disease than other ethnic groups, one possible explanation is that these women may delay longer when they discover a breast symptom. Although our study found no differences in delay times across European, Maori and Pacific women, further research targeting these groups and others is warranted to determine the extent of delay and factors influencing the time at which a woman decides to seek professional medical care.

The practice of breast self-examination (BSE) and its influence on delay time demonstrated no significant effect, which supports previous research in the literature.^{10,11} However, we identified a trend in delay times depending on how the breast symptom was initially discovered. Women who discovered their symptom by chance and during regular BSE had a shorter delay time compared to women who experienced pain. Our findings suggest that delay time in seeking medical evaluation of breast symptoms may not be specifically determined by 'how' women discover their symptom, but by 'what' they discover. The symptoms of the women who reported discovery during regular BSE or by chance were definitive changes to their breast, for example, a lump or change in shape. We found that women with these definitive changes had a shorter delay time than those women with breast pain, which is consistent with findings from other studies.^{15,16}

In the current study, the influence of having a friend or family member with breast cancer, was not significantly associated with delay as reported in previous research.^{4,13,16} However, a trend was evident, as women who had a family member with breast cancer delayed longer than those with no family member with the disease. Research suggests that breast cancer worries may pose a barrier to mammography adherence for some women with relatives with breast cancer.¹⁷ In the context of a self-discovered breast symptom, a woman who has experienced breast cancer in her family may make a direct self-diagnosis upon symptom discovery and the resulting distress contributes to longer delay. The results from the current study suggest that risk perceptions of developing breast cancer may influence delay time in seeking medical help. Further clarification of this issue is important.

A number of limitations of the study should be kept in mind when considering the findings. An inherent feature of research into patient delay is the retrospective nature of collecting data on the duration of symptoms. The possibility of inaccuracy and recall bias in the current study is an issue, as some women may have wrongly estimated breast symptom duration before they saw their doctor. The study may also be subject to selection bias due to the fact that participants were only those women who finally saw their GP and excluded those who do not present to doctors for evaluation. Additionally, as the research was conducted at a specialist breast clinic, no delay data are available for women who initially consult with their doctor but are subsequently not referred on for further evaluation. Finally, the selection criteria included only women who had experienced no previous breast health issue.

Additional research involving a broader patient population is important to add to the findings of the current study.

Patient delay in seeking evaluation of a breast symptom should be kept to a minimum, not only because of the significance of early diagnosis and treatment. The shorter the time between detecting a symptom and confirmed negative diagnosis, the less time women will have to worry unnecessarily. Further clarification of the factors that influence delay is vital to broaden and develop public education initiatives aimed at encouraging women to promptly see their doctor for evaluation of breast symptoms.

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