Help-seeking patterns in Chinese women with symptoms of breast disease: a qualitative study

W. W. T. Lam1,2, M. Tsuchiya1,2, M. Chan3, S. W. W. Chan4, A. Or3, R. Fielding1,2

1School of Public Health, 5/F, WMW Mong Building, The University of Hong Kong, Hong Kong, PR China
2Centre for Psycho-Oncology Research & Training, The University of Hong Kong, Hong Kong, PR China
3Department of Surgery, Kwong Wah Hospital, Kowloon, Hong Kong, PR China
4Department of Surgery, United Christian Hospital, Kowloon, Hong Kong, PR China
Address correspondence to WWT. Lam, E-mail: wwtlam@hku.hk

ABSTRACT

Background Prompt utilization of health services on detecting breast symptoms can improve breast cancer (BC) survival. Little is known about Chinese women’s help-seeking behaviour. Our aim was to determine patterns of self-referral among Hong Kong Chinese women with self-detected breast symptoms.

Methods We recruited 37 women awaiting their first consultation at public hospitals for breast symptoms. Interviews were transcribed and analysed based on the grounded theory approaches.

Results A two-stage help-seeking model provided the best interpretation of the data. Symptom recognition was triggered by symptom interpretation, symptom progression and social messages. Painful lumps were seen as symptomatic, but atypical symptoms were often dismissed as benign as they responded to dietary change. Symptom intensification and discussions with someone who had faced BC prompted consultation. Service utilization involved fear of consequences, confirmation need, symptom distress, lay referral, media prompts and opportunistic presentation. Fearing cancer as incurable delayed consultation. Utilization barriers included cost, uncertainty about referral pathways, competing priorities and embarrassment.

Conclusions Atypical and painless presentation was more common among women delaying presentation. Barriers included cost, access, time and embarrassment. Education should emphasize atypical symptoms, the high-cure rate and the need for early presentation. Reduced cost and improved access to clinics would enhance early consultation.

Keywords cancer, health promotion, health services

Introduction

Breast symptoms may indicate a common condition, benign breast disease or breast cancer (BC). Detection of a breast symptom does not always prompt immediate consultation. Patient delay, defined as the period from the first detection of symptom(s) to the first medical consultation, comprises appraisal delay (delay between detecting a symptom and deciding to consult) and utilization delay (period between deciding to consult and actual consultation).1 Delay in the presentation for symptomatic BC of 3 months or more is strongly associated with lower survival rates.2 Women with total delays of 3–6 months have increased tumour size, a more advanced stage of the disease and poorer long-term survival than those with delays of <3 months.2,3 As BC treatment is more effective in the early stages of the disease, factors that influence a woman’s decision to seek medical help for breast symptoms need to be identified, to develop interventions that reduce patient delay. Increased awareness is particularly important, since there is no evidence that screening BC with mammography4 or by regular self-examination of the breasts does more good than harm.5 Between 18 and 34% of women with BC wait >3 months before consulting a physician.3,6–8 Several factors are associated with this delay. Older women are more likely to delay BC presentation.7 Lower educational achievement, non-white ethnic origin, presenting with breast symptoms...
other than a lump, not disclosing the breast symptom to another and not attributing the breast symptom to BC are all associated with patient delay.\textsuperscript{8–10} Symptom interpretation, attitudes towards general practitioner attendance and beliefs about the consequences of cancer treatments may also influence patient delay following suspected cancer symptoms.\textsuperscript{9,10} Hence, these findings suggest that delays or help-seeking is influenced by illness cognitions: how women interpret their symptoms and their coping responses predicted by the resulting illness representation.\textsuperscript{11} However, an adequate descriptive model that furthers understanding of processes involved in women’s decision-making and delay or health-seeking behaviour for breast symptoms remains elusive. Influences on patient delays remain poorly defined outside of western populations.\textsuperscript{8,9} Gaining insights into these unanswered questions is essential to reduce patient delay.

The Chinese peoples comprise the largest ethnic grouping worldwide, but we have only been able to identify only one previous study of Chinese women’s BC consultation delay among American–Chinese women with BC symptoms.\textsuperscript{9} There were similarities and differences to Caucasians. Californian Chinese–American women’s 5-year survival was much lower (55%) than that of Caucasians (85%).\textsuperscript{9} Chinese–American women were more likely to report feeling ‘invulnerable’ to BC as the disease was perceived to be due to ‘bad luck’. How the pervasive BC health education in the USA affected these women is unknown, but most had migrated from Mainland China or Taiwan as long as 31 years ago, so they probably differ from currently indigenous Chinese women.

In a preliminary analysis of 235 Hong Kong Chinese women who discovered their breast symptoms themselves, 101 (43%) presented to their medical doctor within 4 weeks and 38 (16%) within 8 weeks of symptom detection. However, 92 (39%) delayed their presentation for 12 or more weeks.\textsuperscript{11,12} These data indicate that, consistent with the study of American–Chinese,\textsuperscript{9} patient delay is also more prevalent in Hong Kong Chinese than in western populations, suggesting that cultural effects may be influencing help-seeking behaviour. However, this preliminary analysis,\textsuperscript{11} based on \textit{ad hoc} hospital records data obtained during an unrelated study, is limited by the subset of available variables, and therefore also as primary evidence.

A general consensus exists that most studies in the literature are of insufficient quality and that weaknesses in current evidence poorly inform the development of specific strategies to shorten patient delay.\textsuperscript{6,7,13} Most studies have relied on secondary data, such as hospital records often obtained in a non-standardized format, and suffer from sample size and/or power limitations. Studies based on women’s reports of their help-seeking patterns tend to focus on women who delayed their presentation of BC. Hence, women were recruited after the confirmation of BC diagnosis. Yet, the retrospective nature of these data threatens the internal validity of existing evidence on symptom duration. Diagnosis can prompt rationalization of health-seeking behaviour, distorting or misrepresenting symptom duration.\textsuperscript{14} Retrospection limitations are inevitably unavoidable in any feasible study of help-seeking behaviour. Nonetheless, efforts should be made to interview women on presentation to minimize the recall bias. To overcome these and other design limitations in existing studies, good quality primary research is urgently needed.\textsuperscript{8–11} Of critical theoretic and methodological importance is that, at the time a breast symptom is detected, women are unlikely to know if the symptom is benign or malignant: their consultation behaviour is consequently based on their interpretation and cognitions. After consulting a general practitioner (GP), women are referred for breast surgery consultation on the basis of the GP’s suspicion that the symptom has clinical significance. Women’s responses to self-detected breast symptoms, therefore, are predicated on a high degree of uncertainty. We assumed \textit{a priori} that, for the purposes of consultation decision-making, there should be few pre-existing differences between women with benign and those with malignant disease, perhaps with the exception of level of anxiety, with women who consult earlier displaying greater anxiety.

We describe a grounded theory-based qualitative study of medical help-seeking decision-making by Hong Kong Chinese women with breast symptoms interviewed before they are given a diagnosis, to minimize contamination and recall bias. A grounded theory approach was chosen because it explores experiential aspects of human behaviour and the underlying process.\textsuperscript{15,16}

**Methods**

**Sample**

Following Ethics Committee approval, participants were recruited in three regional Hong Kong public hospitals from women-seeking evaluation for self-identified breast symptoms, such as lump, pain or nipple discharge. Eligible participants were Hong Kong resident Cantonese-speaking Chinese women, \( \geq 21 \) years. Women with a prior BC diagnosis, or whose breast abnormality was discovered through breast screening were excluded. Women interviewed were chosen, using theoretical sampling, to capture the richness of a wide range of perspectives.\textsuperscript{15} Sample selection for interview was based on the following factors: age, socio-economic background, duration of delay and nature of
breast symptoms. Women who had waited at least 3 months before seeking medical help were defined as delayers. At the time of data collection, only one woman presented with symptoms other than a lump, consistent with our previous study in which <5% of women presented non-lump symptoms. Sample size was determined by data saturation (no new material generated over five consecutive interviews). In this study, data saturation was achieved with 37 women.

**Procedure**

Over a 12-month period (September 2005–August 2006), women, referred by their GP to be seen by the breast surgeon, were interviewed while awaiting their initial consultation in surgical specialist out-patient clinics, before history taking, diagnostic investigations and diagnosis, thereby minimizing recall bias, including post hoc rationalization of help-seeking behaviour or selective recall. Being unsure about the diagnosis, both the women and the interviewer were blind to the diagnosis, and women were also uninformated by any information conveyed during the consultation or by any emotional reactions arising therefrom. All interviews were conducted by the first author who was independent of the clinical team caring for the women.

Each woman participated in a 30- to 45-min, in-depth, semi-structured interview, prior to their consultation, which began with the general question ‘Please tell me how you decided to bring the particular breast problem to the attention of a doctor’. This broad question was then followed by probes to encourage elaboration of responses. All of the interviews were electronically recorded.

**Data analysis**

Interviews were transcribed verbatim. Transcripts were analysed and coded using the grounded-theory approach facilitated with NVIVO. We used a constant comparative method of data analysis involving concurrent interviewing and transcript analysis in order to explore emergent themes in subsequent interviews. To maximize the validity of the theoretical model, two experienced and trained researchers independently coded the data and held joint interpretive discussions. Disagreement was resolved by repeated textual reference, comparison, plausibility and discussion. The adequacy of the research process was achieved by using explicit outlines, close adherence to the research process and the evolution of codes, categories and theory in order to allow others to understand how decisions on the analysis was made. During the course of the study, categories and concepts arising from different transcripts were constantly and systematically compared and contrasted to ensure that they were mutually exclusive, and to see how they clustered or connected, thereby firmly ‘grounding’ theory in the data. Moreover, existing theories on help-seeking behaviour were only reviewed after the completion of data analysis in order to ensure that the conceptual model was developed exclusively from the data. We continued data collection to theoretical saturation.

**Results**

The women interviewed were aged 20–81 years, and most (62%) were married. Twenty-four had at least a secondary education. Three reported a family history of BC. Thirteen women consulted a physician within 1 week and 10 within 3 months of symptom discovery. Fourteen women had delayed 3 months or more before presenting, eight of whom had delayed beyond 6 months. Excepting one woman with nipple discharge, all women cited a breast lump as the primary presenting symptom. Of these 37 women presenting with breast lump, 21 had concurrent breast pain. Ten women had a history of benign breast disease. Eleven women were subsequently diagnosed with BC (Table 1).

The qualitative analyses suggested a two-stage help-seeking decision model explaining the process of medical help-seeking decisions by Chinese women with self-detected breast symptoms. The two stages are (i) symptom recognition, and (ii) service utilization.

**Symptom recognition**

Symptom recognition appears to be triggered by three factors: symptom interpretation, symptom progression and social messages (Table 2 presents illustrative quotes a–u).

**Symptom interpretation**

Women’s subsequent help-seeking behaviours depended on symptom interpretation that often involved subjectively matching the presenting symptom against known BC symptoms to determine the likelihood of cancer. Influences included family history of cancer (quotes a, b) and the nature of the symptom (quote c). Some women initially evaluated the breast lump as not serious because it was painless. For these women, pain, rather than the lump, indicated breast abnormality (quote d), suggesting that symptoms that fail to match women’s symptom expectations exacerbate appraisal delay. Additionally, some women initially dismissed the breast lump because they attributed the breast symptom to injury or considered it in terms of Traditional Chinese Medicine (TCM) as ‘re qi’ (an excess of Yin energy) (quotes e, f).

Other women simply attributed the presence of the symptom as a normal reflection of periodic hormonal change (quote g). Moreover, women were more likely to
take the wait-and-see approach when the symptoms fluctuated (quote h), suggesting that this created ambiguity or signified a benign aspect.

**Symptom progression**

Women who dismissed the initial breast symptom did not deny their symptoms, but rather actively monitored their symptoms closely. Symptom persistence and symptom change confronted them with the possibility of a serious health threat. Several women talked about how the persistence of the symptom triggered medical help-seeking (quotes i, j).

Other women shifted their interpretation of the symptom as normal to something requiring attention when the symptoms’ presentation changed, such as an increase in lump size, or developing additional symptom(s), including breast pain or nipple discharge. They decided to seek medical attention at this stage (quotes k, l).

<table>
<thead>
<tr>
<th>Case</th>
<th>Age</th>
<th>Martial status</th>
<th>Employment</th>
<th>Highest education level</th>
<th>Years of residence</th>
<th>Type of breast symptoms</th>
<th>Duration of delay</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>44</td>
<td>Married</td>
<td>Employed</td>
<td>Tertiary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Benign</td>
</tr>
<tr>
<td>2</td>
<td>52</td>
<td>Married</td>
<td>Housewife</td>
<td>Primary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&gt; 6 months</td>
<td>Benign</td>
</tr>
<tr>
<td>3</td>
<td>48</td>
<td>Married</td>
<td>P/T employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&gt; 3 months</td>
<td>Benign</td>
</tr>
<tr>
<td>4</td>
<td>36</td>
<td>Married</td>
<td>Employed</td>
<td>Secondary</td>
<td>4 – 7 years</td>
<td>Lump</td>
<td>&gt; 6 months</td>
<td>Benign</td>
</tr>
<tr>
<td>5</td>
<td>32</td>
<td>Married</td>
<td>Employed</td>
<td>Primary</td>
<td>1 – 3 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Benign</td>
</tr>
<tr>
<td>6</td>
<td>44</td>
<td>Single</td>
<td>Employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 3 months</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>7</td>
<td>58</td>
<td>Married</td>
<td>Housewife</td>
<td>Primary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&gt; 3 months</td>
<td>Benign</td>
</tr>
<tr>
<td>8</td>
<td>23</td>
<td>Single</td>
<td>Employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&gt; 3 months</td>
<td>Benign</td>
</tr>
<tr>
<td>9</td>
<td>78</td>
<td>Widowed</td>
<td>None</td>
<td>&lt; 7 years</td>
<td>Lump</td>
<td>&lt; 3 months</td>
<td>Breast cancer</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>42</td>
<td>Married</td>
<td>Housewife</td>
<td>Secondary</td>
<td>1 – 3 years</td>
<td>Lump</td>
<td>&gt; 3 months</td>
<td>Benign</td>
</tr>
<tr>
<td>11</td>
<td>20</td>
<td>Single</td>
<td>Student</td>
<td>Tertiary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&gt; 3 months</td>
<td>Benign</td>
</tr>
<tr>
<td>12</td>
<td>51</td>
<td>Married</td>
<td>Housewife</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Benign</td>
</tr>
<tr>
<td>13</td>
<td>48</td>
<td>Married</td>
<td>Employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 3 months</td>
<td>Benign</td>
</tr>
<tr>
<td>14</td>
<td>45</td>
<td>Married</td>
<td>Housewife</td>
<td>None</td>
<td>4 – 7 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Benign</td>
</tr>
<tr>
<td>15</td>
<td>46</td>
<td>Single</td>
<td>Unemployed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Benign</td>
</tr>
<tr>
<td>16</td>
<td>47</td>
<td>Single</td>
<td>Employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&gt; 6 months</td>
<td>Benign</td>
</tr>
<tr>
<td>17</td>
<td>52</td>
<td>Single</td>
<td>Employed</td>
<td>Primary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 3 months</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>18</td>
<td>49</td>
<td>Married</td>
<td>Employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&gt; 6 months</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>19</td>
<td>65</td>
<td>Married</td>
<td>Housewife</td>
<td>None</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&gt; 6 months</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>20</td>
<td>46</td>
<td>Widowed</td>
<td>P/T employed</td>
<td>Secondary</td>
<td>&lt; 1 year</td>
<td>Lump</td>
<td>&gt; 3 months</td>
<td>Benign</td>
</tr>
<tr>
<td>21</td>
<td>35</td>
<td>Married</td>
<td>Housewife</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Benign</td>
</tr>
<tr>
<td>22</td>
<td>50</td>
<td>Married</td>
<td>P/T employed</td>
<td>Primary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>23</td>
<td>45</td>
<td>Single</td>
<td>Employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Benign</td>
</tr>
<tr>
<td>24</td>
<td>52</td>
<td>Married</td>
<td>P/T employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Benign</td>
</tr>
<tr>
<td>25</td>
<td>44</td>
<td>Divorced</td>
<td>Employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Nipple discharge</td>
<td>&lt; 3 months</td>
<td>Benign</td>
</tr>
<tr>
<td>26</td>
<td>70</td>
<td>Widowed</td>
<td>Retired</td>
<td>Primary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&gt; 3 months</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>27</td>
<td>35</td>
<td>Single</td>
<td>Employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Benign</td>
</tr>
<tr>
<td>28</td>
<td>44</td>
<td>Married</td>
<td>Housewife</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 1 month</td>
<td>Benign</td>
</tr>
<tr>
<td>29</td>
<td>69</td>
<td>Married</td>
<td>Retired</td>
<td>Primary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>30</td>
<td>56</td>
<td>Married</td>
<td>P/T employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>31</td>
<td>33</td>
<td>Married</td>
<td>Employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 3 months</td>
<td>Benign</td>
</tr>
<tr>
<td>32</td>
<td>81</td>
<td>Widowed</td>
<td>Housewife</td>
<td>None</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&gt; 6 months</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>33</td>
<td>54</td>
<td>Married</td>
<td>Employed</td>
<td>Primary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 1 week</td>
<td>Benign</td>
</tr>
<tr>
<td>34</td>
<td>42</td>
<td>Married</td>
<td>Employed</td>
<td>Tertiary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&lt; 3 months</td>
<td>Benign</td>
</tr>
<tr>
<td>35</td>
<td>40</td>
<td>Married</td>
<td>Employed</td>
<td>Secondary</td>
<td>4 – 7 years</td>
<td>Lump</td>
<td>&lt; 1 month</td>
<td>Benign</td>
</tr>
<tr>
<td>36</td>
<td>47</td>
<td>Married</td>
<td>Employed</td>
<td>Primary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&gt; 6 months</td>
<td>Breast cancer</td>
</tr>
<tr>
<td>37</td>
<td>21</td>
<td>Single</td>
<td>Employed</td>
<td>Secondary</td>
<td>&gt; 7 years</td>
<td>Lump</td>
<td>&gt; 6 months</td>
<td>Benign</td>
</tr>
</tbody>
</table>
Table 2: Factors influence symptom recognition

Factors related to symptom interpretation
Family history of cancer:
(a) ‘...when I felt the lump...I was so scared as both of my parents died from cancer. I was worried it could be genetic. My father died from leukemia and my mom died from lung cancer.’ (Case 23, age 45, duration of delay <1 week)
(b) ‘I have a strong family history of cancer. Two of my uncles and my grandmother died from cancer in the past three years. It worries me. Therefore, I didn’t want to go to the doctor. I was scared that the doctor will tell me (that I have cancer).’ (Case 19, age 65, >6 months)

Symptom nature
(c) ‘I was having a shower...The breasts are normally very soft, liked cotton balls. Then I suddenly felt a hard nodule and I know there is something wrong.’ (Case 28 age 44, <1 week)
(d) ‘I didn’t pay much attention to the lump. I just ignored it. But then recently, it was painful when I touched it. So I thought I shouldn’t wait anymore.’ (Case 2, age 52, >6 months).
(e) ‘I thought it’s (the lump was caused by) re qi (excess Yin energy). So I took some cooling food attempting to get rid of the re qi.’ (Case 6, age 44, <3 months).
(f) ‘I bumped into something and bruised my chest. It was severely bruised. I felt a lump too. But I thought it was just a bruise at first. I put some Chinese medicine...on the affected area to reduce the bruise and it disappeared after a while. But the lump doesn’t go away.’ (Case 18, age 49, >6 months)
(g) ‘It’s like...menstrual pain. Sometimes, women get breast pain during the menstrual period...I didn’t notice any change of the shape. So I thought I must have too much heat in my body.’ (Case 6, age 44, <3 months)
(h) ‘The size of the lump was quite big and it was painful too. The pain only came during the evening and it’s gone during the day. So I dismissed it.’ (Case 3, age 48, <3 months).

Symptom progression
(i) ‘At first, (the lump) was slightly painful, like having a zit on your face. The zit usually will disappear after a while, but this one is still there and won’t disappear. Therefore, I need to see a doctor.’ (Case 6, age 44, <3 months)
(j) ‘(The lump) is still there every time I felt it. And it’s the same as the first time I felt it. So I think it needs to be seen by a doctor.’ (Case 20, age 46, >3 months)
(k) ‘I kept an eye on it. And I thought it has got bigger. So I went to see a doctor.’ (Case 13, age 48, <3 months)
(l) ‘I could feel the change of the (lump). And there was some blood stained discharge and it began to hurt from time to time. It felt different compared to previously. So I decided to seek medical help.’ (Case 17, age, 52, <3 months)

Social messages
(m) ‘I am quite aware of breast cancer as many of my friends had breast cancer. So I know.’ (Case 23, age 45, <1 week).
(n) ‘I went to see the doctor (about the breast symptom) as I have many friends who had breast cancer.’ (Case 12, age 51, <1 week)
(o) ‘My sister-in-law in Mainland China had breast cancer. So I worried about the lump.’ (Case 14, age 45, <1 week).
(p) ‘I didn’t know what (the lump) is about...Then my sister-in-law was diagnosed with breast cancer. So I realized I am in trouble.’ (Case 32, age 81, >6 months).
(q) ‘Recently, I had a friend who had breast cancer. She is in her 20s. She was amazing. She felt the lump and went to see the doctor straight away. So she was able to have lumpectomy. After talking to her, I decided I need to go to see a doctor.’ (Case 34, age 42, <3 months).
(r) ‘I told my husband (about the lump). He said this is serious and I need to go to see a doctor.’ (Case 7, age 58, >3 months).
(s) ‘The lump seems to be getting bigger. So I told my friend. She told me that I need to have the doctor look at it.’ (Case 20, age 46, >3 months)
(t) ‘I was really worried (when I felt a lump in the breast). I made an appointment...straight away...I read a lot about cervical cancer and breast cancer from the newspapers, also from TV advert. So I was scared that I might have cancer.’ (Case 5, age 32, <1 week)
(u) ‘I have come across a lot of information about breast cancer and cervical cancer on TV. Liza Wong (a local celebrity) also talked about (breast cancer). I think such information alerts the general public...So I thought I should go and see a doctor.’ (Case 8, age 23, >3 months)

Social messages
Three types of social influences triggering women’s responses to the presence of symptoms were reported. Knowing someone who had cancer or breast disease helped to signify the symptom as a health threat. Women with relatives or friends who had BC promptly appraised the breast symptom as threatening (quotes m, n, o). Other women, who initially dismissed their symptoms, were later prompted to reinterpret the symptom as threatening through contact with others who had had BC (quotes p, q).

Social disclosure
Discussing their symptom with others allows women to calibrate their symptom interpretation against the views of others, prompting help-seeking (quotes r, s).
Media sources also informed women’s symptom interpretation. Many women spoke of acquiring knowledge about BC mainly from newspapers, television or radio programmes. BC reports in the news heightened their awareness of the potential seriousness of breast symptoms, particularly if public figures were affected (quotes t, u).

**Service utilization**

Once women recognized the breast symptom as a potential health threat, they moved into the second stage where they made the decision to seek medical care. Six triggers to seek medical help emerged from the narrative data: fearing consequences of delayed help-seeking, perceived need to confirm the diagnosis, physical symptom distress, lay referral system, media prompts, and opportunistic help-seeking. However, not every woman promptly sought medical help on recognizing their breast symptom as a health threat. Several factors influenced utilization delay: fear of cancer diagnosis, avoiding breast surgery, inaccessibility to health services, financial constraints, competing life priorities, and being embarrassed to have a breast examination. Table 3 summarizes the illustrations of the stimulating and impeding factors.

**Triggers for service utilization**

**Fearing consequences of delayed help-seeking**
Non-delayers reported a sense of urgency in medical help-seeking to avoid the possibly fatal consequences of delayed presentation of breast symptoms (illustrations [il.] a, b). Some women worried about the impact on their children if prevarication led to incurable BC (il. c).

**Perceived need to confirm the diagnosis**
An undefined symptom increases threat uncertainty. Some women simply perceived a need for diagnostic confirmation as a means to reduce or control threat uncertainty (il. d, e).

**Physical symptom distress**
Women who experienced prolonged physical distress from the breast symptom, particularly if this involved interference with physical or daily activity, promptly sought medical help (il. f).

**Lay referral system**
For some women, the decision to seek medical help was taken by someone else, most often the partner, sister, other female relative or adult children of older women, instead of it being the woman’s sole decision (il. g, h).

**Media prompts**
Prompts from a concurrent non-government organization-sponsored BC awareness social marketing programme in Hong Kong effectively triggered some of the women interviewed to seek medical attention for their breast symptom (il. i, j).

**Opportunistic help-seeking**
Many women, especially delayers, waited until they had developed another health problem then used that as a pretext to consult their doctors, presenting the breast symptom as a secondary concern (il. k, l).

**Factors influence utilization delay**
A number of factors presented barriers to action once an appraisal decision to consult had been made. These are discussed below.

**Fear of cancer diagnosis**
For some women, the possibility of BC was too fearful, leading to extended utilization delay to avoid having to confront bad news (il. m, n). Others equated cancer with a death sentence, and resigning themselves to a fatalistic position, saw no purpose in seeking medical help for an ‘incurable’ disease (il. o, p).

**Avoiding breast surgery**
For other women who delayed seeking medical help, the negative feelings evoked by the prospect of breast surgery were instrumental in their utilization delay (il. q, r).

**Inaccessibility to health services**
Utilization delay was frequently due to structural rather than individual behavioural factors. Unfamiliarity with the medical care system prevented women utilizing the health service. Older women and new immigrants were more likely to have difficulty in accessing health services (il. s, t).

**Financial constraints**
Limited household income and the high cost of health care also contributed to utilization delay. Several women found it hard to justify spending as much as 2 days’ living expenses on seeing a public doctor for what might turn out to be a benign and self-limiting condition (il. u).

**Competing life priorities**
Some women delayed seeking medical attention due to other competing life priorities. Delayers tend to prioritize their
Table 3 Factors influence service utilization

<table>
<thead>
<tr>
<th>Triggers for service utilization</th>
<th>Factors influence utilization delay</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fearing consequences of delayed help seeking</strong></td>
<td><strong>Fear of cancer diagnosis</strong></td>
</tr>
<tr>
<td>(a) ‘I am afraid of dying ... I often seek medical help straight away whenever I am ill.’ (Case 12, age 51, &lt;1 week)</td>
<td>(m) I was so frightened what if it’s not a benign tumour. I was too scared to face the truth. So I didn’t want to go to the doctor. If I didn’t think about it, I was fine. I started worrying when I thought of it. But I was just too afraid to face it.’ (Case 2, age 52, &gt;6 months).</td>
</tr>
<tr>
<td>(b) ‘You can’t wait with this thing (cancer). If it is (cancer), it needs to be treated at the early stage. If you delay to seek help, you will lose your breast. It’s quite sad.’ (Case 28, age 44, &lt;1 week)</td>
<td>(n) ‘I had been struggling for two to three months whether to go to the doctor or not. I was so frightened to find out the truth.’ (Case 8, age 23, &gt;3 months).</td>
</tr>
<tr>
<td>(c) ‘I worried about my kids. They need me. I don’t know what will happen to my kids if something happens to me. So I didn’t want to wait and went to see the doctor straight away.’ (Case1, age 44, &lt;1 week).</td>
<td>(o) ‘If it’s a benign tumour, it will cure itself. And if it’s cancer, it’s incurable. Therefore, I didn’t go to the doctor.’ (Case 3, age 48, &lt;3 months).</td>
</tr>
<tr>
<td><strong>Diagnosis confirmation</strong></td>
<td>(p) ‘It (cancer) is incurable. So it’s no need to seek medical help.’ (Case 19, age 65, &gt;6 months).</td>
</tr>
<tr>
<td>(d) ‘I felt that I had to have the lump taken out. It’s abnormal that having a lump in the breast. It was a burden for me having a lump (in the breast). I can’t avoid it anymore. I do need to know what is going on.’ (Case 6, age 44, &lt;3 months).</td>
<td><strong>Avoid breast surgery</strong></td>
</tr>
<tr>
<td>(e) ‘I decided to seek medical help because I want to have peace of mind. I need to know the diagnosis.’ (Case 8, age 23, &gt;3 months).</td>
<td>(q) ‘I know it could be malignant. But I was so afraid that I might need an operation. I don’t want to be operated on. So I didn’t go to the doctor.’ (Case 36, age 47, &gt;6 months).</td>
</tr>
<tr>
<td><strong>Physical symptom distress</strong></td>
<td>(r) ‘I worried about (the lump), but I didn’t want to go to the doctor. I worried about the breast surgery which will leave the scarring on my chest.’ (Case 2, age 52, &gt;6 months).</td>
</tr>
<tr>
<td>(f) ‘I had to do housework and cook for my family. But I couldn’t lift my hand up because the lump hurt. It affected my daily activities. So I need to seek help. Otherwise, I wouldn’t go to see a doctor.’ (Case 7, age 58, &gt;3 months).</td>
<td><strong>Inaccessibility to health services</strong></td>
</tr>
<tr>
<td><strong>Lay referral system</strong></td>
<td>(s) ‘I had waited for few months because I wasn’t sure where to seek help. Then I asked around and I was told to go to the family planning clinic.’ (Case 20, age 46, &gt;3 months).</td>
</tr>
<tr>
<td>(g) ‘A friend of mine is working at one of the clinics) She pushed me to seek medical help. She said I shouldn’t keep putting it off. . . . she then made a medical appointment for me. So I went.’ (Case 2 m age 52, &gt;6 months)</td>
<td>(t) ‘I know I had to see a doctor. But I didn’t know where to go. So I waited till the next follow-up appointment at diabetic clinic. Then I told the doctor.’ (Case 26, age 70, &gt;3 months)</td>
</tr>
<tr>
<td>(h) ‘My mom and my aunt pressed me to go and see a doctor. They told me that I must go to the doctor . . . I know I should seek medical help, but for some reason, I kept putting it off until my mom pushed me to do so.’ (Case 8, age 23, &gt;3 months).</td>
<td><strong>Financial constraints</strong></td>
</tr>
<tr>
<td><strong>Media prompts</strong></td>
<td>(u) ‘I can’t afford to see a doctor. I live on the government allowance. I don’t have money to seek medical help. My daily expense costs me HK$70. So where am I going to find money to see a doctor? So I have to wait till the follow-up appointment (for other medical concern).’ (Case 26, age 70, &gt;3 months).</td>
</tr>
<tr>
<td>(i) ‘The lump didn’t bother me . . . Then I’ve come across a lot of information about breast cancer. It was everywhere from newspapers to train stations. So I decided to seek medical help.’ (Case 6, age 44, &gt;3 months).</td>
<td><strong>Competing life priorities</strong></td>
</tr>
<tr>
<td>(j) ‘The information (about breast cancer) on the advert sounds scary. About 1 in 20 women would get breast cancer. And I had a lump. So I decided to seek medical help.’ (Case 21, age 35, &lt;1 week).</td>
<td>(v) ‘I don’t have the time. I have a busy schedule. I get up and go to work. Then I come home and cook for my family. I have a daughter at mainland China. So when I am off, I go to China to visit her. So I just don’t have the time to go to the doctor.’</td>
</tr>
</tbody>
</table>

Continued
other social duties or activities (including family responsibilities, studying and work) over personal health (Il. v).

**Embarrassment about having a breast examination**

Delayed presentation to the doctor was mentioned more by women who expressed the view that their breasts were ‘private’ and who were therefore reluctant to be examined, especially by male physicians (Il. w; x).

**Discussion**

**Main findings**

We explored determinants of delays in Hong Kong Chinese women’s medical help-seeking behaviour for self-detected breast symptoms. Our findings compare well with Andersen et al.’s process of patient delay. Narrative analysis revealed recognition of symptoms and perceived need to seek medical attention to be the two key stages influencing initial medical consultation by women with breast symptoms. Appraisal delay is influenced more by internal factors, whereas utilization delay is predominantly influenced by structural, social and personal factors. In appraisal delay, symptom interpretation, the initial and most important step in the process of symptom recognition, is largely constructed from the existing lay knowledge of BC symptoms. Symptoms incongruent with women’s pre-existing knowledge were more likely to be dismissed as insignificant, delaying medical-care seeking. Similar misattribution of cancer symptoms has been reported in previous studies on breast and other cancers. For example, patients with oral cancer tended to attribute symptoms to minor oral conditions while urogenital patients dismissed potential prostate cancer symptoms as due to ‘wear and tear’. Previous studies on Caucasian women suggested that non-lump symptoms are associated with more patient delay. In contrast to previous studies in which substantial proportions of women presented with non-lump symptoms, our previous study on breast clinic attendees indicated <5% of new cases presented with non-lump symptoms. Moreover, non-lump symptoms were not associated with delayed presentation. Our current data suggest that, in this Chinese sample, breast pain motivates prompt help-seeking. A painful lump, concatenating as it does two key symptom features of disease—the stereotypical ‘lump’ of cancer, and pain, a non-specific indicator of damage—is construed as more serious and requiring urgent medical attention, whereas a painless lump is more likely to be attributed to excess qi (body heat), to be self-limiting and implying no long-term consequence. Our finding suggests that Chinese women make sense of breast symptoms using both traditional Chinese (TCM concepts, including the balance of yin and yang, the flow of qi and concepts of heat and cold) and western (pain associated with illness and injury) heuristics, possibly increasing the risk of confusing symptom attribution, thereby compounding appraisal delay.

Women who initially dismissed the breast symptom still actively monitored symptom progression, consistent with previous reports. Persistent symptoms and interference with daily activity stimulated medical help-seeking, consistent with a previous study on oral cancer in which functional impairment resulting from oral symptoms triggered patients’ help-seeking. Perceived interference with physical activity is one of Zola’s five social triggers for medical help-seeking.

Consistent with previous studies, social disclosure facilitated women’s help-seeking behaviour. Women used their social networks to determine the significance of breast symptoms, polling advice on further action. Disclosing

<table>
<thead>
<tr>
<th>Triggers for service utilization</th>
<th>Factors influence utilization delay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunistic help seeking</td>
<td></td>
</tr>
</tbody>
</table>
| (k) ‘I didn’t seek medical help because it was not painful. I went to see a doctor later on for my chest pain. During the examination, the doctor felt the lump in my breast. So I told him.’ (Case 18, age 49, >6 months) | Being embarrassed to have breast examination  
| (l) ‘I went to see a GP for a cold. During the visit, I told the GP that I also found a lump. He had a look at it and referred me to here to see the specialist.’ (Case 25, age 44, <3 months) | (w) ‘I am quite conservative regarding seeking help for women’s health concerns. I would try to avoid it. I would go to see a female physician for women’s health. If it’s a male doctor, I would not go. Sometimes I would even refuse to see a male doctor for cold.’ (Case 7, age 58, >3 months)  
| (x) ‘I went to the follow-up appointment to get medications for my hypertension. It was a male doctor. So I didn’t tell him about my lump. It’s too embarrassing. I didn’t want him to look at my breasts. Then I met a female doctor in the following appointment. So I told her about my lump.’ (Case 9, age 78, >3 months). |
their symptom to others seems to allow women to evaluate symptoms experiences against the views of others, thereby reducing and possibly modifying utilization delay if others also offer advice about health services’ availability.

Social messages facilitated prompt health service utilization by women on detecting a symptom. Media sources provided significant information for Chinese women’s understandings of BC. Therefore, educational interventions aiming at achieving general public awareness of BC symptoms need to be carefully designed with concrete symptomatic information, importantly emphasizing variability of symptom nature, timeline and sensation. High-fear messages primarily emphasize disease prevalence and its morbidity and mortality. However, women who perceived BC treatment to have low efficacy delayed help-seeking, fearing confrontation with an incurable cancer diagnosis. This has been documented in previous studies.\(^{24}\) Hence, emphasizing that early detection carries a favourable prognosis, instead of, or alongside, fearful messages would likely be more effective for these women. Involving high-profile celebrities who themselves have survived BC in education campaigns should prove a particularly effective prompt to consultation.

A number of elements indicate the need for affordable, subsidized health services with flexible hours to address several identified contributors to utilization delays. Previous studies\(^ {3,6,8,13,18,23,24}\) correspond with our findings that two socio-economic factors—financial constraints and being occupied with other life priorities—increase utilization delay by restricting access to health services. Shortage of money or time makes it hard for women to persuade themselves that the symptom is serious enough to justify the financial or social costs.\(^ {25,26}\) Older women were more likely to have difficulty in accessing health services. This may be due to lower educational level, greater traditional beliefs about health and disease, self- or other-attributions of symptoms to ‘ageing’, negative past experience in health care, or less disposable income. Poverty in old age is a common problem in Hong Kong. Accessible subvented breast care services, therefore, should be staffed by female doctors to minimize barriers from embarrassment and be promoted to bring the services to public attention in order to strengthen women’s access to health services. There is no benefit to be gained by providing enhanced information to populations which then face significant barriers in accessing services, nor by providing accessible services that remain unknown to potential users. Mass media campaigns that provide health information that is more precisely tailored to various demographic groups such as older, migrant or ethnic minority women could also induce women to respond promptly to breast symptoms.

**What this study adds to the body of knowledge**

In conclusion, these findings have increased our understanding of how Chinese women make decisions to seek medical help for breast symptoms. They reveal that Chinese women describe similar but not identical reasons to Caucasian women for delayed symptom presentation. Prior studies have primarily sought to identify factors influencing patient delay, paying less attention to the process from when breast symptoms are detected to entry into the medical care system. The present study findings fill the gap in this body of knowledge, clarifying factors influencing both appraisal and utilization processes. The findings highlight that while education aiming to enhance accurate understanding of BC presentation among the general public is a key strategy to shorten appraisal delay, organizational changes focusing on equal accessibility across the social class spectrum are necessary to minimize utilization delay.

**Limitations of this study**

This study has several limitations. We interviewed women as early as possible after symptom detection and before consultation to minimize bias. Performing interviews before the diagnosis prevented post hoc rationalization of help-seeking behaviour and enhances the validity of the findings. However, being retrospective, some recall bias is inevitable and needs to be borne in mind. Most women interviewed, not surprisingly, turned out to have benign breast disease. It is the case that, of women either self- or GP-referred to a specialist breast clinic, the majority will have benign disease and only a small fraction malignant disease. Referral letters do not contain the diagnosis (in most cases) but instead describe briefly the findings on examination (lump, discharge etc) without alluding to a particular diagnosis. The referring agency may have their suspicions, but rarely are these expressed in the referral letter. Consequently, we could not identify diagnosis in advance for practical reasons. A potential limitation of approaching women who were waiting for their diagnostic investigations and diagnosis is that they may be extremely anxious, which can affect recall. To facilitate recall, women were encouraged to temporally relate their symptom discovery relative to key events, such as birthdays, festival seasons or holidays.\(^ {13}\) The accuracy of recall was validated by checking for consistency against the information obtained from the GP’s referral letter. Although our study findings were based on a wide variety of Chinese women with breast symptoms in respect of demographic and medical factors, the study sample was limited to Hong Kong Chinese women mostly presenting with breast lumps. The comparability of these findings to women with
non-lump breast symptoms is unknown. The sample also had a high proportion of women (70%) eventually diagnosed with benign disease who were significantly younger than the women diagnosed with BC. The decision process for medical help-seeking was similar between the two groups, but more women subsequently diagnosed with BC had delayed help-seeking compared with those with benign disease. Age may have been a factor, though our previous study showed that age was not associated with delay in presentation of BC. However, the data were based on ad hoc hospital records’ data obtained during an unrelated study. Hence, caution is needed before generalizing our results. A large-scale quantitative study on Chinese women presenting with self-discovered breast symptom, therefore, is required to confirm these findings.

**Funding**

This study was funded by Health and Health Services Research Fund (project no. 02030121), Health, Welfare and Food Bureau, Government of the Hong Kong Special Administrative Region, The People’s Republic of China.

**References**