

## RESEARCH ARTICLE

# Knowledge, Perception, Practice and Barriers of Breast Cancer Health Promotion Activities among Community Pharmacists in Two Districts of Selangor State, Malaysia

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### Abstract

Breast cancer is the most common cancer and the leading cause of cancer death among women in Malaysia. Despite the campaigns undertaken to raise the awareness of the public regarding breast cancer, breast cancer screening rates are still low in the country. The community pharmacist, as one of the most accessible healthcare practitioners, could play a role in the provision of breast cancer health promotion services to the community. However, there are no documented data regarding the community pharmacists' involvement in breast cancer related health promotion activities. Hence, this study was conducted to examine self-reported knowledge, practice and perception of community pharmacists on provision of breast cancer health promotion services and to investigate the barriers that limit their involvement. This cross-sectional survey conducted between May to September 2010, included a sample of 35 community pharmacists working in the districts of Hulu Langat and Sepang in state of Selangor. A 22-item validated questionnaire that included both closed and Lickert scale questions was used to interview those pharmacists who gave their informed consent to participate in the study. The data was analysed using SPSS. Only 11.3% of the community pharmacists answered all the questions on the knowledge section correctly. The mean overall knowledge of the community pharmacists on risk factors of breast cancer and screening recommendations is 56%. None of the respondents was currently involved in breast cancer health promotion activities. Lack of time (80%), lack of breast cancer educational materials (77.1%) and lack of training (62.9%) were the top three mentioned barriers. Despite these barriers, 94.3% (33) of the community pharmacists agreed that they should be involved in breast cancer health promotion activities. Hence, there is need to equip community pharmacists with necessary training and knowledge to enable them to contribute their share towards prevention and screening of breast cancer.

**Key words:** Breast cancer - community pharmacists - health promotion - Malaysia

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### Introduction

Breast cancer is the commonest cancer in women in most parts of the world and across all ethnic groups in Malaysia. According to the statistics reported by the National Cancer Patient Registry (NCPR) of Malaysia, 1 in 20 women will develop the disease in their life time (Yip et al., 2006).

Early detection is a key to reduce the morbidity and mortality associated with breast cancer. However, most of the patients in Malaysia present with advanced stage of the disease on their initial visit to the public hospitals (Hisham and Yip, 2004; Nur et al., 2007). Hence, there is a need to facilitate the early breast cancer detection (Hadi et al., 2010).

Community pharmacists could play a vital role to educate the public about breast cancer and the importance of early detection (El Hajj and Hamid, 2011). As reported by Anderson (2000) and Krass et al. (2003), community

pharmacists are well suited to offer health promotion services due to their accessibility and credibility. They could provide reliable up-to date information, offer advice and counseling, display leaflets and refer women to special breast cancer screening programs. The involvement of community pharmacists in health promotion activities on the other hand is anticipated to effectively position the profession in the 21<sup>st</sup> century (Hassali et al., 2009).

So far there is no study that assessed these potential roles of community pharmacists on breast cancer health promotion in Malaysia. Therefore, this study was set to examine knowledge, perception and barriers of community pharmacists in provision of breast cancer health promotion services.

### Materials and Methods

A face to face interview, using structured questionnaire, was carried out with pharmacists working in community

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pharmacies in district of Hulu Langat and Sepang, Selangor. Fifty-two registered community pharmacists working in these districts were approached to take part in the study. The consent to participate was obtained after the community pharmacists were presented with a cover letter explaining the purpose of the study. A total of 35 out of 52 community pharmacists (67% response rate) agreed to participate in the study.

**Data analysis**

Data was analyzed using the Statistical Package for Social Sciences (SPSS) version 17.0. Rate and proportions were used to summarize community pharmacists' response in this study. A P-value of less than 0.05 was considered as statistically significant.

**Results**

The average age of the community pharmacists who took part in this study was 34.7±5.9 years. The majority of the respondents are female and graduated from local universities (Table 1). Most of these pharmacists work in independent community pharmacies. The reported average working hours per week is 47.2 hrs which is about 6.7 hrs/day and 33 out of 35 respondents work alone in shift. According to the findings, 23 community pharmacists see more than 30 female clients per day.

Breast cancer knowledge was evaluated using 7 questions to be answered as yes, no or uncertain. More than half (50%) of the participants answered general questions related to breast cancer and its risk factors correctly. The mean percent score of correct answers was 72.6%±11.

Pharmacists' perception regarding breast cancer health promotion was assessed using 8 likert scale type questions. As indicated in Table 3 the mean percent score for the pharmacists who strongly agree or agree with all the given statements is 90%±8.07. Hence, the

**Table 1. Characteristics of the Community Pharmacists and the Pharmacies**

Characteristics	N (%)	Mean
Age (years)		34.7±5.9
Gender		
Male	13 (37.1%)	-
Female	22 (62.9%)	-
Place of graduation		
Local	23 (65.7%)	-
Overseas university	10 (28.6%)	-
Types of pharmacy		
Chain pharmacy	10 (28.6%)	-
Independent pharmacy	25 (71.4%)	-
Average working hours		
Pharmacists	35 (100%)	47.2*
Female clients seen daily		
<10	1 (2.85%)	-
10-30	11 (31.4%)	-
31-50	16 (45.7%)	-
>50	7 (20%)	-
Number of pharmacist at one shift		
1	33 (94.2%)	-
2	2 (5.71%)	-

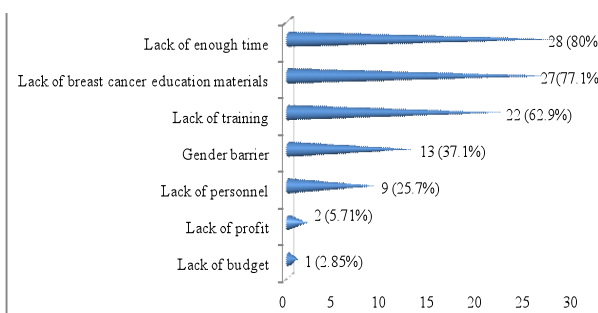
\*hrs/week

**Table 2. Knowledge of Respondents Regarding Risk Factors, Sign and Symptom, Treatment and Screening Recommendation of Breast Cancer**

Statements	Yes N (%)	No N (%)	Uncertain N (%)
Breast cancer is the most cancer among women	31 (88.6%)	0	4 (11.4%)
Women above the age of 20 are at risk of developing breast cancer	24 (68.6%)	3 (8.6%)	8 (22.8%)
Use of hormone replacement therapy is one of the risk factors for developing breast cancer	29 (82.8%)	3 (8.6%)	3 (8.6%)
Excessive alcohol consumption is one of risk factor for developing breast cancer	26 (74.3%)	4 (11.4%)	5 (14.3%)
Early menstruation or late menopause is risk factor for developing breast cancer	18 (51.4%)	6 (17.1%)	11 (31.5%)
Puckering or dimpling of the skin of the breast can be a warning sign and symptom of breast cancer	26 (74.3%)	3 (8.6%)	6 (17.1%)
BSE is recommended for women aged 35 and below and should be done once a month	24 (68.6%)	7 (20%)	4 (11.4%)

**Table 3. Perception of Pharmacists Regarding Breast Cancer Health Promotion**

Statements	Strongly Agree N (%)	Agree N (%)	Uncertain N (%)	Disagree N (%)	Strongly disagree N (%)
Pharmacists should involve in breast cancer health promotion	9 (25.7%)	24 (68.6%)	1 (2.86%)	1 (2.86%)	0
Integrating breast cancer health promotion into daily practice is important	8 (22.9%)	24 (68.6%)	0	2 (5.71%)	0
It is pharmacists responsibility to provide breast cancer counseling and this can improve my professional status	9 (25.7%)	24 (68.6%)	1 (2.86%)	1 (2.86%)	0
Distributing breast cancer education materials is important in pharmacy	10 (28.6%)	24 (68.6%)	1 (2.68%)	0	0
Pharmacist can influence patients to adopt breast cancer screening and detection practices	9 (25.7%)	22 (62.9%)	4 (11.4%)	0	0
Pharmacists should invite other healthcare professional to provide breast cancer education in the pharmacy	6 (17.1%)	27 (77.1%)	2 (5.72%)	0	0
Patient demand to get counseling on breast cancer screening and early detection from the pharmacist	4 (11.4%)	21 (60%)	5 (14.3%)	5 (14.3%)	0
Patient appreciate pharmacist's effort to counsel them about breast cancer	4 (11.4%)	27 (77.1%)	4 (11.4%)	0	0



**Figure 1. Barriers of Breast Cancer Health Promotion as Reported.** The main barriers for providing breast cancer health promotion services were lack of enough time, lack of breast cancer education materials, lack of training, lack of personnel, lack of profit, lack of budget and gender barrier.

majority of these community pharmacists either agree or strongly agree that they should be involved in breast cancer health promotion by counseling, distributing breast cancer education materials, and inviting other healthcare professionals to provide breast cancer education. In addition, most of these pharmacists strongly agree or agree that integrating breast cancer health promotion into community pharmacists' daily practice is important.

## Discussion

An increased interest is observed in broadening community pharmacists' role in public health. Pharmacists are easily accessible and recognized as experts in matters of health; therefore, they could offer public health interventions more conveniently than other health care providers (Wiedenmayer et al., 2006). Furthermore, community pharmacies are the ideal site for credible counseling for a large segment of the population because pharmacists have frequent contact with the public, have extended opening hours, and are widely distributed geographically. However, pharmacists working in non-institutionalized settings, such as pharmacies are not being fully utilized (Chandra et al., 2003). Similarly, none of the community pharmacists who work in district of Hulu Langat and Sepang claimed that they were involved in offering breast cancer health promotion services to the community.

A recent systematic review on the beliefs and attitudes of pharmacists regarding pharmaceutical public health showed that, although most view public-health services as important and part of their role, various organizational barriers limit their involvement (Eades et al., 2011). Similarly, community pharmacists who took part in this study demonstrated a positive outlook regarding taking part in breast cancer health promotion activities despite their actual poor involvement. As shown by the findings, more than 90% of the community pharmacists strongly agree or agree that they should be involved by providing counseling, distributing breast cancer education materials, and inviting healthcare professional to provide breast cancer education. Furthermore, they view involvement in breast cancer health promotion as their responsibility and as an opportunity to improve their professional status. Besides, 91.4% strongly agree or agree that there is a need to integrate breast cancer health promotion activities in to their daily practice and about 71.4% strongly agree or agree that there is a demand from the community to get advice on breast cancer screening and early detection.

It is crucial to better understand the barriers and facilitators of greater involvement of pharmacists in public health activities in order to integrate community pharmacists into public-health programs to optimize population health (Laliberté et al., 2012). The community pharmacists cite lack of time (80%), lack of breast cancer education materials (77.1%), and training (62.9%) as major barriers that limit their involvement in breast cancer health promotion activities. Lack of time is an obstacle that stands against the provision of cognitive services by pharmacists' worldwide (Keene et al., 1994; Anderson, 1998; Dunlop and Shaw, 2002; Aquilino et al., 2003; Uema

et al., 2008; Awad, 2010). Time constraints reported in this study might have been associated with the fact that 94.2% (33) respondents work alone in a given shift. Other reported obstacles include gender barrier (37.1%), lack of personnel (25.7%), lack of profit (5.71%) and lack of budget (2.85%).

Overcoming these barriers will require reorganizing not only community-pharmacy practice but also the health care system in order to better integrate pharmacists into the provision of preventive services. This reorganization will doubtless require agreement, commitment and engagement by all pharmacy stakeholders in addition to financial investments.

Government policy, remuneration for service delivery, communication and teamwork; leadership, task delegation, external support or assistance, reorganization of the structure and function of the pharmacy, professional satisfaction or competitiveness, communication and collaboration with physicians, and patient expectations regarding the services to be offered could serve as facilitators for change in community pharmacy (Roberts et al., 2005; 2008).

The cross-sectional survey was confined to community pharmacists in district of Hulu Langat and Sepang in the state of Selangor (Malaysia), hence the results could not be generalized to all community pharmacists in Malaysia. However, this study was the first of its kind in that it attempted to specifically examine the actual breast cancer health promotion practice of community pharmacists and their perception and perceived barriers.

In conclusion, to date, little information has been gathered in Malaysia on involvement of community pharmacist in provision of breast cancer health promotion services. Although the results indicated that none of these community pharmacists are involved in any breast cancer health promotion activities, the majority view breast cancer health promotion as a part of their responsibility. However, low breast cancer knowledge in addition to other identified barriers can prevent actualizing pharmacist's role in breast cancer education. Therefore, further work should focus on providing these pharmacists with high quality breast cancer continuous education and overcoming all identified barriers to enable these pharmacists to make an important contribution to breast cancer education in this country.

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