**APPENDIX 2. A summary of the findings of studies that were reviewed**

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| **Title** | **Year** | **Country** | **Site** | **Sample size** | **Findings** | **Limitation** |
| Breast cancer health promotion in Qatar: a survey of community pharmacists’ interests and needs. | 2011 | Qatar | Community pharmacies | 195 | * Breast cancer knowledge was evaluated using twelve true   or false breast cancer related questions.   * Eighty-eight respondents (48%) scored less than 60% and only 21 respondents (11%) scored more than 80%. The mean percent score was 63 ± 15%. * One hundred and forty respondents (77%) expressed high interest in receiving breast cancer continuous education. * Community pharmacists’ perceived barriers for providing breast cancer health promotion. Highly perceived barriers included lack of breast cancer educational materials (79% of respondents), lack of personnel (59%), and lack of public recognition of this pharmacist’s role (61%)   and lack of time (51%). | * As this was a self-reported survey, the responses may have contained some data inaccuracies resulting from intentional deception, poor recall of information, or misunderstanding of the question and may be biased by an inclination to provide social desirable responses and acquiescence**.** * The survey reliability was not tested among the population of Qatar’s community pharmacists. * The survey was only completed by 60% of community pharmacists in Qatar. Thus generalization of the study results to all Qatar’s pharmacists should be madecarefully. |
| Knowledge, Perception, Practice and Barriers of Breast Cancer Health Promotion Activities among Community Pharmacists in Two Districts of Selangor State, Malaysia. | 2012 | Malaysia | Independent  community pharmacies | 35 | * 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 lickert scale  type questions. The mean percent score for the pharmacists who strongly agree or agree with all the given statements was 90%±8.07.   * 91.4% strongly agree or agree that there is a need   to integrate breast cancer health promotion activities i  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.   * 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 promotion activities. | * The cross-sectional survey was confined to community pharmacists in two districts (Malaysia), hence the results could not be generalized to all community pharmacists in Malaysia. |
| Community Pharmacists’ involvement in Breast Cancer Health Promotion in United Arab Emirate (UAE). | 2013 | UAE | Community pharmacies | 335 | * About 47% of the pharmacists reported that they never provided patients with advice or counselling on breast cancer screening and early detection. * 67 % never provided patients with breast cancer educational materials or self-assessment. * 96 % of them never invited healthcare professionals to provide breast cancer education to patients in the pharmacy. * 75% indicated that they were highly interested in providing breast cancer health promotion and 162 respondents (59%) were highly comfortable in delivering this activity. * 78% were highly interested in receiving breast cancer continuous education. * 65% answer correctly question on cancer sign, 13% answer incorrect and 22% did not know the answer. * Scores were noticed to be low for questions associated with breast cancer screening recommendations and risk factor. * 87% of the participants believed that discussing breast cancer awareness with female patients in the pharmacy is beneficial and can save their lives. * 86% agreed that their professional status and satisfaction can be improved through provision of breast cancer counselling in the pharmacy. * Highly identified barriers included respectively: deficiency in breast cancer educational materials (87% of participants), lack of time (74% of participants), insufficient personnel (68% of respondents) and lack of reimbursement for such services (50% of participants). | * The study variables were assessed by self-report, which may be biased by an inclination to provide socially desirable responses, acquiescence (tendency to agree) and extremity (tendency to use extreme ratings). * The survey reliability was not tested among the population of UAE’s community pharmacists. * The survey sample size was relatively small. |
| Knowledge, Attitudes and Barriers towards Breast Cancer Health Education among Community Pharmacists. | 2016 | Jordan | Commercial community pharmacies | 1113 | * 56.7% agreed to receive adequate education, while 30.5% disagreed and 12.8% provided a neutral response. * 54.9% admitted their information about oral chemotherapeutic agents were gained primarily through their work as community pharmacists. * Majority of community pharmacists reported no attendance of continuous education activities in relation to oncology (63.4%) or breast cancer (62.3%) during the last 2 years. * A small percentage of surveyed pharmacists reported attending more than two continuous educational activities related to oncology (4.9%) or breast cancer (4.3%) over the past 2 years. * (81.5%) agreed to the fact that breast cancer is the most commonly diagnosed type of cancer among women worldwide. * When asked if breast cancer should not be of concern for patient younger than 40 years, 54.9% of participants agreed that this statement was incorrect. * Regarding the initial signs and symptoms of breast cancer, majority of pharmacists (70.3%) agreed that a painless lump is the initial sign. * Enquiring about findings in advanced breast cancer (54.3%) of respondents agreed that pain, nipple discharge and skin oedema are common findings in this stage. * (6.7%) considered breast feeding a risk factor for breast cancer development. * (81.8%) reported family history as a leading factor for breast cancer development. * Overall assessment of pharmacists’ knowledge revealed that half the pharmacists (50%) had poor knowledge, while the other half had acceptable level of knowledge of breast cancer. * only nine pharmacists (0.9%) had a total score of 15 points on assessment of breast cancer knowledge. * 64%) agreed that counselling women about BSE should start at age of 30 which was incorrect. * With respect to frequency of BSE, large proportion of respondents (70.7%) answered correctly to recommend once monthly BSE examination. * The overall mean score for pharmacists’ knowledge of screening guidelines was 3.83 ± 1.61 out of a maximum score of 7 points (median = 4, range 0–7) classifying the knowledge as satisfactory. * 60% had poor knowledge, while 40% had satisfactory knowledge of screening recommendations. * (3%) had a total score of 7 points (100%) based on knowledge of breast cancer screening * 46.5%) strongly agreed that pharmacists should be involved in breast cancer health promotion in community pharmacy settings. * Mean score for pharmacist attitude was 19.82 4.34 out of a maximum score of 28 points (median = 21, range 6–28), * 89.7% had favourable attitude compared with 103 pharmacists (10.3%) who were classified as having less favourable attitude. * Recognised barriers were lack of privacy (57.1%), lack of skills (56.2%) and lack of adequate knowledge (50%). * 20.2% reported lack of direct profit as a barrier to active involvement in patient education. | * Self-reported design used in the study may have contained some data inaccuracies and may not accurately reflect what pharmacists actually do in practice. * The convenience sample which was used may create a selection bias which limits the generalizability of results. |