



UNIVERSITI PUTRA MALAYSIA

***IMPACT OF THREE HEALTH EDUCATIONAL STRATEGIES ON BREAST
SELF-EXAMINATION KNOWLEDGE, BELIEFS AND PRACTICES AMONG
FEMALE PUBLIC UNIVERSITY STUDENTS***

MEHRNOOSH AKHTARI ZAVARE

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**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfilment of the Requirements for the Degree of
Doctor of Philosophy**

September 2013

DEDICATION

To my family and friends, without whose support and care I wouldn't have realized my dreams in life. Indeed, they make sure they are always there to do the needful!



Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy

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SELF-EXAMINATION KNOWLEDGE, BELIEFS AND PRACTICES AMONG
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By

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September 2013

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Breast cancer is the most common cancer and the second principal cause of cancer deaths among women world wide as well as in Malaysia. Early detection of breast cancer can play an important role in reducing cancer morbidity and mortality. Mammography and clinical breast examination (CBE) are considered as screening methods for early detection of breast cancer. Practicing breast self examination (BSE) could provide an opportunity for women to know how their breasts normally feel and notice any changes in their breast. Studies have shown that among younger women breast cancer tend to be more advanced stage and more aggressive than those affecting older women. The objective of this study was to comparing health educational strategies towards breast self examination practice among female public universities' students in Klang Valley.

A multi-stage random sampling was used for selection of participants. All female students those fulfill the inclusion criteria of the study were invited to participate in the

study with informed consent form. A translated, reliable and valid tool adopted from Champion's Health Belief Model was used to determine women's perceptions on breast cancer and BSE. Three types of intervention strategies namely knowledge-based, knowledge-based and skill-based and skill-based strategies were implemented for this study. The strategies were supported by educational module, presentation, and demonstration on BSE practice on breast silicon model. The control group received all of the informational material and BSE practice after the completion of the study. To evaluate the effect of the intervention, data were collected at baseline, 6 months and 12 months after intervention in 3 intervention groups and control group. Descriptive and multivariate statistics were used for analysis the data using SPSS version 19.0.

Baseline data were collected from 792 female students in four groups. At 12- month follow assessment, data was collected from 183 (92.42%) in intervention group one, 186 (93.93%) in intervention group two, 189 (95.45%) in intervention group three and 188 (94.94%) in control group. The mean age of participants was 22 ± 1.20 years and majority of them were Malay (728, 91.9%), single (767, 96.8%). After intervention, there was a significant increase in the mean score of knowledge on breast cancer in intervention Group One (knowledge-based) (11.28-12.15, $p<0.001$), intervention Group Two (knowledge-based and skill-based strategy)(11.32-13.09, $p<0.001$) and intervention Group Three (skilled-based strategy)(11.05-11.52, $p<0.008$). Regarding knowledge of BSE, there was a significant increase in the mean score of knowledge BSE in intervention Group One (6.19-7.13, $p<0.001$), intervention Group Two (6.29-7.79, $p<0.001$) and intervention Group Three (6.01-6.70, $p<0.001$). Proportion of BSE practice was increased in intervention Group One (20.2%-21.9%, $p<0.005$), intervention Group Two (23.7%-30.1%, $p<0.001$) and intervention

Group Three (18.0%- 24.3%, $p<0.001$), over the twelve months follow up in the intervention groups. Health Belief Model (HBM) constructs significantly differences for susceptibility, confidence and motivation in the intervention groups and control group ($p<0.05$). the logistic regression model showed that change in total knowledge score of breast cancer ($OR=1.58$), motivation ($OR=1.47$), susceptibility to breast cancer ($OR=1.47$) and seriousness of breast cancer ($OR=1.28$) were predictors of BSE practice after twelve months.

The results provide evidence for the effectiveness an educational strategies using a multi-component approaches in improving breast self-examination practice, knowledge of breast cancer and BSE and beliefs within young female students in Malaysia. This study suggests that the three interventions had impacts on knowledge, beliefs and BSE practice but there were no significant differences among them which should lead to recommendation that policy makers should adopt the cheapest and most feasible of the three intervention strategies.

**IMPACT TIGA KESIHATAN PENDIDIKAN STRATEGI ON SENDIRI
PAYUDARA-PEPERIKSAAN PENGETAHUAN, KEPERCAYAAN DAN
AMALAN DI KALANGAN PELAJAR PEREMPUAN AWAM UNIVERSITI**

Oleh

MEHRNOOSH AKHTARI-ZAVARE

September 2013

Pengerusi: Profesor Madya Muhamad Hanafiah Juni (M.D, MPH)

Fakulti: Perubatan dan Sains Kesihatan

Kanser payudara adalah kanser yang paling biasa dan yang kedua kerap sebagai punca kematian utama di kalangan wanita sedunia serta di Malaysia. Pengesahan awal kanser payudara memainkan peranan penting dalam mengurangkan morbiditi dan mortaliti kanser. Mamografi dan pemeriksaan payudara klinikal merupakan kaedah penyaringan untuk pengesahan awal kanser payudara. Amalan pemeriksaan sendiri payudara (PSP) memberi peluang kepada para wanita untuk membiasakan diri dengan rasa payudara sendiri dan mengesan sebarang perubahan pada payudara mereka. Kajian telah menunjukkan bahawa kanser payudara wanita muda lebih cenderung kepada tahap yang lebih maju dan lebih agresif berbanding kanser yang menyerang wanita tua. Objektif kajian ini adalah untuk menentukan strategi pendidikan kesihatan yang memberikan kesan yang lebih terhadap amalan pemeriksaan sendiri payudara di kalangan pelajar wanita universiti umum di Lembah Kelang.

Satu persampelan rawak pelbagai peringkat telah digunakan untuk memilih peserta. Semua pelajar wanita yang memenuhi kriteria kemasukan kajian telah dijemput untuk menyertai kajian ini dengan borang makluman persetujuan. Data asas dikutip daripada

792 pelajar wanita. Suatu alat yang diterjemahkan, dipercayai dan sah dari Model Kepercayaan Kesihatan Champion telah digunakan untuk menentukan persepsi wanita terhadap kanser payudara dan PSP. Tiga jenis strategi intervensi iaitu berasaskan pengetahuan, berasaskan pengetahuan dan kemahiran serta berasaskan kemahiran telah digunakan dalam kajian ini. Strategi yang menyokong modul pendidikan, persembahan dan demonstrasi PSP dengan model payudara silikon. Kumpulan kawalan menerima semua bahan maklumat selepas kajian selesai. Untuk menentukan kesan intervensi, data dikumpul pada permulaan, 6 bulan dan 12 bulan selepas intervensi dalam 3 kumpulan intervensi dan kumpulan kawalan. Statistik deskriptif dan multivariat telah digunakan untuk menganalisa data dengan perisian SPSS versi 19.0.

Data asas telah dikumpulkan daripada 792 pelajar perempuan dalam empat kumpulan. Pada 12 - Penilaian mengikut bulan , data telah dikumpul daripada 183 (92.42%) dalam kumpulan campur tangan satu, 186 (93.93%) campur tangan dalam kumpulan dua, 189 (95.45%) dalam kumpulan campur tangan tiga dan 188 (94.94%) dalam kumpulan kawalan. Purata umur peserta adalah 22 ± 1.20 tahun dan majoriti daripada mereka adalah Melayu (728, 91.9%), single (767, 96.8%). Selepas campur tangan, terdapat peningkatan yang ketara dalam skor min pengetahuan mengenai kanser payudara dalam Kumpulan campur tangan Satu (berasaskan pengetahuan) (11.28-12.15, $p < 0.001$), Kumpulan campur tangan Dua (strategi berasaskan pengetahuan dan kemahiran berasaskan) (11.32-13.09, $p < 0.001$) dan Kumpulan campur tangan Tiga (strategi berasaskan mahir) (11.05-11.52, $p < 0.008$). Mengenai pengetahuan BSE, terdapat peningkatan yang ketara dalam skor min pengetahuan BSE dalam Kumpulan campur tangan Satu (6.19-7.13, $p < 0.001$),

Kumpulan campur tangan Dua (6.29-7.79, $p <0.001$) dan Kumpulan campur tangan Tiga (6.01-6.70, $p <0.001$). Bahagian amalan BSE telah meningkat dalam Kumpulan campur tangan Satu (20.2% -21.9%, $p < 0.005$), Kumpulan Dua campur tangan (23.7% -30.1 %, $p <0.001$) dan Kumpulan campur tangan Tiga (18.0%-24.3%, $p <0.001$), lebih dua belas bulan susulan dalam kumpulan campur tangan. Kepercayaan Model Kesihatan (HBM) membina ketara perbezaan untuk kecenderungan, keyakinan dan motivasi dalam kumpulan campur tangan dan kumpulan kawalan ($p<0.05$). Model regresi logistik menunjukkan bahawa perubahan dalam jumlah skor pengetahuan kanser payudara (OR = 1.58), motivasi (OR=1.47), kecenderungan kanser payudara (OR=1.47) dan keseriusan kanser payudara (OR=1.28) adalah peramal BSE mengamalkan selepas dua belas bulan.

Keputusan menyediakan bukti untuk keberkesanan suatu strategi pendidikan menggunakan pendekatan multi-komponen dalam meningkatkan payudara amalan pemeriksaan sendiri, pengetahuan tentang kanser payudara dan BSE dan kepercayaan dalam pelajar wanita muda di Malaysia. Kajian ini menunjukkan bahawa tiga campur tangan mempunyai kesan terhadap pengetahuan, kepercayaan dan amalan BSE tetapi tidak terdapat perbezaan yang ketara di kalangan mereka yang seharusnya membawa kepada cadangan bahawa pembuat dasar harus menerima pakai yang paling murah dan paling sesuai daripada tiga strategi campur tangan.

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I certify that an Examination Committee has met on 4 September 2013 to conduct the final examination of Mehrnoosh Akhtari-Zavare on her Doctor of Philosophy " Impact of three health educational strategies on the knowledge, beliefs and practices of breast

self examination among female public university students" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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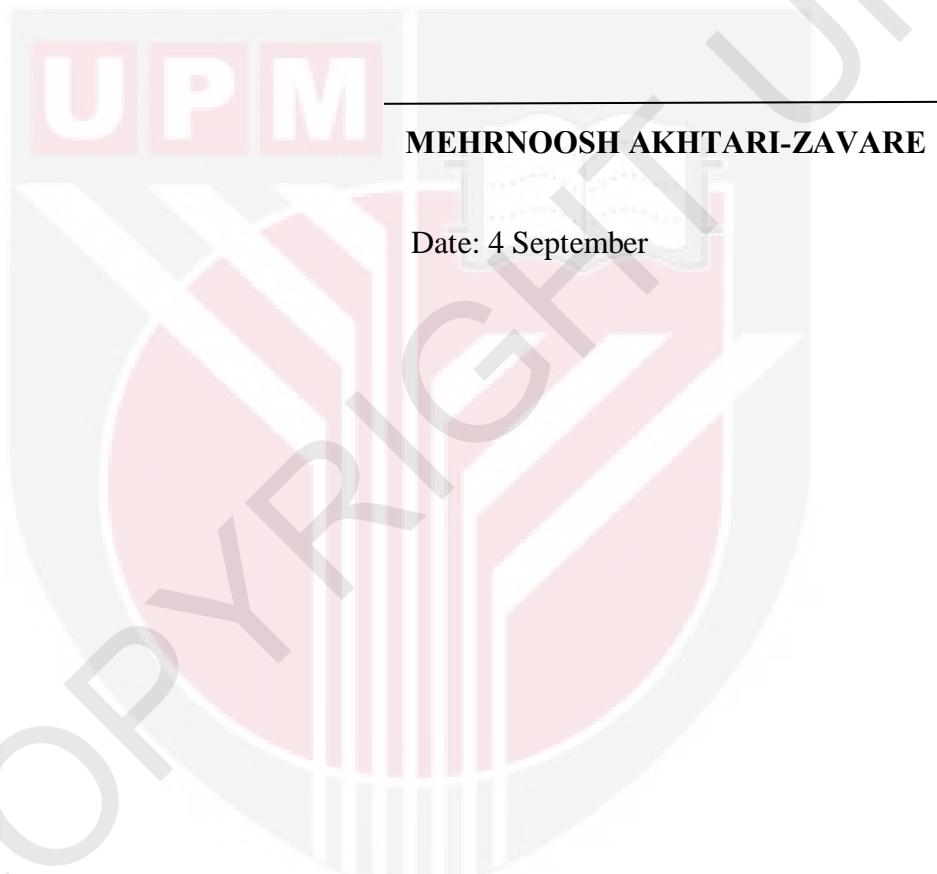
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DECLARATION

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I declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously and is not concurrently submitted for any other degree at Universiti Putra Malaysia or at any other institution.



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