



UNIVERSITI PUTRA MALAYSIA

**FACTORS CONTRIBUTING TO THE USE OF COMPLEMENTARY &
ALTERNATIVE MEDICINE AMONG FEMALE CANCER SURVIVORS IN
SELECTED CENTRES, MALAYSIA**

NURFAIZAH BINTI SAIBUL

FPSK(m) 2012 28

This hard work is dedicated to my soul mates:

Hjh. Mahani Ibrahim
(Mom)

Mohd Hamzidi Hamid
(Husband)

&

Nur Amna Safiya, Nur Aliya Syuhada & Ahmad Zharif Izham
(Children)

For their eternity loves, prays and sacrifices

Thank you with love..

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment
of the requirement for the degree of Master of Science

**FACTORS CONTRIBUTING TO THE USE OF COMPLEMENTARY &
ALTERNATIVE MEDICINE AMONG FEMALE CANCER SURVIVORS IN
SELECTED CENTRES, MALAYSIA**

By

NURFAIZAH BINTI SAIBUL

September 2012

Chair: Prof. Zalilah Mohd Shariff, PhD

Faculty: Medicine and Health Sciences

Complementary and Alternative Medicine (CAM) use is prevalent among individuals with cancer to complement the conventional medicine. This cross sectional descriptive study was conducted to identify the pattern and factors associated with CAM use among female cancer survivors in selected regions of Peninsular Malaysia. This study was a hospital and breast cancer support groups centre-based. A total of 457 survivors with breast, colorectal, cervix, ovarian and stomach cancer were recruited from 8 government hospitals and 4 breast cancer support groups. A pre-tested interviewer-administered questionnaire was used to collect information on socio-demography, cancer history, CAM practices, dietary intake and physical activity of cancer survivors. The mean age of the respondents was 53 ± 10 years and more than half (53.0%) had at least secondary education. Majority of the respondents were Malays, married and currently unemployed. Most of the respondents were breast cancer patients followed by ovarian, colorectal, stomach and cervical cancer survivors. The mean age of cancer diagnosis was 49 ± 9 years and the mean years of survival was 5 ± 4 years. A high proportion (41.4%) of respondents was diagnosed

with cancer stage II. About 52.1% of respondents were overweight (34.4%) and obese (17.7%) and about 66.1% of respondents had waist circumference \geq 80 cm. The mean energy intake of respondents was lower than the RNI for Malaysian women in all age groups. The mean intake of protein, vitamin A and vitamin C were slightly higher than the RNI while, the mean intake of thiamine, riboflavin, niacin, calcium and iron were lower than the RNI. The respondents had inadequate mean number of servings for all food groups except for grains and protein groups (meat/fish/ poultry and legumes). Majority of the respondents reported having moderate and high levels of physical activity. A total of 49.7% of the respondents reported CAM use as complementary treatment. Vitamins (46.7%) and spiritual activities (37.0%) were the most commonly used CAM therapies. Multivitamin (51.9%) is the most frequent type of vitamin used. Common reasons for CAM use were to increase the body's ability to perform daily activities (72.7%) and enhance immune function (60.8%). CAM users obtained CAM information mainly from friends and family members (65.7%) and physicians (25.3%). About 53% of CAM users did not communicate with their physicians regarding CAM use. Ethnicity and years of education were significantly associated with CAM use. Multivariate logistic regression showed that non-Malay women were less likely to use CAM while those with more years of education were more likely to be associated with CAM use. Although no adverse effects of CAM was reported, cancer survivors should discuss their CAM use with health professionals to prevent potential adverse effects of these therapies. More in-depth studies on CAM use among cancer survivors should be conducted in order to explore the patterns of CAM use among cancer survivors in this country.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai
memenuhi keperluan untuk ijazah Master Sains

**FAKTOR-FAKTOR YANG MENYUMBANG KEPADA PENGGUNAAN
PERUBATAN KOMPLEMENTARI DAN ALTERNATIF DALAM
KALANGAN SURVIVOR KANSER WANITA DI BEBERAPA PUSAT
TERPILIH DI MALAYSIA**

Oleh

NURFAIZAH BINTI SAIBUL

September 2012

Pengerusi: Prof. Zalilah Mohd Shariff, PhD

Fakulti: Perubatan dan Sains Kesihatan

Perubatan komplementari dan alternatif (CAM) lazim digunakan oleh survivor kanser sebagai pelengkap kepada rawatan konvensional. Kajian deskriptif keratan rentas ini telah dijalankan untuk mengenal pasti corak dan faktor-faktor yang menyumbang kepada penggunaan CAM dalam kalangan survivor kanser di beberapa buah negeri di Semenanjung Malaysia. Kajian ini hanya melibatkan survivor kanser daripada hospital dan kumpulan sokongan kanser payudara. Seramai 457 orang yang terdiri daripada survivor kanser payudara, kanser kolorektal, kanser servik, kanser ovarи dan kanser perut telah direkrut dari 8 buah hospital kerajaan dan 4 buah kumpulan sokongan kanser payudara untuk menyertai kajian ini. Borang soal selidik berdasarkan temubual yang telah dipraruji digunakan untuk mendapatkan maklumat tentang sosiodemografi, sejarah kanser, amalan penggunaan CAM, pengambilan makanan dan aktiviti fizikal survivor kanser. Min umur responden adalah 53 ± 10 tahun dan lebih daripada separuh responden (53.0%) mempunyai sekurang-kurangnya pendidikan sekunder. Majoriti responden adalah berketurunan Melayu, berkahwin dan tidak lagi bekerja. Kebanyakan responden adalah survivor kanser

payudara dan diikuti oleh kanser ovarи, kanser kolorektal, kanser perut dan kanser servik. Min umur responden ketika didiagnos dengan kanser adalah 49 ± 9 tahun dan min tempoh kemandirian adalah 5 ± 4 tahun. Diagnosis kanser menunjukkan bahawa kebanyakan responden menghidap kanser pada tahap II (41.4%). Lebih daripada separuh responden adalah berlebihan berat badan (34.4%) dan obes (17.7%) serta mempunyai ukur lilit pinggang ≥ 80 sm (66.1%). Min pengambilan tenaga responden adalah lebih rendah dari saranan pengambilan nutrient (RNI) untuk wanita Malaysia bagi semua kumpulan umur. Min pengambilan protin, vitamin A dan vitamin C adalah sedikit tinggi berbanding RNI manakala min pengambilan tiamin, riboflavin, niasin, kalsium dan zat besi adalah rendah berbanding RNI. Responden mempunyai min bilangan hidangan yang tidak mencukupi untuk semua kumpulan makanan kecuali bagi kumpulan bijirin dan protein (daging/ ikan/ ayam dan kekacang). Majoriti responden melaporkan mempunyai tahap aktiviti fizikal yang sederhana dan tinggi. Sebanyak 49.7% responden menggunakan CAM sebagai rawatan komplementari. Vitamin (46.7%) dan aktiviti spiritual (37.0%) adalah terapi CAM yang paling lazim digunakan oleh survivor kanser. Multivitamin (51.9%) adalah jenis vitamin yang paling kerap diamalkan. Antara sebab paling utama mereka menggunakan CAM adalah untuk meningkatkan keupayaan tubuh untuk melakukan aktiviti harian (72.7%) dan meningkatkan fungsi imuniti (60.8%). Pengamal CAM memperoleh maklumat tentang CAM terutamanya dari ahli keluarga dan rakan (65.7%) dan pengamal perubatan (25.3). Sebanyak 52.9% pengamal CAM tidak berkomunikasi dengan pengamal perubatan yang merawat mereka tentang penggunaan CAM. Etnik dan bilangan tahun pendidikan didapati menunjukkan perkaitan yang signifikan dengan penggunaan CAM. Analisis multivariat regresi logistik menunjukkan bahawa wanita bukan Melayu kurang berminat untuk

menggunakan CAM manakala mereka yang mempunyai bilangan tahun pendidikan yang tinggi lebih cenderung menggunakan CAM. Walaupun kajian ini menunjukkan bahawa tiada sebarang laporan mengenai kesan buruk penggunaan CAM, survivor kanser seharusnya merujuk dan berbincang mengenai penggunaan CAM kepada profesional kesihatan untuk mengelakkan sebarang potensi kesan buruk rawatan berkenaan. Kajian yang lebih mendalam tentang amalan penggunaan CAM dalam kalangan survivor kanser perlu dijalankan pada masa akan datang untuk mengenal pasti corak penggunaan CAM dalam kalangan survivor kanser di negara ini.



ACKNOWLEDGEMENTS

In the name of Allah, The Most Gracious, The Most Merciful

Thank you Allah for giving me bless throughout the journey to complete my research project. Special thanks to Prof. Zalilah Mohd Shariff, my inspired supervisor for her guidance, contribution and advice. I also would like to acknowledge my co-supervisor, Professor Asmah Rahmat and Dr. Suhaina Sulaiman for their comments, advice and supports. Thank you very much. How lucky am I to be supervised by such a great mentors.

My special note of appreciations also dedicated to my family and research team for their support, understanding, contribution and cooperation. Last but not lease, a lot of thanks to my work colleagues at Cancer Resource & Education Center (CaRE), UPM for their understanding and encouragement. Really appreciated. May Allah bless all of you. Thank you with love.

I certify that an Examination Committee has met on 25 September 2012 to conduct the final examination of **Nurfaizah binti Saibul** on her Master of Science thesis entitled “Factors contributing to the use of complementary and alternative medicine (CAM) among female cancer survivors in selected centres” in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the student be awarded the relevant degree.

Members of the Examination Committee were as follows:

Loh Su Peng, PhD

Associate Professor

Faculty of Medicine & Health Sciences

Universiti Putra Malaysia

(Chairman)

Latiffah A Latiff, PhD

Professor

Faculty of Medicine & Health Sciences

Universiti Putra Malaysia

(Internal Examiner)

Chan Yoke Mun, PhD

Institute of Gerontology

Universiti Putra Malaysia

(Internal Examiner)

Fatimah Arshad, PhD

Professor

Department of Nutrition and Dietetics

International Medical University

Malaysia

(External Examiner)

SEOW HENG FONG, PhD

Professor and Deputy Dean

School of Graduate Studies

Universiti Putra Malaysia

Date

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Master of Science. The members of the Supervisory Committee were as follows:

Zalilah Mohd Shariff, PhD

Professor

Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Chairperson)

Asmah Rahmat, PhD

Professor

Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
(Member)

Suhaina Sulaiman, PhD

Lecturer

Faculty of Allied Health Sciences
Universiti Kebangsaan Malaysia
(Member)

BUJANG BIN KIM HUAT, PhD

Professor and Dean
School of Graduate Studies
Universiti Putra Malaysia

Date:

DECLARATION

I declare that the thesis is my original work except for the 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.



Date: 25 September 2012

TABLE OF CONTENTS

	Page
ABSTRACT	ii
ABSTRAK	iv
ACKNOWLEDGEMENT	vii
APPROVAL	viii
DECLARATION	ix
LIST OF TABLES	xiv
LIST OF FIGURES	xvi
LIST OF ABBREVIATIONS	xvii
CHAPTER	
1	
INTRODUCTION	
1.1 Introduction	1
1.2 Problem statement	3
1.3 Objectives	6
1.3.1 General objective	
1.3.2 Specific objectives	
1.4 Research framework	9
1.5 Significance of the study	12
2	
LITERATURE REVIEW	
2.1 Cancer	14
2.1.1 Breast cancer	16
2.1.2 Colorectal cancer	17
2.1.3 Stomach cancer	19
2.1.4 Ovarian cancer	20
2.1.5 Cervical cancer	20
2.2 Complementary and alternative medicine	22
2.3 Prevalence of CAM use	26
2.4 Types of CAM use	31
2.5 Reasons for CAM use	33
2.5.1 Reasons for not using CAM	36
2.6 Perceived benefits of CAM	37
2.7 Perceived adverse effects of CAM	42
2.8 Sources of information on CAM	46
2.9 Communication with physicians on CAM use	48
2.10 Factors associated with CAM use among cancer survivors	50
2.10.1 Sociodemographic factors	51
2.10.2 Lifestyle factors	52
2.10.3 Anthropometric factors	55
2.10.4 Clinical factors	55
3	
METHODOLOGY	
3.1 Study design	58
3.2 Study location	58

3.3 Sampling and sample size	60
3.4 Subject	61
3.5 Measurements	63
3.6 Data collection procedures	74
3.7 Statistical analysis	75
4 RESULT	
4.1 Demographic and socioeconomic characteristics	76
4.2 Cancer history	80
4.3 Body mass index and waist circumference	83
4.4 Dietary intake	
4.4.1 Energy and nutrient intakes	86
4.4.2 Servings of food groups	91
4.5 Physical activity	93
4.6 Use of complementary and alternative medicine	96
4.6.1 Prevalence and types of CAM use	96
4.7 Frequency and dosage of ingestible CAM use	98
4.8 Reasons for using CAM and perceived benefits of CAM	105
4.8.1 Reasons for not using CAM	105
4.9 Concerns about CAM	108
4.10 Sources of information on CAM	108
4.11 Communication with physicians regarding CAM use	109
4.12 CAM expenses	110
4.13 Characteristics of CAM and non CAM users	114
4.14 Factors associated with CAM use	131
5 DISCUSSION	
5.1 Socioeconomic and demographic background	138
5.2 Body mass index and waist circumference of cancer survivors	139
5.3 Dietary intake of cancer survivors	140
5.4 Physical activity of cancer survivors	145
5.5 Patterns of CAM use among cancer survivors	148
5.5.1 Prevalence of CAM use	148
5.5.2 Types of CAM use	151
5.5.3 Reasons, perceived benefits and concerns of CAM use	153
5.5.4 Sources of information on CAM	157
5.5.5 Communication with physicians regarding CAM use	158
5.6 Factors contributing to the use of CAM among cancer survivors	160
5.6.1 Socioeconomic and demographic factors	160
5.6.2 Clinical factors	163

5.6.3	Lifestyle factors	165
5.6.3.1	Physical activity	165
5.6.3.2	Dietary intake	167
5.6.4	Anthropometric factors	168
5.6.4.1	Body mass index and waist circumference	168
6	CONCLUSION AND RECOMMENDATION FOR FUTURE RESEARCH	170
6.1	Conclusion	170
6.2	Recommendations	172
6.2.1	Recommendation for health professionals and policy makers	173
6.2.2	Recommendation for cancer survivors	173
6.2.3	Recommendation for future research	174
6.3	Limitation of the study	176
REFERENCES/ BIBLIOGRAPHY	179	
APPENDICES	203	
BIODATA OF STUDENT	230	
LIST OF PUBLICATIONS	231	