

## ORIGINAL ARTICLE

# KNOWLEDGE AND BELIEFS ON FEMALE BREAST CANCER AMONG MALE STUDENTS IN A PRIVATE UNIVERSITY, MALAYSIA

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### ABSTRACT

*The purpose of the study was to determine the level of knowledge and beliefs about female breast cancer among male students. A cross-sectional study involving 460 male students of a private university selected by convenient sampling was conducted using self-administered questionnaires that consists of socio-demographic details as well as knowledge and beliefs about female breast cancer. The prevalence of good knowledge was only 45.2%, there was a significant association between level of knowledge and age, course of study ( $p=0.02$  and  $< 0.001$ , respectively). The prevalence of poor belief was 72.6% and the main source of information was the media (84.1%). There was no significant association between beliefs about female breast cancer and family income, mother's education and race. However, there was a significant association between beliefs about female breast cancer and age, course of study and father's education. As a conclusion, the knowledge and beliefs about female breast cancer among the male students was very poor. More education and awareness need to be emphasized; especially the media was the most common source of information in our study.*

**Keywords:** Knowledge, Beliefs, Female breast cancer, University Students.

### INTRODUCTION

Breast cancer is the most common cancer in women worldwide, with nearly 1.7 million new cases diagnosed in 2012 (second most common cancer overall). This represents about 12% of all new cancer cases and 25% of all cancers in women. Belgium had the highest rate of breast cancer, followed by Denmark and France. The highest proportion of breast cancer survivors still alive five years after their diagnosis was in Northern America and Europe; and the lowest incidence was in Africa and Asia.<sup>1</sup> According to Kuan et al.<sup>2</sup>, the states of Johor and Kedah in Malaysia had the highest incidence of breast cancer which was 608 cases, followed by Selangor, 541 cases and the lowest was Perlis, 7 cases.

Early diagnosis is a crucial step in disease prognosis and this requires a good knowledge and practice towards the early detection of signs and symptoms. A research of awareness and knowledge of breast cancer and mammography was conducted among a group of Malaysian women aged 18-29 years old in Shah Alam. It showed that 81.2% of women have casually heard about breast cancer. However, they had poor knowledge about the signs and symptoms and risk factors of breast cancer<sup>3</sup>

A study was conducted by Salati&Rather (2009)<sup>4</sup> regarding female breast cancer among Kashmiri males. Out of 624 participants, 555 (89%) had poor breast cancer awareness, 47 (7.5%) had average and 22 (3.5%) had good awareness about breast cancer.

Very few studies have been conducted among males regarding female breast cancer. Other than husbands, male family members also play an important role. Male Knowledge regarding breast cancer can be started by knowing and have some facts regarding the breast cancer and explaining the early symptoms so it can be diagnosed early. Also in cases of diagnosed breast cancer, men role especially husbands are very crucial as their wives are going through a lot of physical and emotional changes. They have to be there to support their other halves.

The aim of our study was to determine the level of knowledge and beliefs about female breast cancer among male students in a private university in Malaysia.

### METHODS

A cross-sectional study was conducted among 460 students of a private university using self-administered questionnaires that consists of socio-demographic details as well as knowledge and beliefs about female breast cancer among male students of all faculties. The inclusion criteria include students from both undergraduate and postgraduate studies while an exclusion criterion was those with family history of breast cancer.

Questionnaires were adopted from 2 previous studies<sup>4,5</sup>. The questionnaires consist of 3 parts: Part A was about socio-demographic characteristics such as age, race, course of study, parent's education level, family's monthly

income. Part B was about knowledge on female breast cancer and the score used is no = 0, yes = 1, don't know = 0 which brings the total score of 12. So, those who answered more than 50%, which is > 6 was considered as having good knowledge. Part C was about breast cancer beliefs, in which score for beliefs was no = 1, yes = 0, don't know = 0. The total score of beliefs was 10, so good beliefs was those who scored more than 50%, which is > 5.

Data were analyzed using SPSS version 22.0. Frequency and percentage were used for descriptive statistics while chi square and t test were used for inferential statistics. Consent was taken from all respondents before participating in the study. Ethical approval was obtained from the International Medical School, Management and

Science University. Questionnaires were back-to-back translated and pre-tested among 30 students prior to data collection.

**RESULTS**

The age of respondents ranged from 18 to 30 years old with mean age of 20.64 ±2.15 with average monthly family income of RM 4827.42±7030.71 as shown in Table 1. The knowledge regarding female breast cancer was good except for a few factors such as menarche at younger age, menopause at older age and having child at older age as male students did not answer them correctly with only 15.7%, 19.8% and 18.0% respectively as shown in Table 2.

**Table 1 Socio-demographic characteristics of respondents**

	Frequency	Percentage (%)
<b>Race</b>		
Malay	288	62.6
Chinese	16	3.5
Indian	130	28.3
Others	26	5.6
<b>Course of Study</b>		
Medical	123	26.7
Non-medical	337	73.3
	<b>Mean± SD</b>	
<b>Income (RM)</b>	4827.42±7030.71	
<b>Age (Years)</b>	20.64±2.15	

Regarding the beliefs of female breast cancer, 44.6% answered that breast cancer is a punishment, 73.3% said it is a fate or destiny and 53.7% wrongly said that breast cancer is contagious as shown in Table 3.

The prevalence of poor knowledge was 54.8%, while the poor beliefs was 72.6% as shown in Table 4. The most common source of information was media (84.1%) and then followed by internet (73.3%). Table 5 shows the association between knowledge level and socio-demographic factors.

Only age was significant (P=0.02) as older age respondents had a better knowledge compared to younger ones. The association between beliefs and socio-demographic factors were not

significant except for course of study and age with p <0.001 and 0.02 respectively as shown in table 6.

**DISCUSSION**

The main finding of our research was that the prevalence of poor knowledge about female breast cancer among male students was 54.8%. The prevalence of good beliefs about female breast cancer among male students was only 27.4%. These results were similar to a study done in Kashmir among the Kashmiri males as 89% had poor breast cancer awareness and 7.5% had average awareness. Only 3.5% had a good awareness about breast cancer.<sup>4</sup>

Table 2 Knowledge regarding female breast cancer among male students

Risk factors of female breast cancer	Frequency	Percentage (%)
<b>Being female</b>		
Correct	318	69.1
Wrong	142	30.9
<b>Having family history</b>		
Correct	266	57.8
Wrong	194	42.2
<b>Menarche at younger age</b>		
Correct	72	15.7
Wrong	388	84.3
<b>Menopause at older age</b>		
Correct	91	19.8
Wrong	369	80.2
<b>Having first child at older age</b>		
Correct	83	18.0
Wrong	377	82.0
<b>Not breastfeeding</b>		
Correct	182	39.6
Wrong	278	60.4
<b>Lump in breast</b>		
Correct	320	69.6
Wrong	140	30.4
<b>Lump in armpit</b>		
Correct	192	41.7
Wrong	268	58.3
<b>Pain in breast</b>		
Correct	305	66.3
Wrong	155	33.7
<b>Change in size of breast</b>		
Correct	230	50.0
Wrong	230	50.0
<b>Change in areola</b>		
Correct	171	37.2
Wrong	289	62.8
<b>Nipple discharge</b>		
Correct	186	40.4
Wrong	274	59.6

Based on our result, media was the highest source of information comprised of 387 respondents (84.1%), followed by internet 337 (73.3%), friends 222 (48.3%), physician 186 (40.4%), survivors 107 (23.3%), nurses 83 (18%), support team 80 (17.4%) and traditional medicine 44 (11.7%). This contradicts the previous study done in Saudi Arabia, where the main source of knowledge was from the health profession and the mass media for example, television, radio and newspaper comes in the second place.<sup>5</sup>

There was an association between age and level of knowledge about female breast cancer among male students. According to a study done in Mumbai, India, younger women were more aware than older women. As for the family income,

there was no association between family income and level of knowledge about female breast cancer among male students and this finding was in contrast to a study done in India as they concluded that women belonging to higher income group were more aware than those who were economically deprived<sup>6</sup>.

For the course of study, medical students showed a higher percentage of good knowledge and there was an association between course of study and level of knowledge. This contradicts to a previous study in University of Angola where the results showed no significant difference between students in medical programmes and those in non-medical programmes as both generally showed lack of adequate knowledge on breast cancer.<sup>7</sup>

**Table 3 Beliefs regarding female breast cancer among male students**

Statements on beliefs	Frequency	Percentage (%)
<b>Disease is a punishment</b>		
Yes	205	44.6
No	255	55.4
<b>It is a fate or destiny</b>		
Yes	339	73.7
No	121	26.3
<b>Cancer is hereditary</b>		
Yes	384	83.5
No	76	16.5
<b>Cancer is contagious</b>		
Yes	247	53.7
No	213	46.3
<b>I will leave my wife if diagnosed with breast cancer</b>		
Yes	78	17.0
No	382	83.0
<b>Examination does not cure breast cancer</b>		
Yes	304	66.1
No	156	33.9
<b>Herbal treatment is better</b>		
Yes	359	78.0
No	101	22.0
<b>Chemotherapy leads to death</b>		
Yes	269	58.5
No	191	41.5
<b>Removal of breast (mastectomy) is the treatment in all cases</b>		
Yes	350	76.1
No	110	23.9
<b>No treatment at all for breast cancer</b>		
Yes	217	47.2
No	243	52.8

As for race, there was no association between race and level of knowledge about breast cancer among male students. This may be due to imbalance of races among students in our research since there were less Chinese students in this study and mostly compromised of Malay and Indian respondents. According to a study done in the state of Penang among 384 respondents, the mean total score of knowledge was 59.1% with Indian women having significantly less knowledge than Chinese and Malay women.<sup>8</sup>

Regarding beliefs about female breast cancer, there was an association between age and beliefs among male students. Also it showed that there was an association between course of study and level of beliefs. Medical students showed a higher percentage of good beliefs than non-medical students. This result corresponds to a study done in Southern Punjab, Pakistan among 566 students, showing that beliefs of medical students regarding breast cancer were significantly better than non-medical students<sup>12</sup>.

**Table 4: Level of knowledge, beliefs and main source of information about female breast cancer among respondents.**

	Frequency	Percentage (%)
<b>Level of knowledge</b>		
Poor	252	54.8
Good	208	45.2
<b>Level of Belief</b>		
Poor	334	72.6
Good	126	27.4
<b>Source of Information*</b>		
Media	387	84.1
Internet	337	73.3
Friends	222	48.3
Physician	186	40.4
Survivors	107	23.3
Nurses	83	18.0
Support team	80	17.4
Traditional medicine	54	11.7

\*Respondents can choose more than one option

**Table 5: The association between knowledge and socio-demographic factors among male students about female breast cancer**

Variables	POOR KNOWLEDGE		GOOD KNOWLEDGE		P VALUE
	F	F (%)	F	F (%)	
<b>Race</b>					
Malay	155	53.8	133	46.2	0.076
Chinese	5	31.2	11	68.8	
Indian	80	61.5	50	38.5	
Others	12	46.2	14	53.8	
<b>Course of Study</b>					
Medical	48	39.0	75	61.0	<0.001*
Non-medical	245	72.7	92	27.3	
<b>MEAN±SD</b>					
<b>Age (Years)</b>	20.41 ± 2.00		21.06 ± 2.35		0.020*
<b>Income (RM)</b>	4921.89 ± 7339.69		4661.68± 6471.06		0.703

\*Significance level at  $p < 0.05$

## CONCLUSION

The knowledge and beliefs about female breast cancer among the male students was very poor. More education and awareness need to be done,

especially using the media which was the most common source of information in our study.

## Conflicts of interest

The authors declare no conflicts of interest.

TABLE 6: The association between beliefs and socio-demographic factors among male students about female breast cancer

Variables	POOR BELIEFS		GOOD BELIEFS		P VALUE
	F (%)		F (%)		
<b>Race</b>					
Malay	212	73.6	76	26.4	0.379
Chinese	9	56.2	7	43.8	
Indian	96	73.8	34	26.2	
Others	17	65.4	9	34.6	
<b>Course of Study</b>					
Medical	70	56.9	53	43.1	<0.001*
Non-medical	264	78.3	73	21.7	
	<b>MEAN±SD</b>		<b>MEAN±SD</b>		
<b>Age (Years)</b>	20.52 ± 2.02		20.98 ± 2.43		0.042*
<b>Income (RM)</b>	4687.13 ± 7312.78		5199.33 ± 6233.44		0.487

\*Significance level at  $p < 0.05$ 

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