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Research article

A study on traditional, complementary and alternative medicine (TCAM) usage among malaysian cancer patients

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ABSTRACT

Background

Usage of traditional, complementary and alternative medicine (TCAM) has gained popularity over the past few years. However, very little is known about TCAM utilization among Malaysian cancer patients.

Aim

This study aims to identify the determinants of TCAM usage.

Objectives

This study intends to determine the relationship between the cancer patients' demographic factors, patient's satisfaction with conventional treatment, knowledge on TCAM and healthcare professional's influence on TCAM usage. Patient's perceptions towards TCAM will also be determined.

Methodology

Simple random and convenient sampling method was used to recruit 354 patients from Hospital Kuala Lumpur between February to April 2013. All patients were directly interviewed with a structured questionnaire.

Results

In this study, 172 respondents were TCAM users. There were no significant differences between demographic background of respondents in the use of TCAM using ANOVA. Minimal correlation was found between patient's satisfaction with the conventional treatment and usage of TCAM (r = 0.091). Poor correlation was found between healthcare professional's influence and TCAM usage (r = -0.213) indicating an increase in healthcare professional's influence will cause TCAM usage by cancer patients to decrease. Patient's TCAM knowledge correlated negatively with the TCAM usage (r = -0.555) indicated that cancer patients are less likely to use TCAM when they have more TCAM knowledge.

Conclusion

Healthcare professionals should be fully equipped with the necessary TCAM knowledge while maintaining patient's satisfaction with the conventional treatment. They should also intervene patients' TCAM usage where a potential drug interaction or a harmful adverse event can occur.

Keywords: TCAM; cancer; satisfaction; knowledge; healthcare professionals

INTRODUCTION

Traditional, complementary and alternative medicine (TCAM) has gained popularity for cancer treatment over the past few years. According to WHO, 7.6 million deaths worldwide in 2008 are caused by cancer, where abnormal cells divide without control and are able to metastasize through the blood or lymph nodes involving malfunctioning genes that control cell growth and division [1,2]. In 2007, 18,219 new cancer cases were diagnosed and registered at the National Cancer Registry (NCR)

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of Malaysia comprising of 8,123 (44.6%) males and 10,096 (55.4%) females[3].

Traditional Chinese medicine, traditional Malay medicine (Jamu), Ayurveda, dietary supplements, meditations and spiritual therapies are examples of TCAM used among Malaysian cancer patients[4]. A nationwide study conducted in 2004 showed that the prevalence of TCAM usage among Malaysians in their lifetime was 55.6% in the last 12-month period of the study[5]. However, not all TCAM are free from side effects. Pharmacodynamic interactions may occur when active constituents of herbal compounds act in an additive, synergistic or antagonistic manner with a therapeutic agent[6]. Even patients who received acupuncture may experience needle pain, bleeding and syncope although it is infrequent[7].

TCAM has not been well received by the world of western medicine and healthcare providers as most are not taught about TCAM in medical school training. Thus, they are not properly educated in this field to offer these services to the patients who may benefit from them. The lack of TCAM knowledge has caused a disconnection between patients and their healthcare providers[8]. Thus, it has been hypothesized in this study that there is a significant relationship between the healthcare professional's influence with patient's TCAM use. Shin J.Y. *et al*. reported that the overall degree of satisfaction with conventional medicine was a predictor of TCAM use[9]. Hence, it was hypothesized that there was a relationship between patient's satisfaction with the conventional treatment and TCAM use.

However, there were no studies reporting possible predictors of TCAM use such as patient's TCAM knowledge in cancer treatment. Cancer patients mainly obtain their knowledge about TCAM through family and friends, other cancer patients and the Internet. Other sources included electronic media and printed materials[10]. Only a few cancer patients are able to obtain some TCAM knowledge through healthcare professionals[11]. Hence, a significant relationship between patient's TCAM knowledge and usage of TCAM was hypothesized.

Next, patients with cancer generally face a situation that is subjectively more frightening and less controllable compared to other chronic or life-threatening diseases. Thus, it is important for the medical community to understand the factors motivating them to use TCAM[13,14]. Besides that, very little is known about TCAM utilization among Malaysians who are diagnosed with cancer.

METHODOLOGY

Simple random and convenient sampling method was used to select 354 cancer patients from the outpatient Department of Radiotherapy and Oncology in Hospital Kuala Lumpur between February to April 2013. All patients were directly interviewed with a structured questionnaire. All participants taking part in this study gave full informed consent. Patients completed the questionnaire while they were waiting at the outpatient clinic to be seen by their physician. On completion, patients handed the questionnaire to the researcher.

The inclusion criteria for this study were cancer patients above 18 years old and were suffering from any type of cancer and stages with or without co-morbidities. The exclusion criteria were cancer patients below 18 years old, patients who did not give their consent for this study and subjects who have life-threatening or any conditions that compromised their ability to give informed consent are excluded.

Statistical analysis was performed using SPSS version 18.0 software. Differences of TCAM use within patient categories of selected demographic and clinical variables were assessed by χ^2 test. The factors predicting TCAM use was analyzed by univariate analysis and then multiple logistic regression analysis was performed using all significant predictor variables. Statistical significance was set at $P<0.05$.

RESULTS

In this study, 354 respondents were interviewed whereby 171 (48.3%) were males and 183 (51.7%) were females. Most of the respondents were between ages 40 to 65 are suffering from cancer. Among the female respondents, 102 (55.7%) were found to be suffering from breast cancer. More than 90% of the cancer patients are currently receiving or have received treatment for their disease. Nearly half of the total respondents (48.6%) in this study are using TCAM to treat cancer.

Association testing has been measured between the patient's satisfactions with the conventional treatment, patient's TCAM knowledge and healthcare professional's influence with the usage of TCAM using Chi-square test. A Chi-square test was performed and a significant relationship was found between patient's satisfaction with the conventional treatment and usage of TCAM. χ^2 (27, N = 354) = 41.220, p =0.039. The variables

patient's TCAM knowledge and usage of TCAM have a significant relationship, χ^2 (24, N = 354) = 143.774, p =0.000. The Chi-Square test also showed that there was a significant relationship between healthcare professional's influence and usage of TCAM χ^2 (15, N = 354) = 40.462, p =0.000.

A Pearson correlation coefficient was computed to assess the correlation between patient satisfaction with the conventional treatment and usage of TCAM. There was a minimal positive correlation between the two variables, r = 0.091, n = 354, p = 0.088. Increases in patient satisfaction were correlated with increases in usage of TCAM. Hence, the alternate hypothesis (H_4) on patient's satisfaction with the conventional treatment and usage of TCAM is accepted. However, patient TCAM knowledge had a strong correlation with the usage of TCAM for cancer treatment r = -0.555, n= 354, p = 0.000. Increases in cancer patient's TCAM knowledge was correlated are less likely to use TCAM for their cancer treatment. Thus, the null hypothesis (H_0) on patient's TCAM knowledge and usage of TCAM is rejected. The Pearson correlation coefficient showed that there was a poor negative correlation between healthcare professional's influence and usage of TCAM, r = -0.213, n= 354, p = 0.000. Increases in patient satisfaction were correlated with decreases in usage of TCAM. Hence, the alternate hypothesis (H_6) on healthcare professional's influence and usage of TCAM was accepted.

The R of independent variables (patient's satisfaction, patient's TCAM knowledge and healthcare professional's influence) on the dependent variable (usage of TCAM for cancer treatment) is 0.563 showed that cancer patients had positive and strong relationship with the three independent variables. The R^2 is 0.319 suggesting that there is 31.9% relationship between the usage of TCAM for cancer treatment and the 3 variables. The equation for the patient's usage of TCAM for cancer treatment was expressed in the following equation: Usage of TCAM = 2.114 (Constant) – 0.005 (Healthcare professional's influence) + 0.123 (Patient's satisfaction) – 0.386 (Patient's TCAM knowledge).

An independent group t -test revealed a non-significant difference between the mean for females (M = 1.52, SD = 0.501) and mean for males (M =1.58, SD = 0.501), with the usage of TCAM for cancer treatment. This shows that there is no difference in opinion between genders with the usage of TCAM, t(352) = 0.018, p = 0.986. An one way analysis of variance (ANOVA) revealed that the demographic and clinical background were non-significant (p>0.05).

Most of the TCAM users agreed and strongly agreed that they used TCAM to cure cancer, suppress the progression of cancer, prevent cancer from reoccurring, improve physical and emotional well-being, counter symptoms from cancer, reduce side-effects from medical treatment and complement the effects of the present medication. On the other hand, majority of the respondents who did not use TCAM agreed and strongly agreed that they did not use TCAM because they were satisfied with the conventional treatment, never thought of using TCAM, do not believe in TCAM efficacy, discouragement from family, friends and doctors, as well as lack of information about TCAM.

In line with their reasons to use TCAM, it was found that TCAM users believe that TCAM are able to cure cancer, suppress the progression of cancer, and prevent cancer from reoccurring. Improvement of physical and emotional with TCAM usage was also a belief among TCAM users. Many of the respondents also believed that using TCAM may help in reducing side-effects from medical treatment besides complementing the effect of the present medication.

DISCUSSION

In this study, 354 respondents were interviewed where 171 (48.3%) were males and 183 (51.7%) were females. Most of the respondents are between ages 40 to 65 are suffering from cancer. This is mostly due to the fact that they have been exposed to more carcinogens compared to the younger respondents thus increasing the chance of DNA mutation in their cells causing cancer[12]. 102 out of 183 (55.7%) female respondents were found to be suffering from breast cancer. Although at a lower percentage, breast cancer was the most common among the females[3]. More than 90% of the cancer patients are currently receiving or have received treatment for their disease.

The prevalence of TCAM use was surveyed and the determinants of TCAM use by cancer patients were investigated. It is important to note that nearly half of the total respondents (48.6%) are using TCAM to treat cancer. This reflects a high rate of TCAM use and shows that TCAM has become more acceptable among cancer patients. This can be explained by the fact that cancer is more frightening and less controllable compared to other chronic or life-threatening diseases[9].

A relationship was found between patient's TCAM knowledge and TCAM usage whereby a patient who is more knowledgeable about TCAM is less likely to utilize it as their cancer treatment. However, this result cannot be compared as there are no previous literatures that analyzed this predictor. It was also interesting to note that there was no relationship between patient's satisfaction and TCAM usage, which is consistent with the previous studies [13,14]. It was also discovered that there was no relationship between TCAM usage and healthcare professional's influence. Previous studies conducted only determined the responses by healthcare professionals regarding patient's usage of TCAM[15].

The characteristics of a CAM user found in this study were different from that reported in other studies. In the previous literatures, CAM use among cancer patients has revealed a common trend that TCAM users tend to be female[11,16,17], younger[11,16,17], higher earners[11,17], and better educated[11,16,17]. However, another study conducted by Soraya SH *et al*. reported that there were no significant differences in sociodemographic background and cancer clinical treatment history between CAM users and nonusers but this study is only restricted to breast cancer survivors[18]. A study conducted in Thailand also showed there were no significant among CAM users by gender, age, education level or cancer type[15]. This study revealed that there is only a significant difference in opinion between patients who are satisfied and unsatisfied with their conventional treatment. This may be due to the fact that the previous research were conducted in other countries thus, the demographics and culture of the patients may differ which leads to different results.

Cancer patient's decision to whether to use TCAM or not as cancer treatment was also analyzed. Similar to other studies, nearly half of the total respondents in this study used TCAM to cure, suppress the progression and prevent the cancer from reoccurring[19]. Majority of TCAM users also agreed that TCAM is able to improve emotional and physical well being, similar to previous studies [11,15]. Other reasons of using TCAM are to counter symptoms of cancer and reduce side-effects from the medical treatment besides complementing the effects of the present medication. Previous literatures have also supported these reasons[15,19].

Considering there is a high prevalence of TCAM use among Malaysian cancer patients, issues related to TCAM must be urgently addressed and should not be ignored or avoided. It should be proposed that an attempt should be made necessary to improve collaboration between registered and licensed TCAM practitioners and conventional healthcare providers. Not only is that, as there is a relationship between patients knowledge of TCAM with the use TCAM for cancer treatment, healthcare professionals should also be knowledgeable in this field. This study shows the need of easily accessible educational materials for both patients and healthcare professionals in order to establish the kinds of information patients would find useful. In addition to thfat, it should be ensured that these kind of information is easily accessible and reliable. Future studies should focus on specific groups of patients, for example patients with a particular cancer type or conducted in another rural location where the prevalence of TCAM could be different.

Table 1 Demographic background of respondents

Parameters		**Frequency**	**Percent (%)**
Gender	Male	171	48.3
	Female	183	51.7
	Total	354	100.0
Age	Less than 20 years	6	1.7
	Between 20 to 40 years	60	16.9
	Between 40 to - 65 years	199	56.2
	Above 65 years	89	25.1
	Total	354	100.0
Race	Malay	183	51.7
	Chinese	97	27.4
	Indian	70	19.8
	Eurasian	4	1.1
	Total	354	100.0

Level of Education	None	27	7.6
	Primary	37	10.5
	Secondary	163	46.0
	Tertiary	124	35.0
	Missing	3	0.8
	Total	354	100.0
Monthly Household Income	<RM 1500	124	35.0
	RM 1500 - RM 10000	191	54.0
	> RM10000	30	8.5
	Missing	9	2.5
	Total	354	100.0

Table 2 Clinical background of the respondents

Parameters		**Frequency**	**Percent (%)**
Cancer diagnosis	Less than 1 year	84	23.7
	Between 1 to 5 years	177	50.0
	Between 5 to 10 years	73	20.6
	More than 10 years	20	5.6
	Total	354	100.0
Type of cancer	Breast	102	28.8
	Gastrointestinal	85	24.0
	Respiratory	54	15.3
	Genitourinary	75	21.2
	Hematologic	6	1.7
	Skin	3	0.8
	Bone	8	2.3
	Others	21	5.9
	Total	354	100.0
Cancer Treatment	Received/ Receiving	331	93.5
	Not receiving	23	6.5
	Total	354	100.0
Satisfaction with conventional treatment	Satisfied	302	85.3
	Unsatisfied	52	14.7
	Total	354	100.0
TCAM usage	Yes	172	48.6
	No	182	51.4
	Total	354	100.0

Table 3 Type of conventional treatments received by the respondents

Parameter	**Frequency**	**Percent (%)**	
Type of	Surgery	26	7.9
	Chemotherapy	33	10.0
treatment received	Hormonal therapy	3	0.90
	Radiation	2	0.60
	Surgery & chemotherapy	104	31.5
	Surgery & hormonal therapy	15	4.5
	Surgery & radiation	21	6.3
	Chemotherapy & hormonal therapy	2	0.6
	Chemotherapy & radiation	31	9.3
	Hormonal therapy & radiation	1	0.3

	Surgery, chemotherapy & hormonal therapy	9	2.7
	Surgery, chemotherapy & radiation	73	22.1
	Surgery, chemotherapy & palliative care	1	0.3
	Surgery, hormonal therapy & radiation	1	0.3
	Surgery, chemotherapy, hormonal therapy,	9	2.7
	Total	331	100.00

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