

ORIGINAL ARTICLE

**USE OF MIND BODY COMPLEMENTARY THERAPIES
(MBCTs) AND HEALTH RELATED QUALITY OF LIFE
(HRQoL) OF CANCER PATIENTS**

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Abstract

Objectives: Prayers, spiritual healing, yoga, meditation, *t'ai chi*, qigong and support groups are classified as mind body complementary therapies (MBCTs). The study aimed to examine the prevalence of MBCTs use and the Health Related Quality of Life (HRQoL) in a group of Malaysian cancer patients. **Methods:** This cross-sectional study was conducted on 184 cancer patients at the oncology clinic of Penang general hospital, Malaysia. MBCTs was assessed using a self-administered questionnaire while the HRQoL of the participants was assessed by using the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30). **Results:** Among the complementary and alternative medicines (CAM) users, 75(40.7%) patients self-reported using MBCTs while having cancer. Majority of MBCTs users were female 60(80%, $p=0.01$), aged between 38 and 57 (58%), and were of Malay ethnicity (61%). Socio-demographic factors including age ($r=0.15$, $p=0.03$) and monthly house-hold income ($r=-0.25$, $p<0.001$) were significantly correlated with MBCTs use. Prayers for health reasons was the most frequently practised MBCTs modality, followed by spiritual practices 20(10.8%), meditation 7(5.9%), *t'ai chi* 7(3.8%), music therapy 4(2.1%), qigong 1(0.5%), hypnotherapy 1(0.5%), and reiki 1(0.5%). Recommendations from friends and family members 53(70%) were the most common reasons of MBCTs use followed by patient's own will 22(29.3%). Health related Quality of Life (HRQoL) scores showed significant difference in all functional and symptoms scores among MBCTs users and non-users ($p<0.05$). **Conclusion:** The study helps to identify numerous MBCTs commonly practised by a group of Malaysian cancer patients. Prayers specifically for health reasons and spiritual practices were somewhat common among patients. Viewing MBCTs, not as alternative but to complement conventional cancer therapies may help to address cancer patients' emotional and psychological needs. *ASEAN Journal of Psychiatry, Vol. 14 (1): January – June 2013: XX XX.*

Keywords: Mind Body Complementary Therapies, Cancer Patients, Quantitative, HRQoL

Introduction

Mind Body Complementary Therapies (MBCTs) are a wide range of practices that provides an interaction between the mind and body with an intention to promote physical and functional wellbeing. The US national centre for complementary and alternative medicines (NCCAM) includes relaxation, hypnosis, visual imagery, meditation, yoga, biofeedback, *t'ai chi*, qigong, cognitive-behavioral therapies, group support, autogenic training, and spirituality as MBCTs [1]. There is evidence that mind-body interventions can be effective for diseases such as coronary artery disease and pain management among arthritis patients [2, 3]. The benefits of MBCTs in oncology care continued to be investigated. The emotional impact of cancer diagnosis draws a great deal of distress [4]. Cancer patients seek several alternative methods to cope with cancer symptoms. It is evident that mind body therapies can reduce the disease and treatment related symptoms such as chemotherapy induced nausea/vomiting and improve mood and quality of life of cancer patients [5]. Prayers and spiritual ways of healing are viewed and practiced to strengthen religious beliefs after a diagnosis of cancer [6]. Other MBCTs such as meditation, yoga, *t'ai chi* have been reported as having beneficial effects in reducing pain, anxiety and psychological distress [7-9]. Studies that included prayers and spiritual therapies as complementary and alternative medicines (CAM) showed significantly higher incidence of CAM use among cancer patients [10, 11]. Religious practices such as prayers and spiritual therapies have been documented to help patients relieve stress and to cope with psychological symptoms of cancer [12-14]. An increasing interest in faith healing therapies is assumed to be common due to an easy and cheap access to these therapies [15]. In recent years, considerable attention has been given in recognizing the role of MBCTs in Malaysian health care system. MBCTs such as hypnotherapy and psychotherapy are referred as mind body soul therapies and are offered by the

Traditional and Complementary Medicine (T&CM) division under the ministry of health, Malaysia [16]. At the same time the T&CM division also focuses in providing physical and spiritual therapies to Muslim patients according to their faith and practices under the category of Islamic medical practices. These therapies are frequently offered to patients with chronic illnesses including cancer. Although much research has been done to investigate the use of CAM among Malaysian oncology patients, relatively few studies have investigated the prevalence of MBCTs use among cancer patients in Malaysia. The current study assessed the prevalence of MBCTs use among a group of cancer patients and compared their HRQoL with MBCTs non-users.

Methods

Adult patients aged 18 years old and above, diagnosed with all types of cancer between 6 months and 5 years before the study date, and able to read or understand Malay (National Language of Malaysia) or English were recruited between August to November 2011. The Calculated sample size was 384, with an additional dropout rate of 10%. A total of 498 patients attended the Oncology Clinic during the study period, out of which 422 met the inclusion criteria and were interviewed. After evaluating the completeness of the survey forms, 393 questionnaires were included for the final analysis, giving a response rate of 93.1%. Out of 393 respondents, 46.1% had used CAM for their condition. Those reported to use CAM other than MBCTs were labeled as MBCTs nonusers and vice versa. Patients were assured that refusal to participate in the study or information regarding CAM use would not be disclosed to their physicians and would not affect their treatment. The socio-demographic characteristics and clinical variables such as types and stage of cancer, time since diagnosis and types of conventional therapies received were recorded separately. The face and content validity of the questionnaire were established by

experts from School of Pharmaceutical Sciences, Universiti Sains Malaysia. The contents, clarity of language, ease of administration and appropriateness of the items in line with the study's objectives were assessed prior to the pilot study. The study questionnaire was piloted among 20 cancer patients and little modification in the questionnaire was needed. Data from the pilot study was not added to the final analysis.

The HRQoL of MBCTs users and non-users was measured by the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30) [17]. The questionnaire comprised of a total of 30 questions with nine multi-item scales: five functional scales (physical, role, cognitive, emotional and social functioning), three symptom scales (fatigue, pain, nausea/vomiting), and a global health status/QoL scale. Six single item scales are also included (dyspnea, insomnia, appetite loss, constipation, diarrhea and financial difficulties). All scores ranged from a minimum of 0 to a maximum of 100 and were computed using linear transformation by referring to the EORTC scoring manual [17]. Higher scores indicated better functioning and global health status, but higher scores for symptom scales indicated more symptoms. The 30-item questionnaire has demonstrated acceptable psychometric properties, with Cronbach's alpha coefficients for the complete instrument ranging from 0.52 to 0.89. The approval was obtained by the European organization for research and treatment of cancer quality of life and was used in two

languages i.e. Malay and English. The validity and reliability of the Malay version has been established previously thus no further validation procedure was undertaken [18].

Ethical approval was obtained from the Medical Research Ethics Committee (MREC), Ministry of Health, Malaysia. Both descriptive and inferential data analyses were applied using SPSS version 16.0 (SPSS Inc., Chicago, IL). Variables were taken to be statistically significant at $p < 0.05$.

Results

Socio-demographic characteristics

During the four months of study period, 384 cancer patients attended the oncology clinic at Penang general hospital. One hundred and eighty four patients met the inclusion criteria and reported to use different types of CAM therapies for treatment or management of cancer after diagnosis. Among the 184 CAM users, 75(40.7%) reported to use MBCTs. The majority of MBCTs users were female (80%, $p=0.01$), aged between 38 and 57 (54.6%), and were Muslims (62.6%, $p=0.02$) of Malay ethnicity (61.3%, $p=0.02$). Most of the MBCTs users (49.3%) were educated up to secondary school level and were married (85.3%) with no monthly income (37.3%). The socio-demographic characteristics of MBCTs users and non-users are presented in Table 1. Socio-demographic factors including age ($r_s=0.15$, $p=0.03$) and monthly house hold income ($r_s= -0.25$, $p<0.001$) were significantly correlated with MBCTs use.

Table 1. Demographic and disease characteristics of the participants.

Variables	MBCTs users N=75	%	MBCTs non users N=109	%	χ^2 p-value
<i>Age</i> (Mean±SD)=52.48±12.6					
18-27	4	5.3%	3	2.7%	0.27
28-37	8	10.6%	6	5.5%	
38-47	18	24%	20	18.3%	
48-57	23	30.6%	34	31.1%	
58-67	15	20%	38	34.8%	
>67	7	9.3%	9	8.2%	

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Gender					
Male	15	20%	40	36.6%	0.01
Female	60	80%	69	63.3%	
Race					
Malay	49	65.3%	45	41.2%	0.02
Chinese	19	25.3%	51	46.7%	
Indian	9	12%	11	10%	
Others	1	1.3%	2	1.8%	
Educational status					
Never go to school	4	5.3%	8	7.3%	0.37
Primary	16	21.3%	26	23.8%	
Secondary	37	49.3%	54	49.5%	
Diploma/Matriculation	9	12%	10	9.17%	
University degree	6	8%	11	10%	
Postgraduate degree	3	4%	0	0%	
Marital status					
Unmarried	6	8%	13	11.9%	0.43
Married	64	85.3%	91	83.4%	
Divorced	1	1.3%	3	2.7%	
Widowed	4	5.3%	2	1.8%	
Religion					
Islam	47	62.6%	47	43.1%	0.02
Buddhism	15	20%	47	43.1%	
Hinduism	8	10.6%	8	7.3%	
Christianity	5	6.6%	5	4.5%	
Others	0	0%	1	0.9%	
Irreligion	0	0%	1	0.9%	
Employment status					
Employed	28	37.3%	32	29.3%	0.22
Unemployed	12	16%	31	28.4%	
Retired	15	20%	23	21.1%	
Home maker	17	22.6%	22	20.18%	
Student	1	1.3%	1	0.9%	
Others	2	2.6%	0	0%	
Monthly income in *MYR/month					
No income	28	37.3%	67	61.4%	0.006
<1000	13	17.3%	16	14.6%	
1000-3000	21	28%	19	17.4%	
>3000	13	17.3%	7	6.4%	
Primary cancer site					
Breast	37	49.3%	42	38.5%	0.45
†GIT cancers	17	22.6%	21	19.2%	
‡Gynaecological cancers	7	9.3%	9	8.2%	
Lung	3	4%	10	9.1%	
Naso-pharynx	2	2.6%	10	9.1%	
Prostate gland	3	4%	4	3.6%	
Thyroid	1	1.3%	2	1.8%	
*Others	4	5.3%	11	10%	

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Duration of disease (Mean±SD)=2.0±0.91					
6 months-1 year	20	26.6%	43	39.4%	0.14
>1 year- 3 years	26	34.6%	40	36.6%	
>3 years- 5 years	23	30.6%	20	18.3%	
Don't Know/Not Sure	6	8%	6	5.5%	
Cancer stage					
Very advanced	21	26.6%	39	35.7%	0.62
Slightly advanced	32	42.6%	39	35.7%	
Not advanced at all	13	17.3%	17	15.5%	
Undetermined	3	4%	2	1.8%	
Don't Know/Not sure	6	8%	12	11%	

*Other cancer sites include carcinoma of tongue, germ cell, skin, bone, brain, and lymphoma.

†Gastrointestinal Tract cancers include colon, rectum, stomach, and intestine.

‡Gynaecological cancers include ovarian, uterine, cervical cancers.

*1MYR=0.325US\$.

Types of MBCTs used by the study participants

Table 2 summarized the types of MBCTs used by the participants. Prayers for health reasons was the most frequent (27.7%), followed by spiritual practices (10.8%) which included visits to the spiritual healers in line with the patients' faith. Spiritual practices was most common among Malay participants. The spiritual practices reported by patients were visits to

spiritual healers where patients were given 'zam zam' (holy) water which was believed to cure diseases and verses from the holy book Al-Quran, recited by a group of people. Meditation was practiced by (5.9%) of the participants. Other MBCTs reported to be practiced were *tai chi* (3.8%), music (2.1%) and yoga (1.6%). *Tai chi* commonly practiced by Chinese cancer patients and was common among the age group 48 to 67 years.

Table 2. Types of MBCTs used by the study participants.

Mind Body Complementary Therapies (MBCTs)	N	%
Prayers for health reasons	51	27.7%
Spiritual Practices	20	10.8%
Meditation	11	5.9%
Tai Chi	7	3.8%
Music	4	2.1%
Yoga	3	1.6%
Qi Gong	1	0.5%
Hypnotherapy	1	0.5%
Reiki	1	0.5%

†Note: Total percentage may not be 100% due to the choice given for multiple responses.

Monthly MBCTs expenditure and source of information

Table 3 summarized the monthly expenditures

and the source of information about MBCTs. Many of the participants (40%) could not estimate their monthly expenditures on MBCTs.

However, 21.3% reported spending an average of 50-100 MYR per month on MBCTS. Friends and family members were the most common

source of MBCTS recommendations (70%), followed by patient's own free will (29.3%) to use MBCTS.

Table 3. Monthly MBCTS expenditure and source of information.

<i>Variables</i>	N=75	%
<i>Monthly expenditure on MBCTS in MYR*</i>		
Not sure	30	40
<50	10	13.3
50-100	16	21.3
101-500	13	17.3
501-1000	6	8
>1000	0	0
<i>†Sources of information about MBCTS</i>		
Friends or family	53	70
Own free will	22	29.3
Health care providers	11	14.6
Mass media	10	13.3
Cancer survivors	4	5.3
CAM vendors	2	2.6

*MYR: Malaysian Ringgit, 1MYR=0.325us\$

†Note: Total percentage may not be 100% due to the choice given for multiple responses

Health Related Quality of Life (HRQoL) of MBCTS users and non-users

Table 4 shows the comparison of multi-item functional, symptom and global health status scores between MBCTS users and non-users. On the functional scale, we found significant differences in physical (p=0.035), role (p=0.021), emotional (p=0.011), cognitive (p=0.001), and social (p= 0.024) domains

between MBCTS users and non-users. For symptoms scale, only fatigue (p=0.01), nausea/vomiting (p=0.04), pain (p=0.031) and insomnia (p=0.01) were significantly different among MBCTS users and non-users. No significant difference was found in Global Health Status/Quality of Life scores between MBCTS users and non-users (p=0.83).

Table 4. HRQOL scores for MBCTS users and MBCTS non- users.

Scale/items	MBCTS USERS	MBCTS NON-USERS	P values
	Mean(SD)	Mean(SD)	
Functional scales†			
Physical functioning	64.2(33.0)	75.0(26.1)	0.035
Role functioning	64.9 (36.5)	77.8(27.5)	0.021
Emotional functioning	68.7(32.2)	80.8(24.1)	0.011
Cognitive functioning	76.4(27.8)	88.0(19.5)	0.001

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Social functioning	77.3(30.3)	87.1(20.3)	0.024
Symptom scales / items[‡]			
Fatigue	40.0(30.1)	28.8(24.8)	0.011
Nausea and vomiting	21.1(30.3)	11.9(22.5)	0.042
Pain	36.8(33.1)	25.8(25.9)	0.031
Dyspnoea	25.2(35.8)	15.8(26.2)	0.12
Insomnia	37.3(39.1)	23.2(31.3)	0.01
Appetite loss	31.5 (37.1)	22.8(31.6)	0.16
Constipation	16.4(32.1)	12.2(27.0)	0.44
Diarrhoea	14.2(28.5)	9.1(22.6)	0.23
Financial difficulties	27.4(31.2)	25.3(33.3)	0.41
Global health status / QoL*			
Global health status/QoL	56.7(22.4)	57.1(21.8)	0.83

Note: All scores have a potential range from 0 to 100.

† High score for a functional scale represents a high / healthy level of functioning.

* High score for the global health status / QoL represents a high QoL.

‡ High score for a symptom scale / item represents a high level of symptomatology / problems.

P-value is calculated using Mann-Whitney test

Discussion

The purpose of this study was to explore the use of MBCTs among cancer patients and to evaluate their health related quality of life (HRQoL). The prevalence of MBCTs use was 40.7% among the cancer patients with prayers and spiritual therapies being the most common MBCTs among the participants. Cancer patients are reported to experience a high level of depressive and anxiety symptoms. The emotional impact of cancer diagnosis, fear of cancer therapies' side effects and fear of death brings a great deal of psychological distress to the patients [19-21]. Puchalski & O'Donnell (2005) concluded that the sufferings of dying patients should be addressed and can be dealt with by helping patients to understand the purpose of life which may help them to think about something else other than their own sufferings [22]. Prayer for this study was defined as "human communication with divine and

spiritual entities" [23]. In this study, prayers and spiritual therapies were most commonly practised by Muslim patients. Prayers for health reasons included increase in frequency of Salat (a daily recurring prayer ritual among Muslims), recitations of Al- Quran(which Muslims believed to have a healing effect on the mind and body) [24] as well as increased 'zikir' which is the repeated recitation of specific verses from the holy book Al Quran. 'Poja' was practised as prayers among patients from Hindu faith and were performed either at home or at temples. Spiritual therapies for this study included participation in the religious rituals of healing as well as seeking out the help of people who are known for supernatural healing power [25]. In the Muslim faith, prayers are among the common coping strategies to deal with stress and are considered to be a way to seek help from God [26]. As the Al Quran says in chapter 13, Al Rad, verse 28: *They are those who believe and whose hearts find rest in the remembrance*

of Allah. Lo! in the remembrance of Allah hearts do find rest [27]. The belief that a cure comes from the Lord (God) helps patients face an illness with patience and courage; as the Al Quran states in chapter 26, Al Shuara, verse 80: *And when I sicken, then He health me* [27]. The diagnosis of cancer brings stress and challenges in different intensities and stages to patients and their care givers. Prayers helps to create a link between man and his creator to communicate and to seek forgiveness for sins during a time of apparent hopelessness, thus giving some solace [27]. Spirituality and prayers are reported to have positive psychological and physical effects on well being of lung cancer patients [28]. Spirituality is believed to reinforce religious beliefs towards life, dying and death. In the Muslim faith, there is a concept of 'life after death', thus to a Muslim this world is a temporary place where one is tested and deeds that are done will be evaluated, as stated in chapter 2 of the Al Quran , Al Baqrah, verse 46: *Who know that they will have to meet their Lord, and that unto Him they are returning* [27]. It is not surprising, therefore, that prayers and spiritual acts become more common among terminally sick patients who aim to seek forgiveness before meeting their lord [29].

Regardless of the faith or religion, prayers and spiritual activities may help patients deviate their attention from their own physical pain and emotional stresses. Balboni et al (2007) reported that majority of the cancer patients in their study considered religion as an important component of their lives and was poorly supported by a religious community or medical system [30]. The same study reported that spiritual support by religious community or medical system was significantly associated with patient's quality of life. It was somewhat surprising to find that this study also revealed that MBCTs users were having poorer emotional and social functioning compared to non MBCT users. However, the cross-sectional design of this study means that we cannot conclude anything about causality or directionality of any associations that are found. The association could be due to poor prognosis of the disease even though no significant difference was found in MBCTs use and stage of

cancer; we did not ask patients about their own perceptions of their prognoses which may have been different between the two groups especially as it has been shown that MBCT users had more symptoms. If indeed the perceptions of prognoses by MBCT users were worse than non-users, this would explain the poorer emotional and social functioning and MBCT was being used to cope with the symptoms. Currently, the Malaysian health care system recognizes Islamic medical practices as CAM, but it is important in a multi-ethnic society that the religious and spiritual practices from faiths other than Islam should also be recognized to address the spiritual needs of patients from different faiths.

Meditation which originates from ancient religious and spiritual techniques claims to bring about calmness, physical relaxation and a positive emotional state [31]. Meditation was the third most commonly used MBCTs among the study participants. Despite its religious and spiritual origins, mediation is currently practiced by cancer patients regardless of their faith or religion. The efficacy of mediation has been established through some randomized controlled trials [32]. In a review of mindfulness meditation as a health care intervention the results claimed significant reductions in depressive relapse and recurrence as well as psychological distress [33].

Most of the MBCT users showed significant poorer scores in symptoms scales such as insomnia and fatigue, meditation can be recommended as one of the intervention to help patients cope with such symptoms. The benefits of *tai chi* are under investigation and the pilot studies are evident to improve neuropsychological functioning among cancer patients [9]. In a review of literature, Mansky et al. (2006), suggested tai Chi as an intervention to benefit cancer survivors combining it with medication and aerobic exercises [34]. Though not many of the participants reported to practice *tai chi*, recommendations can be made to evaluate the effects of *tai chi* on psychological and emotional well being of cancer patients. The monthly expenditure on MBCTs was assessed and patients reported spending only minimal amount of money on these therapies. Easy

access to these therapies with minimal charges could be a possible reason of patients' use of MBCTs compared to other CAM therapies such as dietary and herbal products.

The measurement of the HRQoL confirms that cancer patients suffered a great deal of functional and psychological stress regardless of MBCT use. However, it is important to continually evaluate the potential role of MBCTs to improve cancer patients' quality of life. Carlson et al, (2003) reported significant improvement in overall quality of life, symptoms of stress, and sleep quality of cancer patients after undergoing mindfulness-based stress reduction program that incorporated relaxation, meditation, gentle yoga, and daily home practice [35].

The study has several limitations. The study was conducted in one of the public hospitals in Penang state that caters for the low-to middle income population and therefore cannot be generalized to the entire Malaysian population. EORTC QLQ-C30 was designed as a self administered questionnaire, but some of the terminally ill patients needed assistance to fill up the questionnaire. This might have affected some of the quality of life scores but the situation was unavoidable. The results are subjected to recall bias due to the self reported nature of the study.

Conclusion

In conclusion, the study identified different types of MBCTs commonly used by a group of Malaysian cancer patients. As different types of MBCTs have been listed in the national T&CM policy, additional research is required to clarify the relative efficacy of different mind-body therapies.

Acknowledgements

The authors would like to thank all the patients who participated in the study.

Conflict of interest

There is no conflict of interest in this study.

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Received: 28 May 2012

Accepted: 17 December 2012