

## Complementary/alternative Medicine Use among Cancer Patients in Malaysia

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**Abstract:** The objective of this study was to determine the use of complementary and alternative medicine (CAM) among cancer patients in Malaysia. A cross-sectional study was carried out among cancer patients at two Malaysian referral hospitals. The questionnaire consisted of 28 items includes patients' socio-demographic characteristics, clinical characteristics and questions about CAM use. A total number of 200 cancer patients participated in this study. The majority were female, Malay, married, with tertiary education and working (54.5%, 36.5%, 53.5%, 46.5%, 45.0%; respectively). The majority were in stage 2 and diagnosed with cancer 1 to 2 years ago (47.5%, 37.5%; respectively). The prevalence of CAM used among the study participants was found to be 14%. The majority of them used the CAM during the treatment (72.7%), used the CAM less than six months (37.0%). The majority of cancer patients reported that CAM is beneficial for them and there is no side effect of CAM and they were satisfied with CAM (65.5%, 92.0%; 80.0%; respectively). Only few patients stopped conventional treatment while using CAM (14.5%). Relieve pain (19.5%) and relieve the symptoms (16.5%) were the reasons for CAM used. The most popular CAM used among cancer patients was sea cucumber (22%) and homeopathy (10.5%). The least popular CAM used reported by the study participants was green tea (0.5%). Level of education found to be significantly influence the use of CAM among cancer patients in this study. In light of the growing interest in CAM, health-care professionals need to be educated about the most common CAM therapies used among cancer patients. This study reported a new finding that 16.4% of cancer patients stopped the standard treatment while using CAM. This is a serious problem and should be addressed and further intervention studies needed.

**Key words:** Cancer • Treatment • Complementary/Alternative Medicine • Malaysia

### INTRODUCTION

Cancer is the major cause of death in most countries worldwide. The conventional therapies of cancer such as surgery, chemotherapy, radiotherapy and hormonal therapy usually cause many adverse effects because conventional therapies cannot differentiate between cancer cells and healthy cells; thus, they damage both

types of cells and cause serious and often debilitating side effects, frequently forcing patients to abandon treatment. Therefore, many cancer patients seek complementary and alternative therapies [1]. On the other hand, drug interaction between CAM and chemotherapy or radiotherapy is a potentially hazardous [2, 3]. Furthermore, use of CAM has been associated with cancer treatment delay [4].

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CAM practices have become increasingly popular worldwide and many cancer patients have turned to CAM with hope of finding a cure to their illness and to make them feel better. According to the National Center for Complementary and Alternative Medicine (NCCAM) CAM practices can be categorized into five groups [5]. The first group is a whole Medical System such as (Homeopathic Medicine, Naturopathic Medicine, Traditional Chinese Medicine, Herbs, Meditation, Yoga, Massage, Acupuncture and Ayurveda), second is Mind-Body Medicine such as (patient support groups, cognitive-behavioural therapy, meditation, prayer, mental healing and therapies that use creative outlets such as art, music, or dance), third group is Biological Based Practices such as (Herbs, foods, vitamins and dietary supplements), fourth group is Manipulative and Body-Based Practices such as (Osteopathic manipulation, Chiropractic Medicine and Naturopathy), fifth group is Energy Medicine such as (bio-field therapies; Qi-gong, reiki, therapeutic touch, bio-electromagnetic-based therapies; electromagnetic fields, pulsed fields, magnetic fields, alternating-current or direct-current fields) [5].

WHO reported that CAM is used by 25%-50% of the general population of developed nations (WHO 2013). Almost half the population in many developed countries now regularly use some form of CAM; for instance 48% in Australia [6]; 49% in France [7]; 70% in Canada [8]. For the developing countries (China, 40%; Chile, 71%; Colombia, 40% and up to 80% in African countries [9].

Cancer patients take a wide range of CAM; these include ingested therapies such as herbs and vitamins, homeopathic remedies and traditional Chinese medicines as well as psychological, physical and spiritual techniques [10, 11]. The most popular therapies seem to be dietary treatments, herbalism, homeopathy, hypnotherapy and imagery/visualization [12]. Spiritual therapies, prayer as a therapy, massage, shark cartilage, green tea, support groups and non-traditional diets are also commonly reported in the previous studies [12-14]. Reasons for CAM use include symptom/side effect relief, strengthening the immune system/increasing the body's ability to fight the disease [15-16], improving physical and/or emotional wellbeing/improving quality of life [16-17] and a desire for greater control/participation [17]. Improvements in physical and psychosocial wellbeing and increasing hope are the main reasons cancer patients turn to CAM [18], although dissatisfaction with some aspects of conventional health care, poor doctor-patient relationship, accessibility, perceived effectiveness and desperation may also be key motivating factors [19].

Characteristics associated with CAM use have been shown to include higher education, high-income bracket, ethnicity, marital status, adjuvant therapy and presence of anxiety or depression [10-13, 20].

To the best of our knowledge; in Malaysia, this is the first study conducted among all type of cancer in Malaysia. Previous Malaysian study conducted by Saibul *et al.* [2012], to determine the use of CAM among breast cancer patients another study by Saw *et al.* [2006], carried out study among chronic disease patients in general. Therefore, this study filled the gap in knowledge of CAM among cancer patients in Malaysia. Thus; the aims of this study were to determine the use of complementary and alternative therapy and associated factors among cancer patients, reasons behind this use, satisfaction and information about complementary and alternative therapy.

**Methodology:** This study was a cross-sectional study carried from 1<sup>st</sup> March until 30 April 2012 among Malaysian cancer patients from two referral hospitals namely: Pusat Perubatan Universiti Malaya (PPUM) and Hospital Kuala Lumpur (HKL), Malaysia. The questionnaire was distributed to the inpatient and outpatients of Oncology Department. The protocol of the study was approval by the Ethics Committee of Management and Science University. Written consent form was obtained from the study participants. The questionnaire consisted of 28 items including patients' socio-demographic characteristics such as (age, gender, race, marital status, educational level and working status), patients' clinical characteristics such as (cancer type, cancer stage and cancer duration) and questions about CAM use. Data were analyzed using SPSS. 13. Descriptive statistics were calculated with all variables to summarize the data. Socio-demographic characteristics associated with CAM used were assessed using t-test.

## RESULTS

A total number of 200 cancer patients participated in this study. The mean age of the participants was 48.45±14.7 years old with maximum age of 82 years and minimum age of 20 years old. The majority of the participants age ranged between 40-49 years old (25.5%), female (54.5%), Malay (36.5%), married (53.5%), with tertiary education (46.5%) and working (45.0%) (Table 1). As for lifestyle, almost half of the participants were smokers and drink alcohol (51.0%, 47.0%; respectively) (Table 2). The majority were in stage 2 and diagnosed with

Table 1: Socio-demographic characteristics of the cancer patients used alternative medicine (n=200)

| Variable         | Categories | N (%)       | p-value |
|------------------|------------|-------------|---------|
| Age (years)      | 20-29      | 20 (10.0%)  | 0.763   |
|                  | 30-39      | 38 (19.0%)  |         |
|                  | 40-49      | 51 (25.5%)  |         |
|                  | 50-59      | 40 (20.0)   |         |
|                  | 60-69      | 33 (16.5%)  |         |
|                  | ≥70        | 18 (9.0%)   |         |
| Gender           | Male       | 91(45.5%)   | 0.358   |
|                  | Female     | 109 (54.5%) |         |
| Race             | Malay      | 73(36.5%)   | 0.092   |
|                  | Indian     | 51(25.5%)   |         |
|                  | Chinese    | 66(33.0%)   |         |
|                  | Others     | 10 (5.0%)   |         |
| Marital status   | Single     | 45 (22.5%)  | 0.446   |
|                  | Married    | 107 (53.5%) |         |
|                  | Divorced   | 19 (9.5%)   |         |
|                  | Widowed    | 29 (14.5%)  |         |
| Education status | Tertiary   | 93 (46.5%)  | 0.032   |
|                  | Secondary  | 69 (34.5%)  |         |
|                  | Primary    | 19 (9.5%)   |         |
|                  | none       | 19 (9.5%)   |         |
| Working status   | Employed   | 90(45.0%)   | 0.188   |
|                  | Unemployed | 52(26.0%)   |         |
|                  | Retired    | 58(29.0%)   |         |

Table 2: Lifestyle of the cancer patients used alternative medicine (n=200)

| Variable          | Categories | N (%)       | p-value |
|-------------------|------------|-------------|---------|
| Smoking           | Yes        | 102 (51.0%) | 0.910   |
|                   | No         | 98(49.0%)   |         |
| Drinking alcohol  | Yes        | 94 (47.0%)  | 0.199   |
|                   | No         | 106 (53.0%) |         |
| Physical activity | Yes        | 94(47.0%)   | 0.638   |
|                   | No         | 106 (53.0%) |         |

Table 3: Clinical characteristics of the cancer patients used alternative medicine (n=200)

| Variable        | Categories | N (%)      | p-value |
|-----------------|------------|------------|---------|
| Cancer stage    | Stage 1    | 59 (29.5%) | 0.811   |
|                 | Stage 2    | 95 (47.5%) |         |
|                 | Stage 3    | 33 (16.5%) |         |
|                 | Stage 4    | 13 (6.5%)  |         |
| Cancer duration | < 1 year   | 62 (31.0%) | 0.431   |
|                 | 1-2 years  | 75 (37.5%) |         |
|                 | 2-3 years  | 45 (22.5%) |         |
|                 | >3 years   | 18 (9.0%)  |         |

cancer 1-2 years ago (47.5%, 37.5%; respectively) (Table 3). Regarding complementary and alternative medicine factors among cancer patients users, the majority of them used CAM during the treatment (72.7%), used CAM less than six months (37.0%), the highest cost reported by the participants was 100 to 149 Ringgit Malaysia (46.0%). For the source of information, the main source reported by the participants was family members (39.0%). The majority of the cancer patients reported that CAM is beneficial for them and there is no side effect of CAM and satisfied with CAM (65.5%, 92.0%; 80.0%; respectively). Only few patients stopped conventional treatment while using CAM (14.5%) (Table 4). The reasons for CAM used among cancer patients were relieve pain (19.5%), followed by relieve the symptoms (16.5%) (Figure 1). Figure 2 shows that the highest users of CAM were breast cancer patients (24%), followed by ovarian cancer patients (11%). The lowest users were skin cancer patients (0.5%). Figure 3 shows the different types of CAM used by cancer patients, the most popular CAM used among cancer patients was sea

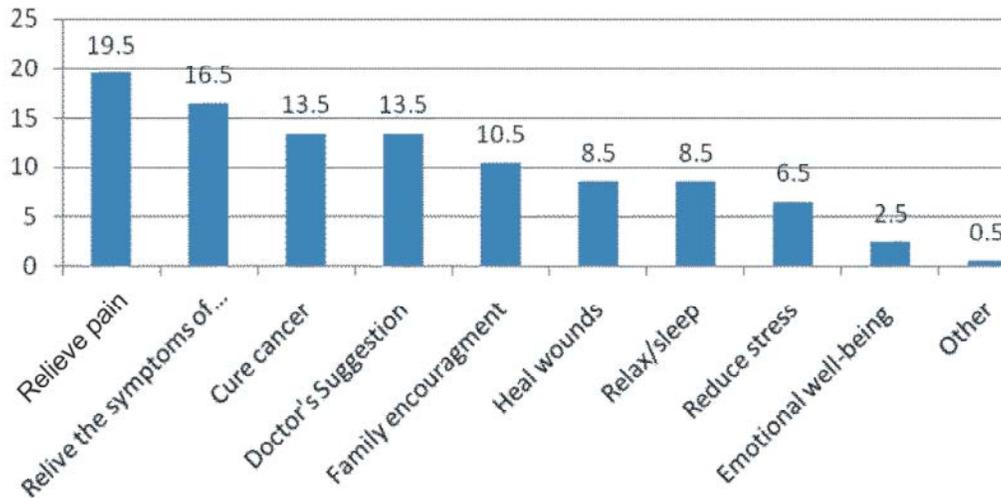


Fig. 1: Reasons for CAM use among the study participants (n=200)

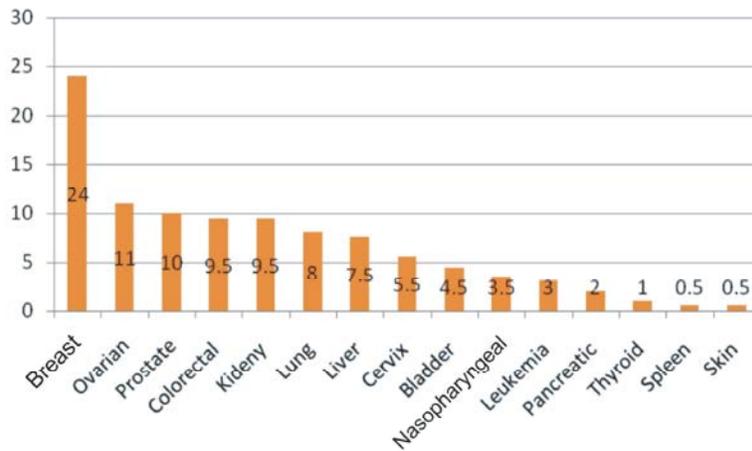


Fig. 2: Type of cancers among the study participants (n=200)

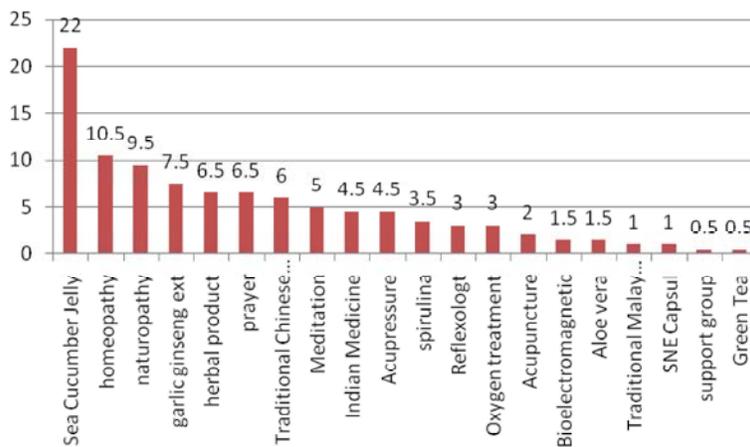


Fig. 3: Type of CAM used among cancer patients in this study (n=200)

cucumber (22%) which known locally as “Gamat”, followed by homeopathy (10.5%). The least popular CAM reported by the study participants was green tea (0.5%). As for factors associated with CAM used, level of education was found to be significantly influenced the use of CAM among cancer patients in this study. Other socio-demographic characteristics did not show any association with CAM use (Table 1).

### DISCUSSION

The socio-demographic characteristics of the participants used CAM in this study were adults, aged between 20 and 82 years, female and with tertiary education. Our study in agreement with other international studies that patients used CAM, were adults, aged between 30 and 59 years of age, female and with a higher degree [21-24].

CAM use has increased among the general population especially among cancer patients. The prevalence of CAM among the study participants was 14%. This reflects that there is a growing interest of CAM use among cancer patients in this country. The prevalence of CAM use was lower than that reported in the U.S. (53.7%) or Australia (64%) and Japan (44.6%) [25]. Other studies also showed that more than 50% of breast cancer patients used CAM for better survival [23, 26]. Worldwide the prevalence of CAM use in cancer patients ranges from 7% to 98% [27-28]. The systematic review from Horneber, 2013 [29] that surveyed a total of 152 studies from 18 countries in the western world reported that the prevalence for current use of CAM across all studies was 40%. With regard to the prevalence of CAM use in Asian countries, there are very few studies but the prevalence of CAM use seems to be higher than that from the western countries. For the example, the

Table 4: CAM factors related to cancer patients used alternative medicine (n=200)

| Variable   | Categories                           | N (%)       |
|--|--------------------------------------|-------------|
| Start using alternative Medicine   | -Before clinical treatment           | 32 (16.0%)  |
|  | -While undergoing clinical treatment | 145 (72.5%) |
|  | -After completed clinical treatment  | 23 (11.5%)  |
| Duration of Alternative medicine use (Months)                                | < 6 months                           | 74 (37.0%)  |
|  | 6-12 months                          | 72 (36.0)   |
|  | >12 months                           | 51 (25.5)   |
| Cost of Alternative medicine (RM*)   | < 50                                 | 36 (18.0%)  |
|  | 50-99                                | 26 (13.0%)  |
|  | 100-149                              | 92 (46.0%)  |
|  | 150-199                              | 14 (7.0%)   |
|  | >200                                 | 32 (16.0%)  |
| Source of information about the Alternative medicine                         | Family members                       | 78 (39.0%)  |
|  | Friends/Relatives                    | 57 (28.5%)  |
|  | Healthcare professionals             | 38 (19.0%)  |
|  | Printed materials/Mass Media         | 27 (13.5%)  |
| Do you get benefited from using Alternative medicine                         | Yes                                  | 131 (65.5%) |
|  | No                                   | 69 (34.5%)  |
| Is there any unwanted effect from alternative medicine                       | Yes                                  | 16 (8.0%)   |
|  | No                                   | 184 (92.0%) |
| Satisfaction of using alternative medicine                                   | Very satisfy                         | 26 (13.0%)  |
|  | Satisfy                              | 160 (80.0%) |
|  | Not satisfy                          | 14 (7.0%)   |
| Stopped the conventional treatment when u started using alternative medicine | Yes                                  | 29 (14.5%)  |
|  | No                                   | 171 (85.5%) |
| Consult your specialist before starting alternative medicine                 | Yes                                  | 71 (35.5%)  |
|  | No                                   | 129 (64.5%) |

\*RM= Ringgit Malaysia

prevalence of CAM use ranged from 54% to 61% in Turkey 64% in Malaysia and 93.4% in China [30-31]. This higher users due to different definitions of CAM, differences in the size and nature of the study population and different geographic settings [30, 32].

In this study 85.5% of the study participants used CAM during treatment. A previous study had shown similar findings that up to 27% of patients taking oral CAM during chemotherapy use potentially hazardous combinations [33]. This is not good practice because certain forms of CAM may result in drug-drug interactions with chemotherapy and radiotherapy [2, 33]. Furthermore; this study reported a new finding that 16.4% of cancer patients stopped the standard treatment while using CAM. This is a serious problem and should be addressed and further intervention studies needed.

In this study, the reasons patients gave for using CAM are relieve pain (19.5%), relieve the cancer symptoms (16.5%), fight/cure cancer (13.5%), doctor suggestion (13.5%), family encouragement (10.5%), heal the wounds (8.5%), relax (8.5%) and emotional well-being (2.5%). Similar findings were reported in several studies [34]. Dietary supplements and religious practices were the two most common modalities used among cancer patients

reported by Lim and Kandiah 2006 [35], reported that 62% of cancer patients used prayer for health Montazeri *et al*, 2007 [36], also observed that spiritual healing was the most popular CAM modality used by almost 80% of cancer patients. Spirituality plays a significant role in helping patients cope with their health conditions and deal with their thoughts of mortality. Many cancer patients were attracted to use CAM therapies as they believed that CAM could boost the immune system, reduce pain, relieve stress, prevent cancer recurrence and cope with side effects of conventional treatment [37]. Other studies reported that poor doctor-patient relationship and dissatisfaction with conventional treatment were encouraged cancer patients to use CAM [38].

In addition, a greater public access to health information and popular media attention to CAM may also increase the use of CAM [28, 33, 37]. Several studies reported that women used CAM because they believed it was helpful in recovery, healing, improving health, boosting the immune system, reducing side effects of conventional treatments, increase the feeling of control, reducing physical and psychological distress, to cure or treat cancer [16, 22, 36] Several studies reported that

patients used CAM to boost their immune system and improve their quality of life with the help of CAM. These findings confirm the results of other studies [28-33]. In this study, only 13.5% of the used alternative therapy to cure their disease, this finding is comparable with other studies [29-30].

In this study the cancer patients used varieties of CMA such as: Sea cucumber, homeopathy, naturopathy, garlic and ginseng extract, herbal product, prayers, traditional Chinese Medicine, Indian traditional Medicine, Acupressure, spirulina, reflexology, oxygen treatment, Acupuncture, bio-electro-magnetic, Aloe vera, Traditional Malay Medicine, SNE capsule, support group and green tea. Previous studies reported that dietary supplements, herbs, spiritual therapies and massage were commonly used by breast cancer patients [26, 37]. The higher prevalence of dietary supplements and spiritual activities used by cancer patients could be encouraged by their beliefs that dietary supplements may increase the body's ability to perform daily activities and prevent recurrence and prayers may help patients to attain peace within them, especially when their perceptions of morbidity and mortality related to illness increased. Similar findings were reported that the main CAM used by cancer patients were: Homeopathy, reflexology, Ayurvedic medicine, psychological therapies, herbal therapies, spiritual therapies, support groups, diets traditional Chinese medicine and relaxation and meditation [35, 39].

In this study, the sources of information reported by cancer patients about CAM were diverse included family members, friends/relatives, health care providers, printed materials/mass media. Moschen *et al.* [40], reported the similar findings to this study, patients commonly received information from family members or friends who are usually involved in the decisions to make dietary changes or use CAM. Similarly several studies found that cancer patients get information on CAM from various sources that included family members, friends, media, health care providers, health food stores and nutritional supplement industry.

This study showed the highest users of CAM were breast cancer patients (24%); followed by ovarian cancer patients (11%); prostate cancer patients (10%); colorectal cancer (9.5%), kidney (9.5%). The lowest were spleen (0.5%) and skin (0.5%). Similar findings reported by Ezeome and Anarado, 2007 [41], that the distribution of cancers represented the typical spectrum of patients we usually seen in oncology clinics and surgical wards: breast cancer (36.3%); urogenital tract cancers (19.4%); gastrointestinal tract cancers (16.9%); soft tissue tumors

(7.5%). Other types included respiratory tract cancers (2.5%), head and neck cancers (1.9%), gynecological malignancies (1.9%) and lymphomas (0.6%).

In this study, level of education was found to be significantly influenced the use of CAM among cancer patients. Patients with higher level of education may also harbor more cynicism toward the conventional system and be more aware of CAM treatments. Several studies reported similar findings that level of education has been linked to higher prevalence of CAM use [40, 42]. Conflicting findings have been reported about factors that affect the use of CAM therapies. Some studies have found associations between age, gender, socioeconomic status, income and level of education. Studies in developed western countries found that women, in both the general population and among cancer patients, have higher prevalence of use than men and that the peak age of use is among young adults/middle aged. Also, higher income, higher level of education and higher socioeconomic status have been linked to higher prevalence of CAM use [40, 42].

## CONCLUSION AND RECOMMENDATIONS

In light of the growing interest in CAM, health-care professionals need to be educated about the most common CAM therapies used among cancer patients. This study reported a new finding that 16.4% of cancer patients stopped the standard treatment while using CAM. This is a serious problem and should be addressed and further intervention studies needed. Doctors should also contribute by playing an active role in eliciting information about CAM usage from the patients. Only with effective communication can potentially hazardous interactions between CAM use and cancer therapy be kept to a minimum. A large majority of cancer patients are using CAM. In light of the growing interest in CAM, health-care professionals need to be educated about the most common CAM therapies used.

## ACKNOWLEDGEMENTS

We would like to thank the selected general hospitals HKL and PPUM for their support and cooperation given. We also would like to thank the following medical students from International School, Management and Science University; for their roles in data collection: Devathaa a/p Nadarajan, Nazrath Begum BT Ali Asgar, Nurul Hafizah Bt Adzli, Siti Nur Sabrina Binti Mohd Hamirudin and Ummu Hanik Binti Ishak.

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