Use of Complementary Therapies by Patients with Cancer in Bangladesh

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Abstract

Cancer is still increasing as a major killer disease around the world. Because of the side effects of conventional treatment and experience of the symptoms, cancer patients want to take all available treatment. Therefore, they have taken to using complementary therapies (CT). Most of the studies about this have been conducted in developed countries. Few are known about the use of and the reasons for CT in Bangladesh. This study aims to describe the types, reasons for and outcomes of the uses of CT. A cross-sectional descriptive survey was used to do this. Of the sufferers from lung, breast, and cervical cancer, 165 respondents were recruited from the National Institute of Cancer Research and Hospital, Bangladesh. Data were collected using structured questionnaires and analyzed using descriptive statistics. Adult patients with an average age of 45 years participated in this study. Out of 165 respondents, 117 (70.9%) used alternative medical methods. Respondents stated that the main reasons they used of CT included belief in the relief of symptoms (63.0%), feeling pain (52.1%), and receiving some benefits (66.7%). The results will be helpful for a number of reasons, such as empowering the cancer patients’ beliefs. They will help clarify the types of and reasons for CT use. Nurses could use them to guide health education program for cancer patients. They can be used as baseline information for further studies regarding the use of CT in cancer patients.

Key words: complementary therapies, alternative medical methods, mind body intervention, biological based therapies, manipulation and body based methods, traditional healer.
**Background and Significance of the Problem**

The prevalence of cancer is still increasing as a major killer disease around the world. In 2008, there were an estimated 12 million new cancer cases and 7.6 million cancer deaths throughout the world (ACS [American Cancer Society], 2008). In line with world statistics, in Bangladesh the estimated cancer caseload was around 0.8 million throughout the country of the 130 million people. Approximately 0.2 million new cases are added every year. Around 0.15 million cancer patients die annually (Shamim, 2006).

Conventional cancer treatments consist of surgery, radiotherapy, and chemotherapy (Liebman, 1992). The treatments are given sometimes consecutively and sometimes concurrently. Conventional treatment has some side effects and cannot cure the cancer completely. The multimodal therapy intensifies the side effects of cancer treatment (Liebman). Because of the side effects and the experience of symptoms, cancer patients want to take all treatment modalities available to treat their problems. Therefore, cancer patients are receiving additional complementary therapies along with conventional treatment (Verhoef et al., 2005). Complementary therapy refers to the supportive methods that are used to complement, or add to, mainstream treatments (Ernst, Schmidt, & Baum, 2006). On the other hand alternative therapy refers to a selective therapeutic method, product, or treatment, used instead of conventional medical therapy (National Centre for Complementary and Alternative Medicine [NCCAM], 2002 as cited Fouladbaksh et al, 2005).

Complementary therapies are being used increasingly throughout the world (Fouladbakhsh et al., 2005). The prevalence of CT use was estimated to be 25% among residents of the United Kingdom (UK), 50% among German, French and Australian populations, and 42-69% among US residents (Richardson, Sanders, Palmer, Greisinger, & Sigletary, 2000). According to Ernst, Schmidt, and Baum (2006), 48% to 66% of breast cancer patients were using CT, usually in parallel with their conventional treatments. Breast cancer patients use CT as they believe it relieves symptoms (60%), improves the quality of life (61%) and is helpful (87%) (Rakovitch et al., 2005). Gynecologic oncology patients used CT in the belief it is helpful (72%). A high level (93.2%) of complementary therapies was used among all types of cancer patients in eastern Turkey (Gozum, Tezel, & Koc, 2003).

It has been found that cancer patients are using different kinds of CT for different reason throughout the world. In Bangladesh, cancer patients are also using different kinds of CT. Very few studies are to be found in Bangladesh regarding the types of CT and why CT is used. The results of this study should provide better understanding of the reasons for using...
CT, the types of CT used, and the associated outcomes for cancer patients in Bangladesh. In addition the study’s result can be used as base line information for nurses to guide health education for cancer patients and for further study of CT use among cancer patients in Bangladesh. Therefore, this study aims at identifying the types of CT used and determining the reasons for its use among cancer patients.

Objectives of the Study
1. To identify the use of complementary therapies including the types, frequency, method, and duration of use by cancer patients
2. To determine the reasons and outcomes of using complementary therapies by cancer patients

Technical Terms
Use of Complementary Therapies
Use of complementary therapies refers to the types, frequency, methods, and duration of CT being used in conjunction with the conventional treatment by cancer patients. The use of complementary therapies was measured by the self-report questionnaire developed by the researchers.

Reasons for uses of complementary therapies
Reasons for the use complementary therapies refers to the opinions of cancer patients regarding their use of complementary therapies including their beliefs about CT, their resources, needs, and outcomes of its use.

Framework of the Study
The Andersen’s Behavioral Model was used as a conceptual framework for this study (Andersen, 1995). According to Andersen’s Behavior Model, health services have three broad classes of determinants. These are: 1) predisposing factor; 2) enabling resources; and 3) patients’ needs.

Research Methodology
A descriptive study was used to identify the types, reasons and outcomes of the CT used by cancer patients in outpatient departments of the National Cancer Institute in Bangladesh. A sample of 1% for the large population (>10,000) is suitable for descriptive
studies (Rosner, 2006). By taking a 1% sample out of the total number of patients (16,530), then the actual sample in this study was 165. The total sample was divided into three groups based on the most common cancer in Bangladesh, which were lung, breast and cervical cancer. Each group consisted of 55 respondents. In addition, 10 respondents from each group were asked open-ended questions to find out their opinions regarding the uses of CT. The 10 respondents in each group were selected because of their experiences of continuously using CT with conventional treatment for at least last three months. The researcher only recruited adult lung, breast, and cervical cancer patients who were using CT with the conventional treatment or had previous experience of its use. A set questionnaire with closed responses was used to measure the main variables, in addition to the 9 open-ended questions asked. Respondents were asked to mark the types, frequency, methods, duration, reasons for and outcomes of the CT used. The main questionnaire was developed in the English language and translated into the Bengali language using the back translation technique to make more understandable to Bangladeshi people. The instrument was content validated by a panel of experts and tested for test-retest reliability. The findings revealed that the correlation coefficients between two time points, a 7-day interval, ranged from .97-1.00, which were considered highly reliable. The issue of confidentiality, anonymity and rights of the withdrawal were addressed prior to the data collection. The researchers also received formal permission from the setting. The data were analyzed and presented as descriptive statistics. In addition, the open ended information was analyzed by using content analysis.

Results

The use of CT among patients with cancer in Bangladesh was assessed according to types, frequency, methods, and duration of use. In addition, the reasons for and outcomes of using CT is shown based on the conceptual framework as the following sequences: evaluated need showing the health related data; perceived need showing the beliefs, symptoms and outcomes of CT use; enabling resources showing how information was obtained about CT, and the sources of support received for using CT.

Respondents’ demographic characteristics

Adult respondents involved in this study had an average age of 45 years old (SD=10.99), and ranged from 19-70 years. Two-thirds of them were female (68.5%) living in rural areas. The majority was married (87.3%) and belonged to the Islamic religion. Two-fifths (41.8%) of the respondents had no formal education. About half of the respondents
were unemployed (47.9%). In addition, half of the respondents had a monthly family income of less than Taka 5,000 (approximately US $ 72).

**Types of complementary therapies used by cancer patients**

All respondents in the study used at least one type of CT. The majority used only one type (77%). The types of CT used ranged from 1-3 types (Table1). Among the types of CT, alternative medical methods were used by the highest number of respondents (70.9%), followed by mind-body intervention (34.5%) (Figure1).

Within the alternative medical methods, the highest number of respondents used homeopathic treatment (62.4%) and ayurvedic medicine (39.3%). All respondents reported that they used medicine orally. Data showed that 57.5% used homeopathic medicine currently on a regular basis whereas 41.3% used ayurvedic medicine. The highest duration of use of both the homeopathy and ayurveda methods was less than three months. In mind-body intervention, the highest percentage of respondents practiced faith based prayer (75.4%), followed by the lowest number used traditional healers (7.0%). All methods were being used currently on a regular basis and the highest duration was less than three months.

However, in biological-based therapies, the highest percentage of respondents used herbs (71.4%). A few of them used vitamins and animal extracts. All biological based therapies were used orally and most of them used currently on a regular basis. Only six respondents used manipulation and body-based methods. One-third of them previously practiced several times and an equal percentage practiced currently on a regular basis. In this study, the data revealed that Bangladeshi cancer patients do not use energy therapy and Chinese medicine (Table 2).

**Table 1**

*Frequency and Percentage of Number of Types of Complementary Therapies Used (N=165)*

<table>
<thead>
<tr>
<th>Number of Types of Complementary Therapies Used</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only 1 Type</td>
<td>127</td>
<td>77.0</td>
</tr>
<tr>
<td>2 Type</td>
<td>33</td>
<td>20.0</td>
</tr>
<tr>
<td>3 Type</td>
<td>5</td>
<td>3.0</td>
</tr>
</tbody>
</table>
Types of Complementary Therapies Used

<table>
<thead>
<tr>
<th></th>
<th>Frequency and percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMM</td>
<td>117 (70.9%)</td>
</tr>
<tr>
<td>MBI</td>
<td>57 (34.5%)</td>
</tr>
<tr>
<td>BBT</td>
<td>28 (17%)</td>
</tr>
<tr>
<td>MBM</td>
<td>6 (3.6%)</td>
</tr>
</tbody>
</table>

Figure 1 Complementary therapies used among the cancer patients (N=165)

Reasons for Use of Complementary Therapies

Complementary therapies were being used for many reasons. The reasons will be presented according to the terminology used in the Anderson’s Behavioral Model. The reasons were as follows.

Evaluated need: It was found that more than two-fifths (43%) of the respondents had the cancer diagnosis 3-6 months previously. The cancer site lung, breast, and cervical cancer were distributed equally. Half of the respondents had stage II cancer (45.5%) and two-thirds of the respondents received chemotherapy (78.2%) at the time of data collection.

Perceived need: the highest percentage of the respondents stated that they used CT because they believed that their symptoms would be relieved (63.0%), followed by prevention of spread of the disease (6.1%). For the relief of their symptoms the highest number of respondents used alternative medical methods (66.7%). In addition, the highest percentage used CT when they were having pain (52.1%). Moreover, the majority of them reported that they received little benefit (66.7%), from the CT.

Enabling resources: Cancer patients stated that the following things enabled them to use CT. One-third of them (32.1%) came to know about the use of CT from friends, followed by family members (23.6%), and mass media (17.6%). In addition, the respondents mentioned that they received support for using CT from family members (57.0%), followed by friends (12.7%), and relatives (30.9%). Moreover, the respondents indicated that the main
sources of getting CT was from CT practitioners (46.1%), followed by traditional healers (35.8%), and relatives (6.7%). A small number of respondents (12.1%) mentioned that they obtained CT themselves.

Discussion

The study aimed at exploring the types, methods, frequency, duration, reasons for and outcome of using complementary therapies among cancer patients. The cancer patients involved in this study were middle-aged adults. This age group might receive adequate information regarding CT and this may contribute to their decision to take CT. This was made evident by the fact that all of them used at least one type of CT. A study in the US conducted by Richardson, Sanders, Palmer, Greisinger, & Singletary (2000) found similar results to the finding that the majority of cancer patients use CT with conventional treatment.

There were different types of CT’s used by Bangladeshi cancer patients. At least one type of CT was used each respondent. Some of them used more than one type of CT. Among the alternative medical methods, Homeopathy was most frequently used in Bangladesh. The personal experience of the primary researcher suggests that in Bangladesh homeopathy treatment is more easily available than the ayurveda treatment. In addition, homeopathy treatment is cheaper, easy to access, and has fewer side effects. In addition, homeopathic doctors in Bangladesh mentioned that 70% of the patients visited them for treatment of tumors (Haq, & Tareq, 2009). It was evident that homeopathy was used as a CT for cancer patients (17.6%) (Richardson et al., 2000). Therefore, the use of homeopathic therapy in cancer patients is more suited to the Bangladesh context.

In addition, faith based prayer was most used in mind body intervention as CT. Bangladeshi people have great belief in religion. In the cultural context they used prayer in accord with their religious beliefs. Usually they practiced prayer for any health problem. Above all, people feel satisfaction after prayer and achieve peace of mind. In Nigeria, evident that, there was high prevalence of faith based prayer (Ezome, & Anarado, 2007). Moreover, Bangladeshi people used herbs as CT most from the biological-based therapies. A study in Bangladesh regarding the Unani medical service delivery throughout the country indicated that 55.5% of females use herbs (Kabir, Haque, & Paul, 2009). One study in the USA showed that herbs were used as CT in cancer patients (38.0%) (Richardson et al., 2000). Only six respondents used massage in the manipulation and body based methods. In Bangladesh, the
researcher believes that massage is not popular. Similarly other study found that massage therapy using rate was very low (Rakovitch et al., 2005).

Evaluated need and perceived need were two of the reasons for the use of CT. Evaluated need featured health related characteristics. This study’s findings indicate that the majority of the cancer patients who used CT had suffered from the disease less than six months (81.8%). Many were at the second stage of cancer (45.5%), and were treated with chemotherapy (78.2%). Cancer diagnosis and treatment facilities are not available in the rural areas of Bangladesh (Health Bulletin, 2007). Therefore rural dwellers are usually finally diagnosed at a late stage of cancer. In consequence, as they are diagnosed late, the opportunity for surgical treatment is usually closed. In addition, the lack of radiotherapy facilities means that Bangladesh cancer patients only have easy access to chemotherapy in (NICRH, 2008). The side effects of chemotherapy are more prominent than the other therapies. Patients want early recovery from the disease or reduced symptoms because the cancer is a chronic disease. They want to take all available steps to reduce their symptoms at least, as well as gain satisfaction. These findings are similar to those of Helyer et al., (2006) who found that the more strenuous the treatment the more likely the patients are to use CT. Helyer et al. also found that chemotherapy patients used the highest percentage of CT (81%).

Perceived need is the individual’s perception of cancer patients in relation to the presence of illness, the response to illness and measures taken to prevent illness (Fouladbaksh, & Stommel, 2007). In this study cancer patients express their perception as belief in the need for relief of symptoms (63.0%). Cancer patients’ beliefs influence the use of CT. When suffering from the disease people want to get free from the disease or gain relief from the symptoms. A previous study confirms this study’s findings. The respondents used CT because they believed such things as their symptoms would be relieved, their cancer cured, side effects would be reduced, spreading prevent, and they would feel hopeful (Rakovitch et al., 2005).

The presence of illness is felt apart from the symptoms. The response to illness and the measures taken to prevent illness influence the use of CT. In this study respondents revealed that the pain was the most important reason for using CT. Most of the cancer patients had common symptoms of pain (Sohl, Schnur, & Montgomery, 2009). Complementary therapies are safe, non-invasive and generally considered to be free of toxicity. Therefore the cancer patients’ preferred using CT to get relief from the symptoms because the pharmacologic treatment of pain does not always meet patients needs and may
produce difficult side effects (Cassileth, Trevisan, & Gubuli, 2007). In contrast, Taiwan researcher found that pain was the least reasons for the use of CT. There the highest reason was to boost the immune system (Yang, Chien, & Tai, 2008). One of the respondents commented in the open responses that:

The cancer pain don’t reduce fully in conventional treatment because conventional treatment acts only on a temporary basis on the symptoms. But the CT acts deeply and slowly on the disease and as a result the symptoms disappear clearly and cure the disease.

A wide variety of sources of information were used to enable the patient to select CT. There may be informers, support and resources available of in the local community (Molassiotis et al., 2005). In this study most of them obtained information from friends, family members and mass media (Radio, TV & Newspapers). The majority of the complementary therapies information is advertised among newspapers in Bangladesh (Islam, & Farah, 2008). In Bangladesh the majority live in joint families. Family members take care of the other people in the family. Friends come to visit their sick friends. At this time they share with each other and advise about taking traditional medicine as a CT (Haqu, & Tareq, 2009). Similarly, friends, family members, and mass media seem to be the most important sources of information (Molassiotis et al. 2005; Swisher et al., 2002). In contrast, in one study in a UK survey, the main sources of information were media, then friends and less was obtained from family members (Scott, Kearney, Hummerston, & Molassiotis, 2005). UK is a more developed country than Bangladesh. In the UK the media is more established than in Bangladesh. In addition, the support for using CT was more influential from family/friends/relatives. In this study the cancer patients received more than fifty percent support from the family members, followed by relatives and friends. A family member is the first person who nurses the sick person. Therefore, the family member is the most supportive in using CT. Similarly Verhoef, Hilisden, and O’ Berine, (1999) found that cancer patients used CT through the family and support of friends. Content analysis revealed that Bangladeshi cancer patients have a history of using of complementary therapies through their family member. Usually, family members influence them to use CT when the cancer patients are not satisfied with the conventional treatment. One unpublished survey in Bangladesh showed that family members offer support for using CT (Haqu, & Tareq, 2009).

Moreover, the availability of resources also influenced the use of CT. In this study fifty percent of the cancer patients used CT practitioners, followed by a traditional healer and themselves. In Bangladesh CT practitioners are available all over the country, such as
homeopathic, ayurveda and herbal practitioners (WHO, 2009). The homeopathic, ayurveda and herbal practitioners advise and provide remedies from their shop. Therefore the CT practitioners as sources of CT are important in Bangladesh. These findings were in accord with the study of Ezeome and Anarado (2007). They revealed that most of the CT sources were CT practitioners, followed by relatives, friends and the open markets. In addition, some traditional healers make their products in their home and sell them to the patients (Islam, & Farah, 2008).

**Limitations**

The participants of this study were from a single regional cancer institute. The respondents were patients with cancer of the lung, breast, and cervix. Therefore, they may not be representative of the population of all the country and other cancer sites. It was a hospital based survey and excluded patients who did not use CT so the actual proportion of cancer patients who use CT is still unknown.

**Conclusion**

The study revealed that the majority of the cancer patients use at least one type of complementary therapy and received little benefit. Considering the respondents’ beliefs and knowledge of complementary therapies is becoming essential for health personnel. Such practices will increase personnel rapport and encourage trusting relationships with the patients through discussing with them the use of complementary therapies.

**Recommendation**

A large scale, study is required in this field in other parts of Bangladesh. This will need to include other types of cancer patients. A future study should include subjects who use or do not use CT. The findings provide an additional insight for nurses who provide care to cancer patients. As shown in this study, all respondents used at least one type of CT. It is highly recommended that an assessment of CT use be included when caring for cancer patients. This knowledge will help provide comprehensive care to cancer patients. The content of the complementary therapies should be added to the Bangladesh nursing curriculum for better understanding on the part of the nurses. Allowing cancer patients to add complementary therapies to the conventional treatment should increase patients’ satisfaction.
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