

The effect of CAM comprehensive nursing interventions on the improvement of quality of life to patients with breast cancer and gynaecological tumours

Liu Jianrong¹, Zhao Haiyan^{1*}

Abstract

Background: Breast cancer in females, which is considered the most dreadful disease in India and the world as compared to other gynaecological cancers, demands extensive care and proper medication in order to control its progressive growth. In addition to the conventional care of the patients, Complementary and Alternative Medicine (CAM) is administered in a controlled way through proper guidance and counselling in order to attain improved physical and mental health for the patients.

Objective: The aim of the study was to assess the effectiveness of CAM comprehensive nursing interventions and their benefit for patients who have breast cancer and gynaecological tumours.

Methods: Statistical data was used to map the adult women diagnosed with breast and gynaecological cancer and who were set to start new chemotherapy treatments. A total of 450 patients from different states of East India were enrolled in the study over a period of four years. The patients were selected based on their preference for undergoing CAM. The research was conducted using a cross-sectional anonymous self-administered questionnaire to examine women's perspectives towards the use of CAM and its effect on their mental and physical health.

Results: 42% of the women preferred the use of CAM as their alternative treatment. Breast cancer patients disclosed that 48.1% of them had used CAM and 39% of women with gynaecological cancers stated that they had used CAM. The results further indicated a less frequent deterioration in the health of CAM users (38.4%) than to non-users (55%). In terms of those who utilized vitamins and nutritional diets, 60% of the participants reported using a proper diet, including antioxidants, minerals, vitamins and herbs etc. 37% opted for spiritual healing through yoga, 26% utilized energy healing, 42.4% utilized acupuncture, 72% preferred massages and 23% of patients utilized chiropractic methods. The use of CAM was found mainly in the patients with proper education and awareness and those with a family history of cancer who were not receiving the necessary care from their previous primary physician.

Conclusion: CAM still requires extensive research in terms of its applications in dealing with patients and in order to successfully launch programmes aimed at promoting its use worldwide and to eradicate all the other false notions about it. [*Ethiop. J. Health Dev.* 2022; 36(2):000-000]

Keywords: Breast Cancer and gynaecological tumours, Complementary And Alternative Medicine (CAM), Complementary Oncology, Quality Of Life, Nutritional Diet and Spiritual Healing, HRQL (Health-Related Quality Of Life).

Introduction

Cancer has been the primary concern in India from the onset, resulting in thousands of deaths due to the lack of adequate medication and therapy. Breast cancer is considered to be a common invasive form of cancer which is responsible for the second highest mortality rate among the primary fatal conditions of cancer-causing deaths in women. Under the National Cancer Registry Program, the breast, cervix, uteri, and oral cavity (7) are the most common cancer sites in women. According to statistics, 50-60% of all cancers among Indian women are commonly found in the cervix uteri, breast, corpus uteri and ovaries, which are the main organs for cancer invasion.

The percentage of women who experience these types of cancer is increases, with more women becoming susceptible to breast cancer, in women up to 3-8% suffer from ovarian cancer, 0.5-4.8% have cancer of the corpus uteri, 1-3% have vulva and/or gestational trophoblastic tumours and a staggering 75,000 or more women have breast cancer. With the advancements of the disease through time, research programs were also improved in order to enable the improvement of existing measures and/or the development of new

measures aimed at combating the diseases and decreasing mortality rates. Apart from the conventional chemotherapy technique, various other programs have been introduced and incorporated into treatment regimes in order to improve the lives of those who are affected by cancer.

Complementary and Alternative Medicine (CAM) emphasizes the methods and practices that are therapeutic and which help diagnose or cure the disease, these methods are intended to complement the conventional methods and can be used in place of mainstream medicine. Women with breast cancer and other gynaecological tumours are increasingly inclined towards the use of CAM. With the increasing number of cancer reports in India and the world, and with the principal amount leading to mortality, women with proper education and awareness are inclined to choose alternative methods rather than the old conventional ones. The side-effects resulting from the chemotherapy are immense and toxic, which is one of the reasons women are inclined to choose.

Various research projects and cumulative studies have been conducted in order to review and discover the

¹ Southwest of the intersection of Xueyuan Nanlu and Renhe Dao, Lu Nan District, Tangshan City, Postal Code-063000, P.R.China, Email: zhaohaiyan@163.com

different positive effects of CAM in cancer patients. However, it is still unclear whether it successfully eradicates the disease entirely or merely offers psychological support to those who are suffering. Due to the large number of individuals in the rural and urban areas of India, previous research has focused on these areas and they provide a large database for researchers to work with.

In this study, data was collected from three contrasting areas with diverse breast cancer survivors. This study aimed to tabulate the effect of CAM on individuals who survived breast cancer at various levels, in order to investigate their coping strategies in daily life and in terms of dealing with the medication that they have to take.

Materials and Methods

A prospective cohort study was conducted at numerous branches of a rehabilitation centre, namely the 'Fighting against Cancer Society', under the supervision of the research team in different East Indian states (Bihar, Jharkhand, Orissa, West Bengal). The study was conducted on 450 patients (who had breast cancer or other gynaecological tumours) two years prior or for four years starting from the month of July in 2018.

The rehabilitation centre was open to all women above the age of 20, who after completing their primary treatment, did not experience any distant metastasis and who hoped to gain a deeper understanding of their results. The participants were grouped based on their inclination to use CAM and were thus subjected to a questionnaire which was tailored for them. Due to previous research that had been conducted in this sector, the researchers were confident that the response rate would be relatively high.

The hospital staff were given the authority to check and adapt questions based on the circumstances of the patient and their health status. The patients were given the opportunity to record their feelings and their physical and mental stability.

The preliminary questions aimed to assess the patients' awareness regarding CAM, as well as their preference for CAM. CAM users were then asked about the various aspects that assist in their relaxation/imagery, spiritual healing, yoga, energy healing, acupuncture, massage, chiropractic, high-dose vitamins, herbs and homoeopathy treatments. The patients were further asked about their regular diets, including their intake of vitamins, antioxidants, orthomolecular medicine, and traditional medicines. The patients were questioned about the advancement of the quality of their life due to the acceptance of CAM as their treatment alternative. The relationship between patients and their physicians was studied closely. The participants' records were reviewed closely for different tumour characteristics such as breast lump, tissue thickening, red-pitted skin, inverted nipple, phyllodes and angiosarcoma.

Statistical Analysis: The results were tabulated according to the participants' demographic and clinical characteristics (in situ and invasive). A correlation test

was used to assess the differences in CAM use based on ethnicity. The Statistical Package for the social sciences (SPSS) version 27.0 was used for analysis of the data.

The most lucrative procedure is the Pearson product-moment correlation Coefficient (PPMCC), (9) or Pearson's correlation Coefficient, which was used to find out the dependence between two quantities in the dataset. This was done by allowing two variables of the numerical dataset to give away the ratio of their covariances, culminating in the square root of their variances. This statistical method is used to evaluate (5) the intensity of relationships between two quantitative variables in order to determine the strength of their relationship. A higher correlation value musters a strong relationship, whereas, a lower or weak correlation implies a disconnection.

The above method signifies a statistical approach called the linear regression analysis, which is used to find the connection between a dependent and an independent variable. The absolute value is 0 and the Pearson correlation Coefficient should not be bigger than 1, as a value bigger than 1 would imply an association with the Cauchy Schwartz inequality (6). When a linear relationship increases, the correlation coefficient is +1 and -1 when the linear relationship decreases.

Results

Statistically significant differences regarding the quality of life as a result of the utilization of CAM on breast cancer: A total of 450 participants were included in this study from different states of East India, namely Bihar, Jharkhand, Orissa, West Bengal, based on their preference to use CAM as an alternative treatment method. 189 participants used CAM as an alternative method for treatment, while 261 participants continued with their traditional methods. A 5% level of significance was used, along with a P-value of 0.1341 in order to correlate the various aspects of preference for participants in relation to CAM. The patients vastly used the different aspects of CAM, i.e., relaxation/imagery, spiritual healing, yoga, energy healing, acupuncture, massage, chiropractic, a high-dose of vitamins, herbs and homoeopathic treatments. The patients who did not use CAM as an alternative method were taken into account. There were significant HQOL improvements in participants who utilized CAM as compared to those who did not use CAM (Table: 2). The majority of the participants did not suffer any side effects, and the alternative methods assisted them in uplifting their mental and physical health.

Age was not a factor in this study. Literacy was a factor in this study as the awareness programs were mostly attended by individuals who were educated and they were more willing to try out the alternative method instead of the traditional methods. The participants found that their spiritual aspect of their life was enhanced through the use of CAM. They found that their mind, body, and energy conditions were significantly improved in the process, which

further improved their well-being a provided a better quality of life and extended their life span.

The relationship between the number of cancer patients and their preferences towards using CAM as an alternative method: The details of the participants have been summarized in Table-1. The patients were

mainly adult women (above the age of 20). The table consists of basic questions like their age, nationality, literacy level, social status, job status, average annual income, awareness regarding CAM, preference towards CAM, relationship with the primary physician, stage of cancer.

Table 1: Percentage of CAM users among the studied participants

Age	Number of Participants	Percentage (%)
19-39	108	24%
40-59	216	48%
60 and above	126	28%
<u>STATE</u>		
Bihar	54	12%
Jharkhand	124	27.5%
Odisha	72	16%
West Bengal	162	36%
Others	38	8.4%
<u>LITERACY RATE</u>		
Secondary	222	49.3%
High secondary	135	30%
Graduation	62	13.7%
Post-Graduation	41	9.1%
<u>SOCIAL STATUS</u>		
Married	398	88.4%
Unmarried	52	11.5%
<u>JOB STATUS</u>		
Employed	247	54.8%
Unemployed	203	45.1%
<u>AVERAGE ANNUAL INCOME</u>		
Less than Rs. 1,00,000/-	102	22.6%
Rs.1,00,000/- - Rs. 3,00,000/-	285	63.3%
Above than Rs.3,00,000/-	63	14%
<u>AWARENESS REGARDING CAM</u>		
Yes	285	63.3%
No	165	36.6%
<u>PREFERENCE REGARDING CAM</u>		
Yes	189	42%
No	261	58%
<u>RELATIONSHIP WITH PRIMARY PHYSICIAN</u>		
Normal	237	52.6%
Strained	213	47.3%
<u>STAGE OF CANCER</u>		
Below stage 4	295	65.5%
Above stage 4	155	34.4%

TOTAL NUMBER OF PARTICIPANTS: 450

According to the study, CAM was reportedly used by 42% of the total participants. No significant statistical difference was reported in terms of the age of the participants and employment status. However, a significant difference was noted in terms of literacy rate and awareness regarding CAM.

The correlation between respective CAM users and NoN- CAM users: The participants were further tabulated and differentiated into CAM users and NON-CAM users. The questions remained the same,

however the results were now reviewed closely in order to observe the effects of CAM on the aforementioned parameters.

The report indicates that more than 42% of accounted women suffering from breast cancer used CAM. This study found a statistically significant difference between CAM users and NON-CAM users in their literacy rate (-0.328,0.666, -1) employment and average annual income. There was no statistical significance for age, social status and state.

Table 2: Statistical Significance among various aspects of CAM users and NON-CAM users

Age	Number Of Participants	Number of CAM users	Percentage(%)	Number of Non-CAM users	Percentage (%)	Significance
19-39	108	44	40.7%	64	59.3%	0.901
40-59	216	103	47.6%	113	52.4%	
60 and above	126	42	33.3%	84	66.7%	
<u>STATE</u>						
Bihar	54	12	22.2%	42	77.8%	0.362
Jharkhand	124	34	27.4%	90	72.6%	
Odisha	72	28	38.8%	44	61.2%	
West Bengal	162	103	63.5%	59	36.5%	
Others	38	12	31.5%	26	69.5%	
<u>LITERACY RATE</u>						
No Education	184	13	7.06%	171	92.5%	-0.328
Secondary	173	88	50.8%	85	49.2%	
Graduation	62	48	77.4%	14	22.6%	
Post Graduation	41	40	97.5%	1	2.5%	
<u>SOCIAL STATUS</u>						
Married	398	172	43.2%	226	56.8%	1
Unmarried	52	17	32.6%	35	67.4%	
<u>JOB-STATUS</u>						
Employed	247	123	49.7%	124	50.3%	-1
Unemployed	203	66	32.5%	137	67.5%	
<u>AVERAGE ANNUAL INCOME</u>						
Less than Rs. 1,00,000/-	102	23	22.5%	69	77.5%	0.666
Rs.1,00,000/- - Rs. 3,00,000/-	285	106	37.1%	179	62.9%	
Above than Rs.3,00,000/-	63	60	95.2%	3	4.8%	
<u>RELATIONSHIP WITH PRIMARY PHYSICIAN</u>						
Normal	237	68	28.6%	169	71.4%	-1
Sour	213	121	56.8%	92	43.2%	
<u>STAGE OF CANCER</u>						
Less than 4 th stage	295	96	32.5%	199	67.5%	1
Greater than 4 th stage	155	93	60%	95	40%	

The participants further indicated that the alternative method of treatment is more profitable and beneficial to their HQOL. 83% of them did not experience any side effects. 75% of participants were reluctantly talking about CAM with their physicians as the traditional doctors are always discouraging their patients regarding alternative methods. The P-value was 0.1341, and the results were not significant at $P < 0.05$. Literacy has been found to be a major contributing factor towards the acceptance of CAM as most of the non-CAM users reside in areas where there is little to no scope for any awareness programs regarding CAM.

The association between the different CAM methods and their subjective application in patients with breast cancer and psychological tumours: Table C illustrates the most common methods of CAM used after cancer treatments, i.e., Apart from vitamins and nutritional

diets, 60% of the participants reported the use of a proper diet, which includes antioxidants, minerals, vitamins and herbs etc. 37% opted for spiritual healing through yoga, 26% utilized energy healing, 42.4% used acupuncture, 72% chose massages and 23% used chiropractic methods.

The improvement of QOL and various mental and physical factors due to the use of CAM: The patients were observed closely over a period of four years, and the estimate of breast cancer-specific death hazards and survival has been presented graphically. After two years, it was found that breast cancer-specific survival for women using conventional methods was worse than for women using CAM modalities. After a further two years, there was a greater separation in survival curves between CAM and NON-CAM users. The Patients numbers considerably increased with the advancements

of CAM techniques. More people were inclined towards the use of CAM, and the amazing results obtained with the use of CAM enabled a better quality of life and a longer lifespan.

Discussion

This study has found that in East India, modern patients suffering from breast cancer and other gynaecological tumours who are aware of the alternative methods chose CAM over conventional methods (8). Furthermore, women who were previously diagnosed with TNM stages and undergoing chemotherapy were more likely to use CAM. The statistical analysis indicated that the patients undergoing CAM had higher survival rates than those who chose conventional methods.

Due to the ayurvedic and herbal type of treatments in CAM, the patients did not experience any side effects. There was also evidence that chemotherapy and other conventional methods may be associated with a 3-fold increase in the risk of breast cancer-specific deaths (4). The Statistical statures established that the multivariable survival parameters were negatively affected prior to the commencement of CAM modalities.

This study suggests that literacy is a significant factor regarding the acceptance of alternative methods, such as CAM. Due to this research being done mainly in the rural areas of India, it is has been found that the people who resided in slums and bustees did not have any idea about the concept of these methods. Furthermore, the middle class or wealthy individuals also benefitted from these methods. These findings also signify that people using CAM benefit significantly in terms of their survival and their emotional strength. However, other studies conducted in this field have produced mixed results. Some studies have found no association, whilst others have found a high mortality rate and others, like this research have found a decreased mortality rate.

This study has certain limitations. As the years go by, the results may differ with time and with the introduction of more programs aimed at educating people on the use of CAM, more people may opt to choose CAM over other methods. With the advancement of technology, it is now possible to assess the pros and cons of both conventional and alternative methods. This research did not utilize BMI (Body Mass Index) as a factor in this study. According to 2007 National Health Interview Survey (NHIS) data, higher BMI (6) was indirectly proportional to CAM use. Therefore, this research did not consider BMI as a significant factor in this research.

Moreover, CAM has a significant scope in terms of cancer treatments. This research used specific significant parameters that assisted in gaining meaningful insight in this study. As with any research, the results may differ from person to person or in other climates or situations.

This extensive grass-root level study was done throughout the slums of East India, where there's still

many ancient notions going on regarding people lives and scientific research. Through the extensive and in-depth design of this research over a period of four years, this research was able to identify and analyse every aspect of people living in those regions. This research statistically evaluated the correlation between the effect of CAM on the lives of people living with breast cancer. This research deduced fruitful results, which encouraged the theories and applications of CAM in everyday life with insight around the proper measures and a clear understanding of the processes involved.

Conclusion

This study proposes that the use of CAM has a positive impact on patients' health both physically and mentally. Based on the findings of this research, individuals who are cancer survivors are strongly encouraged to adopt the use of CAM as a way of dealing with discomfort associated with the disease. The patients who have breast cancer or other gynaecological cancers, generally suffers from low mental stability and because of this their physical health is affected. The adverse effects of chemotherapy act as a catalyst to these conditions. When this happens, patients are encouraged to reevaluate their circumstances and to take up therapies which are able to assist the individual with managing the stress in their lives and to utilize their energy more productively. Various workshops and information sessions should be conducted in order to highlight the benefits of using CAM and to encourage the proper use of CAM. Also, future studies should highlight the different aspects of CAM and promote its use for rural and urban people.

Conflict of Interests

The author declares that there are no conflicts of interest regarding the publication of this paper.

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