A study on the efficacy of body–mind–spirit group therapy for patients with breast cancer

Chun-Ju Liu, Ping-Chuan Hsiung, King-Jen Chang, Yu-Fen Liu, Kuo-Chang Wang, Fei-Hsiu Hsiao, Siu-Man Ng and Cecilia LW Chan

Aims and objectives. This study aims to understand the effects of culturally enriched body–mind–spirit group therapy on anxiety, depression and holistic well-being among women with breast cancer and to examine patients’ views on what aspects of group therapy worked to enhance their health.

Design. The study was designed using multiple methods, which consisted of a randomised controlled trial and a focus group interview.

Methods. A total of 16 subjects in the control group received the standard care of a physician’s treatment at the outpatient department. In addition to standard care, 12 subjects in the experimental group received 10 sessions of weekly body–mind–spirit group therapy for 180 minutes each. This therapy integrates concepts and practices of traditional Chinese medicine and Western medicine (e.g. positive psychology and forgiveness therapy). The subjects in the experimental group were invited to participate in a focus group interview regarding their perceptions of the change mechanisms that occurred in group therapy.

Results. The results of analysis of covariance indicated that after a two-month trial, there was a similarity between the experimental and control groups in reducing the scores of Beck depression inventory and increasing the scores of body–mind–spirit well-being. However, subjects in the experimental group had a better reduction of the scores of state anxiety inventory than subjects in the control group. The qualitative analysis yielded eight domains: (i) imparting of information, (ii) interpersonal learning, (iii) catharsis, (iv) universality, (v) group cohesiveness, (vi) altruism, (vii) instillation of hope and (viii) existential factors. These domains illustrate how the therapeutic effects of group therapy worked to reduce patients’ anxiety.

Conclusion. The culturally sensitive body–mind–spirit group therapy reduced anxiety among outpatients with breast cancer.

Relevance to clinical practice. The involvement of mental health nurses in providing group therapy for cancer patients could enhance the quality of care in psycho-ontological nursing.

Key words: anxiety, body–mind–spirit group therapy, breast cancer, depression, holistic well-being, nursing

Accepted for publication: 1 December 2007
Introduction

Patients with breast cancer commonly experience physical distress such as fatigue, dizziness, pain and sleep disturbance; emotional distress such as fear, anxiety, uncertainty, sense of loss, hopelessness, depression and anger; and spiritual distress such as confusion about the meaning of life and suffering (Vickberg et al. 2000). Leszcz and Goodwin (1998) reported that, in current psycho-oncology, group therapy is considered as an important treatment to reduce cancer patients’ emotional distress, increase quality of life and enhance ability to cope with stress. Several studies (Blanchard et al. 2001, Goodwin et al. 2001, Montazeri et al. 2001) have examined the efficacy of different types of group therapies such as exercise group, support group and psychoeducation group. Blanchard et al. (2001) found that two to three times of weekly exercise group therapy could effectively reduce anxiety among cancer patients. As for support group therapy, the main components of this group include information, emotional and social support from peers and health professionals (Samarel et al. 2002, Zeigler et al. 2004). Its effectiveness has been consistently found. For example, the one single pre-post test study (Montazeri et al. 2001) indicated that a monthly support group programme for one year for 56 patients discharging from the hospital could reduce patients’ anxiety and depressed mood. Moreover, patients reported that a group of peers providing hope and support was most helpful in their recoveries. The study (Goodwin et al. 2001) revealed that a weekly support group also contributed to patients’ relief of emotional distress and pain. In terms of the effects of psychoeducation for cancer patients, patients who received weekly psychoeducation group therapy in the study by Helgeson et al. (1999) had a better outcome of life adjustment than patients who only attended patient discussion meetings. Overall, exercise, support and psychoeducation groups demonstrated their effectiveness individually. Nevertheless, there is a lack of evidence for the efficacy of group therapy that aims to heal patients’ body, mind and spirit distress simultaneously and emphasises issues for strengthening patients’ inner power.

The body–mind–spirit group therapy developed by Chan (2001) integrates concepts and practices from Western medicine (e.g. positive psychology and forgiveness therapy), traditional Chinese medicine and the Eastern and Western philosophies of Buddhism, Taoism and Confucianism. Chan’s body–mind–spirit therapy helps clients to grow and change through suffering and enhance their strength and resilience in coping with stress. Chan et al. (2000) conducted a single pre-group and a six-month post-group study to examine the effectiveness of body–mind–spirit group therapy for women with cancer. This five-session group programme included qi-gong (exercises of vital energy), massage, meditation, self-care training on physical health, stress management such as positive thinking, group mutual support, long-term survivors’ sharing, songs, home assignments and exercises. Chan et al. found that there were improved scores on mental health status, social support and overall subjective quality of life over the six-month period. The results suggested group therapy integrated body–mind work such as qi-gong could help patients improve physical condition and can also distract patients from fear of relapse or death. Moreover, the strategy of strengthening patients’ inner power, such as practising self-love and helping others, might contribute to positive views of self and the world. Further studies need to examine the limitations of this study and include control groups and random assignments to demonstrate the effectiveness of this type of group therapy.

The aims of this study are to examine the effects of body–mind–spirit group therapy on anxiety, depression and holistic well-being among women with breast cancer and to explore patients’ subjective views on what aspects of group therapy worked to enhance their holistic well-being.

Methods

This study was designed using multiple methods, which consisted of a randomised controlled trial (RCT) and a focus group interview. The reason for adaptation of two complementary methods was because body–mind–spirit group therapy was first applied in nursing practice for cancer patients and, therefore, both information about the efficacy and treatment mechanisms was required to help inform continued development of effective strategies to meet patients’ needs in therapy group. The quantitative data from the RCT provide the information on how effectively body–mind–spirit therapy reduces symptoms of depression and anxiety and improves holistic well-being. The qualitative findings from a focus group interview offer a more complete look at the complexity of patients’ experiences of the change mechanisms in body–mind–spirit therapy. Therefore, a combination of quantitative and qualitative approaches contributes to a more comprehensive understanding of body–mind–spirit therapy for breast cancer patients.

Subjects

Figure 1 shows a flow diagram of the recruitment progress through the stages of a randomised trial. The period of recruitment was from 19 January–3 April 2006. Subjects with
breast cancer meeting eligibility criteria were recruited from outpatient departments of surgery. The inclusion criteria of subjects were female patients with breast cancer and aged between 18–65 years. Those suffering ailments in addition to breast cancer or receiving other psychotherapy were excluded from this study. Forty-nine women who met inclusion criteria and agreed to participate were involved in the randomisation process. There were two stages of the randomisation process. Firstly, to have similar level of disease severity in the experimental and the control groups, with the method of stratification, subjects were placed into four different groups according to four stages of cancer: I, II, III and relapse. Secondly, in each cancer status group, subjects were then randomly assigned into the experimental or the control group by using the method of a coin toss. Among 25 subjects in the experimental group, 13 subjects discontinued intervention because of a sense of tiredness because of chemotherapy, worry about being infected in public, worry about hearing other patients’ illness relapse and the need to work or take care of family members. Among 24 subjects in the control group, eight subjects did not complete the study because of lost contact owing to their failure to complete part of the questionnaire. Only those who completed the study were included in data analysis: 12 subjects in the experimental group and 16 subjects in the control group. The estimated power of total sample size (28) is about 0.85 at α = 0.05, δ = 0.75 (a medium effect size) and ρ = 0.70 (Cohen 1988). The baseline characteristics of 28 subjects in the two groups are presented in Table 1. There was no significant difference in the baseline characteristics between these two groups.

Usual care

The subjects in the control group received the standard care of a physician’s treatment.

The intervention: body–mind–spirit group therapy

The subjects in the experimental group received not only the standard care, but also 10 sessions of weekly group therapy for 180 minutes each. The intervention was designed based on body–mind–spirit therapy developed by Chan (2001), which has been published for its efficacy for helping cancer patients (Chan et al. 2000) and divorced women (Chan et al. 2002). This therapy integrates concepts and practices from Western medicine (e.g. positive psychology and forgiveness therapy), traditional Chinese medicine and the Eastern philosophies of Buddhism, Taoism and Confucianism. Table 2 indicates group objectives and activities for managing patients’ physical, psychosocial and spiritual distress. The structure of each group session included qi-gong exercises as a warm-up activity, sharing body–mind–spirit group assignments and singing together. This intervention was provided by a qi-gong master for qi-gong practice in the first 20 minutes of each section of group therapy, the primary investigator (the correspondence author) and co-investigators (the first author) as mental health nurses together running the rest of each section of group therapy. The group therapy was conducted in the consultation room of the cancer foundation centre.

Data collection and data analysis: quantitative inquiry

Data collection

To conduct the single-blind RCT, patients, their physician and the primary investigator were blinded to the randomisation process. The primary investigator was involved only in providing intervention for subjects in the experimental group. The co-investigator implemented the randomisation process, administering intervention and assessment of outcomes. To eliminate experimenter’s bias from her interaction with subjects, the co-investigator implemented the randomisation process.
process to allocate subjects in the experimental or the control group without advising patients as to whether they were ‘test’ subjects or part of the ‘control’ group. Moreover, during two-month trial, the subjects in the control group receiving physician’s usual care were not contacted until the end of the trial; then they were informed by the co-investigator by telephone about mailing back the questionnaires for post-treatment to researcher. In addition, to prevent the co-investigator’s influencing the behaviour of the subjects, she explained to all subjects that there was no good or bad result to researchers; rather, the outcomes they provided would help staff to understand their condition for further treatment.

This study was approved by the institutional review board. With the doctor’s permission, the information about this study was distributed to the potential subjects who were waiting for doctor’s appointments in the outpatient department of surgery. Patients were given individual explanations about the purpose and the procedure of this study and the procedure taken to protect their confidentiality. Patients who provided a written consent form were asked to complete

Table 1 Baseline characteristics of the subjects in the experimental and the control groups

<table>
<thead>
<tr>
<th></th>
<th>Experimental group (n = 12)</th>
<th>Control group (n = 16)</th>
<th>t</th>
<th>( \chi^2 )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>52.0 ± 8.30</td>
<td>46.10 ± 7.81</td>
<td>1.361</td>
<td></td>
<td>0.644</td>
</tr>
<tr>
<td>Educational levels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior school</td>
<td>4</td>
<td>3</td>
<td>22.083</td>
<td>0.141</td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td>6</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religious</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not religious</td>
<td>1</td>
<td>3</td>
<td>12.980</td>
<td>0.371</td>
<td></td>
</tr>
<tr>
<td>Religious</td>
<td>11</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>1</td>
<td>4</td>
<td>0.779</td>
<td>0.854</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>11</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupational status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>10</td>
<td>14</td>
<td>16.875</td>
<td>0.154</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage I</td>
<td>3</td>
<td>3</td>
<td>12.677</td>
<td>0.178</td>
<td></td>
</tr>
<tr>
<td>Stage II</td>
<td>6</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage III</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relapse</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of operation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modified radical mastectomy</td>
<td>7</td>
<td>9</td>
<td>3.873</td>
<td>0.144</td>
<td></td>
</tr>
<tr>
<td>Conservative surgery</td>
<td>3</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radical mastectomy</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body–mind–spirit well-being</td>
<td>391.33 ± 86.05</td>
<td>371.00 ± 88.69</td>
<td>-0.60</td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td>Beck depression inventory, second edition (BDI-II)</td>
<td>14.75 ± 10.69</td>
<td>15.31 ± 8.61</td>
<td>0.15</td>
<td>0.15</td>
<td>0.87</td>
</tr>
<tr>
<td>State anxiety inventory</td>
<td>34.58 ± 14.37</td>
<td>34.44 ± 12.27</td>
<td>-0.29</td>
<td>-0.29</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Note: Age, body–mind–spirit well-being, BDI-II and state anxiety inventory are expressed as mean ± SD. The rest is expressed as numbers of subjects.

Table 2 Group objectives and activities for cancer patients

<table>
<thead>
<tr>
<th>Intervention objectives</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancing physical strength</td>
<td>Self-care planning, health diet, qi-gong exercises, massage of acupuncture points, imagery</td>
</tr>
<tr>
<td>Increasing emotional release</td>
<td>Drawing impressions of emotions and self, sharing strategies of releasing emotions</td>
</tr>
<tr>
<td>Establishing positive self-concept</td>
<td>Sharing how to love oneself, creating love cards for self, sharing one’s own strength and inner powers</td>
</tr>
<tr>
<td>Building social network</td>
<td>Creating love cards for family members or friends, sharing how to devote ourselves to others, such as being volunteers</td>
</tr>
<tr>
<td>Developing positive meanings of life</td>
<td>Sharing the meanings of life and self-existence, creating rainbows of forgiveness</td>
</tr>
</tbody>
</table>

questionnaires for the pre-intervention test. After patients completed the two-month intervention, the questionnaires for post-intervention were then collected.

The Beck depression inventory, second edition (BDI-II) and the state anxiety inventory (SAI) were selected to measure the changes of symptoms of depression and anxiety, the most common emotional distresses among cancer patients. The instrument of body–mind–spirit well-being inventory (BMSWBI) used in this study was because it measures an individual’s changes in holistic well-being. The details of instruments are described below.

The BDI-II (Beck et al. 1988) is a self-administered 21-item measure. It is designed to assess severity of symptoms of depression and to monitor the beneficial or adverse effects of treatment. Depression severity scores are defined as: 0–9, minimal; 10–16, mild; 17–19, moderate; 20–29 and 30–63, severe. Cronbach’s α ranged from 0.76–0.95. SAI developed by Spielberger et al. (1970) aims to estimate people’s responses to situational stress. The scale consists of 20 items, which ask people to describe how they feel at a particular moment in time and their responses are rated on a four point scale ranging from ‘not at all’ to ‘very much so.’ The reliability of this scale is 0.88. BMSWBI, developed by Ng et al. (2005), consists of 56 items. This 10-point scale is a self-reported assessment measuring the holistic well-being of an individual in terms of body, mind and spirit. It is an indigenous psychosocial inventory for the Chinese community. The inventory can be used as an outcome measurement to evaluate the effectiveness of psychosocial interventions. The reliability of this inventory is 0.87–0.92.

Data analysis
Data were managed by the SAS system. Pearson chi-square tests and two independent samples t-tests were performed to examine if there were differences in baseline data including demographic data, stages of cancer, type of operation and pre-intervention tests between the experimental and the control groups. The scores of symptoms of depression and anxiety and BMSWBI were compared between the experimental and the control groups using ANCOVA with scores of these outcomes at the end of treatment as dependent variables and included main effects of time (pre-test) and group (standard care or group therapy) plus their interaction. The test of ANCOVA was conducted based on Seaman et al. (1985) using parametric ANCOVA on ranks for dealing with heterogeneity of within-groups regression coefficients (if their interaction of group and time is significant). A Cohen’s d measure was calculated for the effect size of overall group effect (Cohen 1988).

Data collection and data analysis: qualitative inquiry

Data collection
At the end of the final session of group therapy, a focus group interview lasting for 90 minutes was then carried out by co-investigators in Mandarin. Open-ended questions were used in a focus group interview guide to understand from the patients’ views what aspects of the group worked to enhance their well-being. The questions suggested by Yalom (1995) for studying treatment mechanism included ‘What do you think is the most impressive and interesting event occurring in the group?’ ‘What leads you to think it is most impressive activity?’ and ‘What can we do to improve the group program?’ The interviews were taped with patients’ consent and then transcribed to be further analysed. A translation of the transcription was conducted by the bilingual researcher to ensure its correctness.

Data analysis
Content analysis (Miles & Huberman 1994) was conducted to analyse the qualitative data from group interviews. Through first analysing 30% of interview transcripts for the meanings of patients’ views of change mechanisms of body–mind–spirit group therapy, domains and themes emerged. The domains indicating different aspects of change mechanisms of group therapy were identified based on the definitions of Yalom’s 12 treatment mechanisms. Each domain was then analysed to identify distinguished themes based on the various mechanisms involved in achieving each aspect of treatment mechanism. Two members of the research team, plus an outsider invited as an independent reviewer, verified the validity and reliability of the analysis. We reviewed randomly selected passages from all verbatim transcripts to explore their meanings. We then discussed the meanings of emerging themes until agreement was reached.

Results

Quantitative inquiry
As indicated in Table 3, the symptoms of depression and anxiety were reduced consistently and BMSWBI was increased in both the experimental and the control groups after subjects received group therapy or standard care. In Table 3, the results of ANCOVA confirmed that there were no statistically significant differences in treatment effects on changing symptoms of depression (group × time interaction $F(1, 24) = 0.36, p = 0.55$; main effect of group $F(1, 25) = 0.38, p = 0.54$) and BMSWBI (group × time interaction
Qualitative inquiry

Table 4 indicates that the qualitative analysis yielded eight domains. These domains represent the treatment mechanisms identified by Yalom (1995). The themes under each domain illustrate how these treatment mechanisms worked to reduce patients’ emotional distress and enhance their holistic well-being.

Domain: imparting of information

All patients experienced that information learned in the group contributed to the improvement of physical condition, emotional distress and spiritual growth. Patients reported that, before participating in group therapy, they had learned little about the treatment and care of cancer. As a result, they suffered from physical distress such as insufficient white blood cells, insomnia and fatigue; emotional distress such as anxiety, uncertainty and fear; and spiritual distress such as loneliness, a sense of hatred towards husband and a sense of the meaningless of life.

Six themes emerged that indicated various types of information learned in the group are described below.

Learning new information about appropriate diet

Because you told me to eat beef, now the white blood cell count has been improved from 1000–5000. (Case 14)

Learning information about the treatment and care of breast cancer

In the group, they all encouraged and helped me to solve problems. I learnt from them about the new information about treatment for breast cancer. Now I feel better and better while before I felt very painful. Now when I have any problem, I can ask them for help, which makes me feel calm. (Case 7)

Learning about how to monitor physical condition

After I heard other cancer patients’ sharing their experiences, I have begun to record the report of my blood test to understand my health condition. (Case 15)

Learning to exercise

Before attending group therapy, I was not used to doing exercise. Since I participated in our group, I have been regularly doing exercise. (Case 2)

Learning to practise relaxation

When I feel nervous, I play the relaxation CD you gave us to help me relax. (Case 15)
Now I play the relaxation CD to help me sleep. (Case 14)

**Learning to reframe cognitive distress**

In the group, the teacher suggested me to image the worst situation which might happen to me. I tried to practice this assignment by imaging if one day, my illness relapsed, how I would deal with this. When I have thought about this, I feel no fear because I know what the worst situation is like. I feel relieved when I do this preparation in my mind. (Case 6)

**Learning to practise forgiveness**

Others suggested me to read sutra and this made me feel more powerful and it gave me a sense of belonging. When I choose to rely on God, I feel God can help me more. Before participating in the group, I felt angry that my husband lost our money when he was young. Now I do not feel angry with him after I have tried to read sutra. I see him with mercy and think that he still needs to work so hard to earn money although now he is old. From deep in my heart, I have compassion and caring for him... (Case 14)

**Domain: interpersonal learning output**

Patients reported that their emotional distress, such as self-isolation and loss of confidence, was related to the fact that they worried about going out in public and possibly increasing the likelihood of being infected and seen by others. Group therapy provided an opportunity for them to interact with others more and obtain support from group members. Two themes emerged from this domain are described below.

**Having more interpersonal interactions**

Going out to participate in the group makes me not feel isolated. It is good for me to have a walk and to make contact with outside. (Case 14)

**Obtaining support from group members**

Thank you for providing me with encouragement and helping me to learn to leave my illness with the doctor. (Case 14)

---

**Table 4 Domains and themes identified from group interviews**

<table>
<thead>
<tr>
<th>Domains</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imparting of information</td>
<td>Learning information about appropriate diet</td>
</tr>
<tr>
<td></td>
<td>Learning information about treatment and care of breast cancer</td>
</tr>
<tr>
<td></td>
<td>Learning about how to monitor physical condition</td>
</tr>
<tr>
<td></td>
<td>Learning to exercise</td>
</tr>
<tr>
<td></td>
<td>Learning to practise relaxation</td>
</tr>
<tr>
<td></td>
<td>Learning to reframe cognitive distress</td>
</tr>
<tr>
<td></td>
<td>Learning to practise forgiveness</td>
</tr>
<tr>
<td>Interpersonal learning output</td>
<td>Having more interpersonal interactions</td>
</tr>
<tr>
<td></td>
<td>Obtaining support from group members</td>
</tr>
<tr>
<td>Catharsis</td>
<td>Understanding the impact of suppressing emotions on holistic well-being</td>
</tr>
<tr>
<td></td>
<td>Sharing suffering with group members</td>
</tr>
<tr>
<td></td>
<td>Learning to use projective methods to express emotions</td>
</tr>
<tr>
<td>Universality</td>
<td>Learning that I am not the only one who suffers from cancer</td>
</tr>
<tr>
<td></td>
<td>Learning that personal characteristics are the common cause of cancer</td>
</tr>
<tr>
<td>Group cohesiveness</td>
<td>Having a sense of belonging</td>
</tr>
<tr>
<td>Altruism</td>
<td>Learning that using one's own successful experience to help others</td>
</tr>
<tr>
<td>Instillation of hope</td>
<td>Group members sharing positive experiences of treatment</td>
</tr>
<tr>
<td></td>
<td>outcomes contributing to a sense of hope</td>
</tr>
<tr>
<td>Existential factors</td>
<td>Practising self-love</td>
</tr>
<tr>
<td></td>
<td>Learning to view misfortune positively</td>
</tr>
</tbody>
</table>

---

---

**Domain: catharsis**

Patients commonly experienced that it was hard for them to find someone to share their emotions with because they were afraid to make family members worry about them, or they thought family members could hardly understand their emotions. Their emotions and sense of fatigue were released by participation in group therapy. There they could share their emotions with others who also had similar experiences. Three themes describing these experiences are indicated below.

**Understanding the impact of suppressing emotions on holistic well-being**

The status of our body is influenced by our view of the meaning of life and by our emotions. I mean, our spiritual or emotional suffering is reflected into our body. Therefore, our
suffering from cancer is related to the status of our negative emotions. I think that we have all suppressed ourselves and our emotions. (Case 6)

Sharing suffering with group members
...After participating in the group, my sense of fatigue disappeared and stress was reduced. I feel that my family members are not sensitive to see how I have changed so I can only talk out in the group. (Case 4)

Learning to use projective methods to express emotions
It is fun to play with potter’s clay. It’s like a child playing with mud, which makes me feel relaxed. It is also fun to go to the park and to use leaves to make a picture of my emotions. (Case 4)

Domain: universality
Two themes described below demonstrated that, through sharing, they felt they were not the only ones suffering from this illness.

Learning that I am not the only one who suffers from cancer
When I first learnt that I suffered from this illness, I felt very anxious and irritable. After hearing others’ stories in the group, I learnt that many people had been through similar experiences and they could overcome the difficulties. What I learnt made me feel better and less anxious. (Case 10)

Learning that personal characteristics are the common cause of cancer
After hearing how others suffered from illness in the group, I think that we all have similar characteristics such as short and bad tempers, easily feeling irritated and asking ourselves to be perfect. I think that our characteristics, such as asking things to be perfect, believing that things cannot be completed without us are the common cause of our illness. (Case 3)

Domain: group cohesiveness
The theme that emerged from this domain illustrated that the sense of isolation caused by feelings of not being understood was reduced when patients’ suffering was empathised with in the warm atmosphere of the group.

Having a sense of belonging
We all feel very happy to come to join the group in which we encourage each other. (Case 5)

Domain: altruism
The theme demonstrated that patients’ successful experiences of surviving their illness led them to devote themselves to helping others.

Using one’s own successful experience to help others
It is a miracle for me to regain my life so I certainly need to be cherished and appreciated. You see, we are all alive healthily. So I want to tell those who are now suffering from illness that it is very important to do exercise. I want to do things for this society. (Case 3)

Domain: instillation of hope
Under this domain, the theme demonstrated that patients’ emotional distress arising from pessimistic, hopeless, anxious, uncertain views of outcomes of treatment was healed when they heard group members’ positive experiences of treatments.

Group members sharing positive experiences of treatment outcomes contributing to a sense of hope
In the group I heard others talk about their experiences of treatment and they were still very optimistic of treatment outcomes. When you see that people with treatment are getting well, you will feel more confident. (Case 15)

Domain: existential factors
Patients often experienced spiritual suffering and confusion about the meanings of suffering and life. In group therapy, practising self-love enhanced members’ sense of the worth of their existence. Moreover, group members’ shared experiences of growth from illness helped cancer patients to transform their views of misfortune. Two themes reporting these experiences are described below.

Practising self-love
Now I can figure out things more than before and I love myself more not just always concerned about others. (Case 7)

Learning to view misfortune positively
Now I have a different view of misfortune. In the group, we have discussed about suffering. I think that when we now are experiencing suffering, we need to face, accept and transcend it from physical suffering to healing. (Case 6)
Discussion

In this study, the findings of the RCT indicated that a greater reduction of anxiety was found among patients who received body–mind–spirit group therapy as opposed to those patients who only received physician’s usual care. The results of focus group interviews demonstrated that the effect of body–mind–spirit group therapy in reducing anxiety was achieved through a group process and the activities designed therein, contributing to eight treatment mechanisms: (i) imparting of information, (ii) interpersonal learning output, (iii) catharsis, (iv) universality, (v) group cohesiveness, (vi) altruism, (vii) instillation of hope and (viii) existential factors. The treatment mechanisms demonstrated how the group successfully managed the common sources of anxiety indicated by this study and the previous studies (Dalton 1987, Fawzy 1995, Oddgeir et al. 2005), including distress of body (cancer cells), mind (lack of self-confidence and suppression of emotions) and spirit (confused with the worth of self-existence and meanings of suffering). The merit of this integrated group therapy deals with body, mind and spirit distress simultaneously while support groups (Montazeri et al. 2001, Zeigler et al. 2004) and exercise group (Blanchard et al. 2001) could decrease patients’ sense of anxiety, but these experiences could not deal with all distress.

This study and the previous studies (Suominen et al. 1995, Lauri & Sainio 1998, Spiegel et al. 1999) revealed that imparting information was considered by patients as the most important treatment mechanism for enhancing patients’ sense of control and reducing their anxiety. In the views of the patients of this study, group activities such as exercise, appropriate diet and information exchange helped them to cope with their sick bodies and, in turn, to reduce physical distress. Moreover, they also experienced release from anxiety that had arisen from spiritual distress through learning to explain the meaning of their suffering positively and through practising forgiveness to transforming hatred to compassion towards significant others.

This study illustrated that patients’ anxiety related to failure of coping with emotional distress was released through the achieved treatment mechanism of catharsis. Patients of this study experienced that sharing emotions with those who had similar experiences of illness and practising projective methods, such as drawing designs in group therapy, could facilitate the catharsis. Moreover, patients in this study shared that group members’ sharing positive experiences of treatment reduced their anxiety arising from uncertainty of outcomes of treatment and, in turn, hope for recovery was increased. Rittman et al. (1997) stated that a sense of hope influenced the outcome of patients’ recovery because it could facilitate the inner power to heal suffering and the expectation of positive outcomes in the future.

With regard to the treatment mechanisms of interpersonal learning output and group cohesiveness, this study and previous studies (Spiegel et al. 1999, Chan et al. 2000, Fukui et al. 2000, Blanchard et al. 2001, Montazeri et al. 2001) revealed that obtaining support from group members with similar experiences of suffering could decrease their social distress of a sense of isolation and fear of being looked down upon. The contribution of treatment mechanisms of altruism and existential factors to decrease anxiety related to spiritual distress was evident in this study. Similarly, Oddgeir et al. (2005) also found that providing help to other cancer patients could reaffirm the worth of their existence. This study also found that meanings of existence were confirmed by learning positive views of self-existence and regarding misfortune as a life challenge.

This study and Chan et al.’s (2000) illustrated that patients with breast cancer benefited from culturally sensitive body–mind–spirit group therapy because they could learn coping strategies from both traditional Chinese medicine and Western medicine. For example, in this study, patients could choose to practise Chinese qi-gong and/or rehabilitative exercises suggested by Western medicine. According to traditional Chinese medicine, emotions are associated with organs (heart, liver, lungs, spleen and kidneys) and excessive or suppressed emotions influence the normal circulation of qi (vital energy) and the blood in the internal organs (Tseng 1973). The results of this study suggested that awareness and acceptance of cultural interpretations of appropriate emotions related to health might facilitate patients in releasing their emotions in a group. Moreover, in this study group integrated Eastern philosophies of Buddhism, which emphasises living for the moment, led patients to have courage to make the most of everyday life. The positive attitudes towards life contributed to the reduction of fear and uncertainty about future life.

Conclusion and limitations

This study illustrated that body–mind–spirit group therapy could reduce anxiety among patients with breast cancer. Anxiety was released through the contribution of achieved treatment mechanisms to manage the sources of anxiety arising from body, mind and spirit distress successfully. Five main limitations influence the general applicability of the results of this study. (i) This study was a single-blind trial.
The co-investigator who conducted random assignment and also assessed outcomes was not blinded. This may result in the potential experimenter bias, although the steps described in the data collection section were taken to prevent the impact of the experimenter’s behaviour on subjects. (ii) Consideration of approximately 35% dropped-out cases, about 49 participants should be recruited originally in this study at $\alpha = 0.05$, $\delta = 0.75$, $\rho = 0.70$ and power = 0.98. However, the estimated power was reduced when 21 subjects discontinued this study. Finally, the estimated power for this study is about 0.85 based on 28 subjects. Higher power (e.g. 0.90) can be achieved by recruiting more than 50 subjects to reduce the impact of dropped out cases. (iii) Male patients were not included in this study and this raises a question about whether results can be applied to male patients with breast cancer. (iv) The subjects in this study mainly are aged 40–60 years and their cancer is mainly classified as stage II. Therefore, the effects of group therapy for those in a younger age group or with stages III or IV cancer require further study. (v) The outcomes are evaluated at baseline (pre-treatment) and post-treatment after two-month interventions. It is unknown whether the effects will be maintained after the group therapy is ended. Further study needs to address these limitations to examine the effect of group therapy for patients with breast cancer.

Implications for nursing and healthcare practice

The implications of this study for nursing practice include the need to provide comprehensive nursing therapy to manage patients’ body, mind and spiritual distress. Lauri and Sainio (1998) stated that developing nursing care of breast cancer patients needed to focus on assisting patients to cope with not only the disease, but also their everyday life changes because of cancer. The body–mind–spirit integrated therapy design in this study will not only meet the needs of patients with managing sick bodies, but also healing psychosocial and spiritual distress. In addition, an integrated approach manages the distress of body, mind and spirit together, because different aspects of distress are inseparable. Patients also can benefit from different healing strategies of both traditional Chinese and Western medicine and life philosophy. Group therapy is a helpful form of therapy for patients with breast cancer as support obtained from group members with similar experiences of illness provides strong therapeutic effects that reduce their anxiety. Mental health nurses can stay involved in developing effective psycho-oncology care with group format for patients with breast cancer by receiving training for group therapy and psychosocial intervention.

Contributions

Study design: FHH, PCH, SMN, CLWC; data collection: KJC, CJL, YFL, FHH; data analysis: FHH, KCW, CJL, PCH and manuscript preparation: FHH, CJL, PCH.

References


