The effects of quantum psychological relaxation technique on self-acceptance in patients with breast cancer

by Ni Made Merlin, Anggorowati, and Chandra Bagus Ropyanto

ABSTRACT

Background: Psychological, as well as physical effects of a disease, and side effects of medications can influence the self-acceptance of patients. Low self-acceptance can lead patients to drop out of their therapy schedule and return to the hospital several months later in much worse condition. This study aimed to investigate the effects of quantum psychological relaxation technique on self-acceptance in breast cancer patients.

Methods: This study used a pre-post quasi-experimental design with a control group. The sample included 64 respondents selected using a consecutive sampling technique and divided into two groups: intervention group (n=32) and control group (n=32). The quantum psychological relaxation technique was administered in two phases with three sessions for each phase. Six sessions were estimated at 90-120 minutes and 15–20 minutes for each. The data on patients' self-acceptance were collected using the Acceptance of Illness Scale (AIS) questionnaire and were statistically analyzed using t-test and Wilcoxon test.

Results: Self-acceptance in the intervention group increased after being given the intervention with a p-value <0.001. However, in the control group there was no significant increase in self-acceptance with a p-value >0.005

Conclusions: The quantum psychological relaxation technique had an effect on the self-acceptance of breast cancer patients.

Recommendation: Further studies of the effects of quantum psychological relaxation technique on depression and life quality of patients need to be conducted.

Key words: breast cancer, quantum psychological relaxation technique, self-acceptance

INTRODUCTION

Breast cancer is one of the deadly diseases in the world. It is a leading cause of death compared to other types of cancer and the number of breast cancer patients is increasing annually. The breast cancer accounted for 40% of the total cancer patients (Kemen
trian Kesehatan Republik Indonesia, 2015). One hundred fifty-two out of 231 breast cancer patients or 68% of patients treated in hospital experience low to moderate self-acceptance (Cipora, Koeczyn & Sobieszcza
ski, 2018). Self-acceptance is a person's ability to cope with the current situation based on the past experience and maintain positive feelings about the current problems (Ryckman, 2008).

The breast cancer patients who experience the effects and side effects of the disease often find it difficult to accept their disease (Cipora et al., 2018; Czerw, Religioni, & Depta
ta, 2016). The physical problems due to breast cancer can be in the form of nausea, vomiting, alopecia, stomatitis, loss of body weight, fatigue, and changes in hematological status. These can cause psychological effects for patients (Black, 2008). The psychological problems experienced by patients are related to anxiety, depression, disease relapse, recovery anxiety, body parts mutilation, and also lengthy medication. All may influence the patient's self-acceptance. (Cipora, Koeczyn & Sobieszcza
ski, 2018). In addition to psychological and physical factors that influence self-acceptance by the patient, there are also several factors such as socio-economy, the environment, and education that influence the self-acceptance of the breast cancer patients (Czerw, Religioni & Depta
ta, 2016).

Low self-acceptance because of a disease can lead the patient to drop out from the therapy designed to cure the disease. Often, when this happens, several months after dropping out from the therapy, the patient comes back to the hospital with much worse condition. Patients with low-self-acceptance are also vulnerable to stress, lack of self-confidence, low pain management, and lack of motivation to fight the disease (Czerw, Religioni, Depta
ta & Walewska-Zielecka, 2016).

The impact of this low self-acceptance is debilitating for patients and thus they need intervention, especially from the caregivers, to increase their self-acceptance (Chen, Liu, Zhang & Li, 2017; Czerw, Religioni & Depta
ta, 2016; Dilworth, Higgins, Parker, Kelly & Turner, 2014; Mermer, Nazli & Ceber, 2016). One of the interventions that can be performed to deal with low self-acceptance is the quantum psychological relaxation technique.

Quantum psychological relaxation technique is a relaxation technique that is performed by instructing the patients to recall their psychological experiences during breast cancer diagnosis and to imagine that the situation is happening in the open space. The technique can help the patient to relax and reduce anxiety about their disease.
in the form of sadness, anger, and disappointment. This relaxation technique is given to the patients to explore their psychological experiences that establish self-awareness/self-acceptance regarding their disease (Oshins, 2013; Sari & Subandi, 2015). The quantum psychological relaxation technique is related to the development of self-awareness (Wolinsky, 2000).

**Objectives**

This study aimed to analyze the effects of quantum psychological relaxation technique on the self-acceptance of breast cancer patients.

**Samples and Setting**

The sample for this study included patients with breast cancer undergoing treatment in RSUD Tugurejo and RSUD Temanggung who met the inclusion criteria. Sixty-four patients were recruited and divided into two groups, the control and intervention groups, with 32 respondents each. The quantum psychological relaxation technique was given to the intervention group for six sessions; each consisted of two phases. The quantum psychological relaxation technique was adjusted with the patients’ schedule of therapy regimen in hospital.

**Methods and Variables**

This study used a pre-post quasi-experimental design with a control group. The study was carried out after the researchers obtained an ethical approval from the Ethics Committee at the Faculty of Medicine, Universitas Diponegoro and also the Ethics Committee at Tugurejo Hospital and RSUD Temanggung in Indonesia.

The inclusion criteria in this study were patients with breast cancer undergoing treatment in hospital, receiving chemotherapy treatment, and being compos mentis. The patients were also able to communicate clearly and had no cognitive disability. Meanwhile, the exclusion criteria were patients with hearing disability and experienced other types of disease complication. Hearing disability was excluded because the intervention in this study used verbal instruction from the researcher.

In this study, the data were collected using two sets of questionnaires: one was related to demographic data such as age, marital status, education, jobs, level of cancer, duration of time to have been diagnosed with breast cancer, type of therapy administered, and the other one was related to self-acceptance [i.e., the Acceptance of Illness Scale (AIS) developed by Felton (Martins, Cunha, & Coelho, 2005)]. The AIS questionnaire consists of 8 items using the Likert scale of 1-5. The score is interpreted as 1=strongly agree, 2=agree, 3=no idea, 4=disagree, and 5=strongly disagree (Bien, Rzonca, Kanczugowska & Iwanowicz-Palus, 2016; Hempel, Politynska, Danilewicz, Sierko & Wojtukiewicz, 2015; Zarzycka, Kobos, Czarnecka & Imlia, 2015). The validity test of the questionnaire in this study obtained r= 0.604 to 0.803. The reliability test of this questionnaire revealed a Cronbach alpha score of 0.886.

Self-acceptance was measured before and after the administration of the quantum psychological relaxation technique. The assessment was done after the patients signed the informed consent. Patients were informed of the objective of the study, the benefit of the relaxation technique, and the length of the session for the intervention. Before receiving the intervention, patients were given an explanation about psychological experiences in the form of sadness, disappointment, sorry, and anger because of the illness suffered.

The strategy for the quantum psychological relaxation technique was individually prepared. The procedure consisted of the preparation of the participants, implementation (i.e., inhaling while listening to music of alpha wave to help the patients relax). During the administration of the therapy, the patients were instructed to visualize their psychological experiences related to the disease that they have. Quantum psychological relaxation technique was given for 15 minutes for each session. Following the intervention, the researcher documented the clinical responses of the patients. The administration of quantum psychological relaxation was based on the following standard operating procedures:

First session: assessing and correcting self-weakness.

Second session: being honest to one-self

Third session: increasing self-confidence

Fourth session: respecting one-self

Fifth session: accepting and surrender

The sixth session: feeling comfortable with one-self.

Following the administration of quantum psychological relaxation technique, the patients’ self-acceptance was measured with the similar questionnaire for pre and post-test. Data were analyzed using the t-test for the intervention group and Wilcoxon test for the control group.

**RESULTS**

Table 1 describes the mean of the respondents’ age and the chemotherapy session using the mean, min-max, and standard deviation. Table 2 depicts the characteristics of the respondents based on their demographic data. Table 3 is the result of statistical tests to see the effect of quantum psychological relaxation techniques in the intervention and control groups.

The results show that in the control group, the mean value is lower than that in the intervention group. The self-acceptance score of the patients in the intervention group at the

<table>
<thead>
<tr>
<th>Variable</th>
<th>Intervention group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>min-max</td>
</tr>
<tr>
<td>Age</td>
<td>46.94</td>
<td>30–60</td>
</tr>
<tr>
<td>Chemo session</td>
<td>3.31</td>
<td>1–5</td>
</tr>
</tbody>
</table>

**Table 1. Characteristics of Respondents Based on Age and Chemotherapy Session in the Intervention and Control Groups (n=64)**
pretest shows a moderate level of self-acceptance, whereas following the intervention (posttest), the score shows an average of high self-acceptance. Meanwhile, in the control group, the pretest score shows that the patients have moderate self-acceptance, and the post-test score shows a decrease in the mean score and average self-acceptance score.

DISCUSSION

This study investigated the effects of quantum psychological relaxation on the self-acceptance of patients with breast cancer. Based on this study result, it can be implied that the quantum psychological relaxation technique can influence the self-acceptance of breast cancer patients. This result supports the theory that the implementation of relaxation technique could increase self-acceptance of the patients by assisting the patients to calm their mind and manage the stress. (Roche Group, 2012). A study by Czerw et al. (2016) also revealed that breast cancer patients have a better coping mechanism following the intervention aimed to increase the mean score of self-acceptance (Czerw, Religioni, Deptala, & Walewska-Zielecka, 2016).

The self-acceptance of the breast cancer patients in the control group is generally moderate. The observation result

<table>
<thead>
<tr>
<th>Variable</th>
<th>Intervention group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Widow/widower</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Married</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No education</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Elementary</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Secondary school</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>High school</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Higher education</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Jobs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>21</td>
<td>20</td>
</tr>
<tr>
<td>Employed</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Cancer Grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 2</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Grade 3</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Length of disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1 year</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>1–2 year</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 2. Characteristics of Respondents in the Intervention and Control Groups (n=64)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>Stages</th>
<th>Mean</th>
<th>Min-max</th>
<th>SD</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-acceptance</td>
<td>Control</td>
<td>Before</td>
<td>16.44</td>
<td>8–35</td>
<td>7.33</td>
<td>0.083</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After</td>
<td>16.38</td>
<td>8–35</td>
<td>7.31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intervention</td>
<td>Before</td>
<td>17.69</td>
<td>8–39</td>
<td>7.83</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>After</td>
<td>32.84</td>
<td>21–40</td>
<td>4.19</td>
<td></td>
</tr>
</tbody>
</table>
revealed that the patients with low to moderate self-acceptance often expressed pain and showed no eagerness to carry out the chemotherapy and medication programs. Several respondents also looked sad, and some even cried and complained about their disease. This finding is also consistent with a previous study by Chen et al. (2017), which reported that breast cancer patients with low self-acceptance often experienced loss of self-confidence, and have low self-esteem and unwillingness to implement their chemotherapy program (Chen, Liu, Zhang, & Li, 2017).

The self-acceptance of the breast cancer patients in the intervention group increased following the quantum psychological relaxation technique. The test revealed that the mean score of self-acceptance in the intervention group on average was high; this observation showed that the patients in the intervention group were happier and had a motivation to recover. Breast cancer patients with high self-acceptance exhibit more positive views about themselves and are able to suppress frustration feelings due to their cancer (Ryckman, 2008). In addition, patients in the control group frequently mentioned their limitations due to this cancer and their inability to do things that they can usually do. A study by Grochans and colleagues (2009) reported that breast cancer patients need others to listen and to cheer them up when they are depressed (Grochans, Wieder-Huszla, Jurczak, Stanislawksa, Janic & Szych, 2009) so that they would not have low self-acceptance in relation to their disease.

The increase of self-acceptance in the intervention group occurred after the patients were given the quantum psychological relaxation technique. This relaxation technique helps patients synchronize their mind, emotion, and soul; hence they become more aware of their condition (Adamski, 2008; Oshins, 2013, 1995). The relaxation therapy is administered in two stages. The first stage is divided into three sessions, wherein the first session, the patient is asked to feel comfortable with herself. The second session, the patient is asked to accept and surrender. Moreover, in the sixth session, the patient is asked to feel comfortable with herself. The documentation of the fourth session revealed the patients report that they are more relaxed and able to overcome the side effects of the medication when they are at home. Moreover, in the fifth and sixth sessions, the patients looked happier and shared more success stories about overcoming the side effects following the therapy regimen.

The clinical responses of the patients after following this quantum psychological relaxation technique are the increase in feelings of comfort and calm, and increased motivation to recover. These comfort and calm feelings, according to Kolcaba and colleagues (2009), can provide better opportunity to increase the patients’ self-awareness regarding their disease (Kolcaba, Tilton & Drouin, 2009). The importance of the intervention in patients with poor prognosis (Tang et al., 2016) is that it is highly helpful for increasing motivation and happiness of the patients.

LIMITATION

Due to time constraint, this study did not follow up and ensure whether the patients, after the administration of quantum psychological relaxation technique, completed all their cancer therapy regimens in the hospital.

IMPLICATIONS FOR NURSING

There is an effect of quantum psychological relaxation therapy on the self-acceptance of the breast cancer patients. This relaxation technique can be used as an intervention to increase the self-acceptance of the breast cancer patients who undergo treatment in hospital, as well as used as palliative care for nursing practice. Nurses only need a text for a session on quantum psychology and music relaxation techniques with calming alpha waves.

IMPLICATIONS FOR EDUCATION

Quantum psychological relaxation technique is an innovation in nursing education. It can be a nursing intervention to improve patient self-acceptance. This technique has no side effects and is low cost, making it easy to apply.

IMPLICATIONS FOR RESEARCHER

Quantum psychological relaxation techniques have a positive impact for the researcher in treating breast cancer patients with low self-acceptance. However, there is a need for further research including:

- study the effects of quantum psychological therapy on depression experienced by the breast cancer patients
- study the effects of quantum psychological relaxation technique on the quality of life of breast cancer patients.

ACKNOWLEDGEMENT

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