



Gratitude intervention for the management of psychological distress in breast cancer survivors

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ABSTRACT

Psychological distress in breast cancer survivors is related to the sequelae of the treatment and care process. Distress experienced includes emotional experiences related to multifactor and causes interference in overcoming the challenges of cancer, including physical symptoms and treatment. This study aims to determine the effect of providing gratitude intervention in the form of a gratitude diary/writing on psychological distress in breast cancer survivors. Twenty-two respondents were involved in this study, divided into a control group (n=11) and an experimental group (n=11). The method used in this study was a quantitative experimental one-group pre-post-test design. The results showed that gratitude diary/writing was significant in reducing psychological distress in breast cancer survivors (anxiety $p=0.003$; stress $p=0.003$; depression $p=0.003$). Gratitude diary conditions breast cancer survivors to actively remember the positive side and then reinterpret the life experiences experienced by increasing appreciation for the positive things that have happened.

Keywords: breast cancer survivor, gratitude diary, psychological distress,



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1. Introduction

The cancer treatment process and the side effects of the treatment process do not stop when the patient has completed the treatment. Cancer survivors are said to experience vulnerability to psychological distress related to the physical and psychological sequelae of the treatment process. These symptoms can be severe, debilitating and permanent (Brandenburg et al., 2020). The results of interviews with members of community X, which is a community of breast cancer patients and survivors in Bali, stated that even though treatment has ended, cancer survivors think of their lives that are very different from before, the emergence of feelings of loss and feelings of insecurity that trigger psychological distress (Syrowatka et al., 2017).

Based on data from the International Agency for Research on Cancer (IARC) in 2024 states that ten types of cancer still dominate two-thirds of new cases that cause significant deaths worldwide (International Agency for Research on Cancer, 2024), which also shows that breast cancer (11.6%) is second only to lung cancer (12.4%). In 2020 in Indonesia, the number of breast cancer patients reached 68,858 cases or 16.6% (The Global Cancer Observatory, 2020). Abdelhadi (2023) explained that in cancer survivors, the prevalence of distress is high, reaching 25%, and there is a lack of understanding of the impact of untreated psychological distress.

Armenian et al. (2021) stated that psychological distress in the scope of cancer patients includes unpleasant emotional experiences related to multifactor that are psychological (cognitive, behavioural and emotional), social and or spiritual that can interfere with a person's ability to effectively cope with the challenges of cancer, physical symptoms, and treatment. This psychological distress can extend from vulnerability, sadness, and fear

to issues of anxiety, stress and depression. Untreated distress has been shown to hurt the treatment process and, more broadly, the quality of life of cancer survivors.

In breast cancer survivors, conditions such as menopausal symptoms, pain, fatigue and sleep disturbances are mentioned as factors that increase the risk of psychological distress experienced. This is also associated with diagnosis of advanced breast cancer, chemotherapy treatment and primary treatment over a long period (Syrowatka et al., 2017). Other factors that increase the risk of distress are low physical activity and lack of social support from the treatment process to completion. This psychological distress problem also involves a negative perception of all aspects of cancer, and cancer patients tend to focus only on the negative possibilities that will occur (Ando et al., 2011; Hassan et al., 2021).

Gratitude intervention in studies in recent years is mentioned to be one of the non-pharmacological interventions proven in handling psychological problems in cancer patients and survivors (Fekete & Deichert, 2022; Kaczmarek et al., 2015; Ruini & Vescovelli, 2013). Gratitude intervention aims to increase individual awareness of the positive things in life through appreciation exercises in the form of kindness and positive experiences received or obtained from others (Lomas et al., 2014). In general, gratitude interventions can be carried out with two techniques, namely gratitude writing/diary, which is done by writing down things to be grateful for and gratitude letters, which is by writing Gratitude to someone through a letter. Studies mention that gratitude letters in some conditions are more challenging because they tend to create grateful conditions that depend on others (Kaczmarek et al., 2015).

A gratitude diary focuses the client on all aspects of life worth being grateful for. Bigatti et al. (2012) and Hartanto et al. (2023) mentioned that breast cancer survivors are often fixated on recurring negative thoughts that produce psychological distress that is disturbing and not well managed. Previous studies have shown that gratitude diaries can help reduce psychological problems experienced by cancer patients through conditioning cognitive and affective processes that individuals can create new meaning from perceived negative experiences (Fekete & Deichert, 2022; Ruini & Vescovelli, 2013; Sztachañska et al., 2019). Based on this, researchers want to know the effect of providing gratitude interventions with Gratitude writing/diary techniques on psychological distress in breast cancer survivors. A gratitude diary is also one of the interventions with simple media so that it is possible to be carried out by breast cancer survivors. The hypothesis tested in this study is that there is an effect of providing gratitude intervention on psychological distress in breast cancer survivors.

2. Method

This research is a quantitative study with research design using a quasi-experiment design with a pre - post-test with a control group design. The effect of the treatment or intervention is measured and analysed. This study aims to reveal the possibility of the effectiveness of treatment on the variables under study (Neuman, 2014). The research design used is a pretest and post-test group design with a control group. The independent variable in this study is the gratitude intervention provided in the form of a gratitude diary/writing, and the dependent variable in this study is psychological distress, which refers to an unpleasant subjective response to a demand shown in conditions of anxiety, stress and depression.

The sample of this study consisted of 22 respondents divided into 11 respondents in the control group and 11 in the intervention group. Samples are cancer survivors who are X community members and were selected using a purposive sampling technique. The inclusion criteria set are: 1) cancer survivors aged 26-64 years, 2) showing psychological distress scores in mild to severe levels, 3) skilled in using smartphones, and 4) filling out research informed consent.

The intervention protocol met the ethical requirements of number 236/E1.STIKESWIK/EC/III/2024. The intervention was carried out over three weeks, and participants were asked to write at least three diaries in 1 week (Southwell & Gould, 2017). On the first day, respondents were given directions, an introduction to the intervention was provided, and diary books were distributed. The respondents were then guided through the WhatsApp group and asked to send evidence of diary writing in the form of photos of books that had been written.

The gratitude diary instruction guide refers to research (Southwell & Gould, 2017) with the following instructions:

We can be grateful for many things in our lives, both of which are small. They can influence relationships, the sacrifices we make, the supportive contributions others have made to us, and the facts about them in our lives, such as benefits and opportunities or even Gratitude for life itself and the world we live in. Use this diary, think about the day that has passed, and list the things in your life for which you are grateful. For example, I am grateful today for having loving parents.

The control group (psychological distress score does not meet the criteria) will be given a brief education about maintaining mental health. Measurement of psychological distress was carried out using the Indonesian version of the Depression Anxiety Stress Scale 21 (DASS-21) scale. DASS-21 itself is one of the measurement instruments for anxiety, stress and depression that has been used globally. Several studies have shown that DASS-21 is proven to be a valid and reliable instrument to use. Several studies have tested the validity and reliability of the DASS-21 scale, one of which in the validity test showed several 0.852 on the depression subscale, 0.776 on the anxiety subscale and 0.905 on the stress subscale (Hakim & Aristawati, 2023; Kinanthi et al., 2020). The reliability test by Onie et al. (2020) showed .794 on the depression subscale, .785 on the anxiety subscale and .91 on the stress subscale. The data were further analysed using the Wilcoxon signed rank test to see changes in scores before and after the intervention and the Man-Whitney U Test to determine the difference in scores in the intervention and control groups.

3. Result

The study data involved 22 respondents collected from May to July 2024. Respondents' Descriptions were displayed based on age, gender, occupation, education and marital status. Descriptive analysis showed that most of the respondents' ages in the intervention and control groups were 46-55 years (72.7%). Based on the respondents' occupations, most of the intervention group and control group did not work, namely as housewives, with a percentage of 45.5%. The education level of the respondents in both groups was higher in the SMA (High School) category and Higher Education in the intervention group. Based on marital status in both groups, the majority were married.

Testing the normality and homogeneity of data for the intervention and control groups was done as follows. Normality testing is done using the Saphiro-wilk Test ($N \leq 50$) with the provisions of $p < 0.05$ (anxiety $p = .000$; stress $p = .000$; depression $p = .004$). It can be concluded that the data distribution is not normally distributed; the homogeneity test is carried out using the Lavene test with the provisions of $p > 0.05$ (anxiety $p = .829$; stress $p = .616$; depression $p = .754$), then the data variance between the treatment group and the control group is homogeneous. Based on this, the analysis test used is the Wilcoxon Signed-Ranked Test to measure pre and post-test changes and the Mann-Whitney U Test to test differences between the intervention and control groups.

Based on the results of the Wilcoxon Signed-Ranked Test analysis show that there is a decrease in the level of anxiety, stress and depression in breast cancer survivors after being given a gratitude diary intervention (anxiety $p = .003$; stress $p = .003$; depression $p = .003$). This shows that the alternative hypothesis is accepted, namely that there is a significant effect of giving a gratitude diary on psychological distress in breast cancer survivors. The Mann-Whitney U Test showed a significant difference in the post-test score between the intervention and control groups (anxiety $p = .000$; stress $p = .000$; depression $p = .000$).

4. Discussion

This study aims to determine the effect of providing gratitude intervention in the form of a gratitude diary on psychological distress experienced by breast cancer survivors. Based on the study results, there were changes in the intervention group after being given a gratitude diary (anxiety $p = .003$; stress $p = .003$; depression $p = .003$). When compared with the control group, the results of the t-test showed a significant difference in both groups after being given the intervention (anxiety $p = .000$; stress $p = .000$; depression $p = .000$).

Problems experienced by cancer survivors are often related to challenges after the primary treatment ends, physical conditions such as fatigue, pain, and sexual problems. Psychological problems include fear of recurrence, financial problems, and social isolation, which ultimately cause psychological distress such as anxiety, stress and depression (Martin et al., 2020). Other studies show that when treatment has ended, and contact with professionals is reduced, communication with fellow patients is no longer intense, conditioning patients to be vulnerable and seemingly losing reinforcers (Abdelhadi, 2023; Martin et al., 2020). Gratitude interventions generally focus on increasing awareness and attention to the positive aspects of life. Diniz et al. (2023) revealed that Gratitude does not have to be conditioned in good circumstances; rather, it is how to maintain that feeling in a negative experience or difficult time.

Based on the results of the study, the gratitude diary process given to cancer survivors helped reduce the potential symptoms of depression, anxiety, and stress. Initial symptoms of depression that were initially at a moderate level showed changes to mild and normal. The study (Chen & Ishak, 2022) explained that gratitude interventions such as the gratitude diary increase attention to positive things that can be appreciated. Some symptoms of depression related to those felt by cancer survivors include feelings of hopelessness for the future, feelings of hopelessness or sadness and feeling less meaningful in life. Breast cancer survivors are guided to remember moments and events involving people who have helped actively; appreciating what is received

increases confidence in life and happiness. One of the respondents in the diary she wrote mentioned that there was a feeling of worth because of the support received from her partner and friends, as follows: *"Every story always gets a good response from my husband" and "the opportunity to meet a friend earlier felt grateful to be able to chat and get input on facial care, thank you sista."*

Anxiety conditions in cancer survivors are often related to sustainability regarding the future and fear of experiencing a recurrence. The results showed that the intervention provided by breast cancer survivors showed a decrease in anxiety symptoms from moderate to mild and normal levels. Yang et al. (2023) showed that a person with high anxiety is related to intolerance to uncertainty, and gratitude diary intervention can train a person to appreciate their current state in conditions as expected or not. This can reduce anxiety over future uncertainty. One respondent expressed anxiety related to the recurrence of her illness. However, through the intervention process, the respondent managed to bring up a sense of Gratitude by focusing on what could be controlled, such as making a bouquet for a child's event and successfully helping prepare for the child's competition.

The results of this study also show that providing gratitude interventions in the form of a gratitude diary is effective in reducing stress levels in breast cancer survivors; the symptoms of stress shown include difficulty being flexible over things that are not appropriate, irritability and difficulty relaxing. A meta-analysis study (Cregg & Cheavens, 2021) mentioned that gratitude interventions, including Gratitude diary/writing, can help reduce stress levels and adverse effects in someone with a clinical illness diagnosis. It is further explained in research (Fekete & Deichert, 2022) that the decrease in negative affect related to stress can decrease through a gratitude diary through a cognitive process that conditions a person to be able to find more meaning after a stressful life event felt which triggers stress and demands high adaptation.

Gratitude can be described as a state or trait (Cregg & Cheavens, 2021; Diniz et al., 2023). As a state, Gratitude manifests when individuals show appreciation for the good things they receive. The gratitude diary intervention provided to breast cancer survivors seeks to condition the emergence of Gratitude as a state that can be raised through the intervention.

Völler (2018) mentioned that the effectiveness of gratitude intervention is also related to the form of activities such as gratitude journaling/diary, gratitude letter, gratitude list (counting blessings), as well as the characteristics of the individual concerned. Individual involvement in these positive activities is ideally said to trigger the conditioning of positive emotions and thoughts. In breast cancer survivors, the expression of Gratitude is not an easy thing to do. Sztachañska et al. (2019) revealed that a person with a clinical condition is not the same as a healthy individual in processing Gratitude, experiences related to health conditions and negative impacts experienced after the treatment undertaken make patients need a longer process in bringing up images of things to be grateful for.

The process of the gratitude intervention conditions the patient to reduce pessimistic attitudes, and the initial focus of body discomfort and negative experiences shifts to attention to the good things that have been received. Boggiss et al. (2023) mentioned that the gratitude intervention trains to gain a new positive perspective that can be generated from the perceived experience. This process seeks to create an emotional appraisal or reappraisal of perceived emotions based on the new perspective generated from the exercise so that the meaning of the event, in this case, the cancer treatment process, can change the perceived adverse effects.

Based on this, the role of gratitude diary in reducing psychological distress in breast cancer survivors is related to cognitive and affective processes that condition individuals to actively remember the positive side and then reinterpret the life experiences experienced by increasing appreciation for the positive things that have happened in life. Positive emotions resulting from the process of interpreting, remembering and appreciating the good things received play a role in reducing the level of anxiety, stress and depression experienced. Although in cancer survivors, positive emotions do not immediately appear in the initial process of writing, when the expression of Gratitude has been successfully raised, the respondent can feel the benefits of the results of writing a diary. Through this process, it is hoped that breast cancer survivors can also have new strategies when faced with unexpected stressors.

This study has several limitations, the first of which relates to two respondents who responded late in submitting the diary and were contacted personally. The researcher attempted to follow up regularly in the WhatsApp group, but other factors, which is a risk in online interventions, could not be controlled. Some previous studies have supported the effectiveness of online interventions. However, it is recommended to consider variables such as personality characteristics that may also affect the effectiveness of interventions in individuals.

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