Mindfulness, Stress and Depression among Women with Breast Cancer

Prof. Uzma Jabeen
Assistant Professor of Psychology,
Govt. Graduate Islamia College for Women, Cooper Road, Lahore
Email: uzmajabeengcuf@gmail.com
Maham Mubarik Ali
Student of BS in Applied Psychology,
Govt. Graduate Islamia College for Women, Cooper Road, Lahore
Email: mahammubarik24@gmail.com
Faiza Zafar
Student of BS in Applied Psychology,
Govt. Graduate Islamia College for Women, Cooper Road, Lahore
Email: fayezazaf336@gmail.com

Abstract
Breast cancer affects millions of women globally, often resulting psychological distress. This quantitative study was carried out to explore the relationship between Mindfulness, Stress and Depression among women with breast cancer. In this study the correlation research design was used. Convenient sampling strategy was used. A sample of 200 breast cancer women was taken. Mindfulness Attention Awareness Scale by Krik Warren Brown & Richard M. Rayan (2003), Perceived Stress Scale by Cohen, Kamarch & Mermelstein (1983), Beck's Depression Inventory by Aron T. Beck (1961) were used to measure mindfulness, stress and depression among women with breast cancer. The study measures the level of stress and depression at baseline, post interventions and follow up in patients. Correlation analysis by Pearson Product Moment "r" was conducted to determine the relationship of mindfulness, stress, depression. Findings indicated significant weak negative correlation of mindfulness with depression and stress. Moreover, the significant positive correlation of stress and depression. The result of the independent sample t-test indicated significant age difference in mindfulness, stress, depression. The study underscores the mindfulness practices into psychosocial care of women with breast cancer, providing a way to improve mental health outcomes by non-pharmacological approach. Future researches should investigate the long-term benefits of mindfulness and explore how different factors, such as the stage of cancer or age difference can affect coping strategies.
Keywords: Convenient sampling, Mindfulness, Stress, Depression, Correlation analysis, MSBR

Introduction

This study explores the relationship between mindfulness, stress and depression among breast cancer women. Its aim to examine the level of stress and depression in women having breast cancer. The average risk of developing breast cancer in women is about 13%. This study will examine the effects and change in their life due to stress and depression. Lack of mindfulness as a major factor significantly alleviate stress and depression. There's also evidence that mindfulness can help people cope with mental disorders. Positive mindfulness increases positive feelings and improve psychological symptoms such as stress, depression and other health related factors (Lengacher et al., 2019).

The term "mindfulness" is derived from the Pali word "sati," which means awareness, attention, and remembering (Bodhi, 2000; Nyaniponika, 1973). Mindfulness is often defined as "nonjudgmental attention to present-moment experience (Holzel et al., 2011; Kabat-Zinn, 1990). It a receptive attention and awareness of present events and experience (Brown & Ryan, 2003).

Mindfulness is an effective coping strategy for managing stress and depression, especially in individuals facing chronic illness like cancer. It promotes present-moment awareness and emotional regulation, decreasing the intensity of negative emotions (Carlson & Speca, 2010).

Stress is a common and significant psychological response in women having breast cancer. It is a normal reaction to everyday pressures, but can be unhealthy when it upsets your day-to-day functioning (American Cancer Society). According to Sheldon Cohen, stress can be defined as "the state of worry or mental tension caused by a difficult situation" (Cohen, 1986).

Chronic stress in breast cancer patients has been linked to weakened immune function, increased fatigue, and difficulties in coping with the disease, making stress management a crucial aspect of care for these women. Stress can worsen symptoms of anxiety and depression, having negative effect on quality of life and even potentially impairing treatment outcomes (Massie, 2004).

Depression is a mental health disorder characterized by persistent feelings of sadness, emptiness, or hopelessness, along with a loss of interest or pleasure in activities once enjoyed (American Psychiatric Association., 2013). Depression can be defined as "a mental health condition that causes a chronic feeling of emptiness, sadness, or inability to feel pleasure that may appear to happen for no clear reason" (Beck, 1967).

Depression is a serious mental health issue among women with breast cancer. Depression can be triggered by multiple factors, including physical changes from surgery or chemotherapy and disruptions to daily life. Up to 25% of breast cancer patients experience depression, which can hinder

recovery, lower medication compliances, and negative impact on overall quality of life (Pitman et al., 2018).

The meta-analysis by Creswell and Lindsay evaluated multiple studies on mindfulness meditation's impact on depression and quality of life for women with breast cancer. It suggested that mindfulness meditation significantly reduces depression and improves overall quality of life (Creswell & Lindsay, 2021). A study by Zainal and Ismail reviewed various interventions using mindfulness-based stress reduction (MBSR) among women with breast cancer and found a significant decreased in depressive symptoms. This research highlights mindfulness's potential as an effective non-pharmacological treatment to improve mental health outcomes in cancer patients (Zainal & Ismail, 2021).

Women suffering from breast cancer endure a wide range of challenges. Physically, they experience pain, disfigurement from surgeries like mastectomies, and side effects from treatments such as chemotherapy, which can lead to fatigue, hair loss, and hormonal changes. Emotionally, the disease often takes a toll on self-esteem, leading to anxiety, depression, and struggles with body image and femininity. Socially, breast cancer may strain personal relationships and disrupt work or social life, while the financial burden of treatment adds further stress. Even after treatment, many women grapple with the fear of recurrence and long-term physical and mental health issues (American Cancer Society, 2021).

Hypotheses

The general aim of current investigation was to explore the associations between mindfulness, stress and depression among women with breast cancer. This study was conducted to confirm the following hypothesis.

- There would be a negative correlation between mindfulness and stress.
- There would be a negative correlation between mindfulness and depression.
- There would be a strong correlation between stress and depression among patients of breast cancer.
- The level of depression and stress would be high among women with age range of Below 40 than Above 40.

Methods

Sampling Strategy

This study utilizes a quantitative research design, specifically employing a convenient sample strategy and survey method. This design is appropriate for identifying correlations and assessing the prevalence of these variables within the target population.

Participants

The target population for this study includes women aged below 40 to above 40 who have been diagnosed with breast cancer and are currently undergoing treatment. A sample size of 200 participants was taken to ensure adequate power for statistical analysis.

Procedure

Permission was initially obtained from the authors to use the measurement tools, including the Mindful Attention Awareness Scale (MAAS), Perceived Stress Scale (PSS), Beck Depression Inventory (BDI) in the research. A demographic sheet was prepared to gather information from participants, aligning with the inclusion and exclusion criteria. Approval for data collection was secured from department authorities. Participants were approached through convenient sampling. Written informed consent was obtained from all participants, after which they were briefed on the study's aims and objectives, as well as the confidentiality of their information. Following this, standardized scales, namely the Mindful Attention Awareness Scale (MAAS), Perceived Stress Scale (PSS), Beck Depression Inventory (BDI) were administered to participants. The estimated time to complete the survey questionnaire was 20-30 minutes. Data collection completed over a period of two months.

Statistical Analysis

Pearson correlation coefficients were calculated to examine the relationship between mindfulness, stress, and depression. Independent Sample t-test and Anova were conducted to analyze the level of depression according to age differences. All statistical analyses were performed using SPSS version 27.

Results

Table 1. Alpha reliability of scales in breast cancer women

Scales	α
Mindfulness Attention Awareness Scale	.84
Perceived Stress Scale	.76
Beck Depression Inventory	.88

NOTE: α= Reliability Coefficient

Table 2. Pearson Correlation Analysis of Scales

Scales	1	2	3
Mindfulness Attention Awareness Scale	-	-.170*	-.221**
Perceived Stress Scale	-	-	.605**
Beck Depression Inventory	-	-	-

*NOTE: ** Correlation is significant at 0.01 level (2-tailed), * 0.05 level (2-tailed)*

Table 3. Mean Scores (M), Standard Deviation (SD), t-value and Cohen's d value of the scales for Age above 40 or below 40 of breast cancer women

Variables	Below 40 Mean (SD)%	Above 40 Mean (SD)%	t	p	Cohen's d
MAAS	72.07(10.75)	68.37(12.44)	2.19	.029	0.31
PSS	19.10(6.855)	19.93(7.735)	-.78	.435	0.11
BDI	12.57(9.720)	15.58(10.07)	-2.11	.035	0.30

NOTE: M=Mean, SD= Standard Deviation, p= significance level

Table 1 sets out the Cronbach's alpha reliability in breast cancer women. Alpha reliabilities ranged from .76 to .88. Table 2 presents Pearson correlation between the study variables. This table reveals that correlations between the variables were statistically significant either positive or negative. Table 3 depicts the descriptive statistics and mean differences in study variables. This table indicates that there are no significant differences in stress in above 40 and below 40 women. Moreover, the results revealed that in terms of depression, significant differences were seen.

Discussion

The general objective of the present study was to extend the previous studies on these variables with a new sample. The results of this study have supported its hypotheses.

The first hypothesis was fully supported, i.e., the correlation between mindfulness and stress among breast cancer women was statistically significant and negative. Similarly, the second hypothesis was also confirmed as a negative correlation between mindfulness and depression among women with breast cancer. For the third hypothesis, there was a significantly positive relationship between stress and depression among women with breast cancer. The results on fourth hypothesis confirmed the age differences in breast cancer women, in terms of depression.

Limitations

Several limitations must be considered when interpreting the findings like self-report measure, short duration. Thus, Longitudinal studies are needed to examine the long-term effects of mindfulness practices on psychological outcomes in breast cancer patients.

References

1. American Cancer Society. (2021). Breast cancer facts & figures 2021-2022. Retrieved from https://www.cancer.org/research/cancer-facts-statistics/breast-cancer-facts-figures.html and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*(4), 822-848.
2. Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. International Universities Press.
3. Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*(4), 822-848.
4. Carlson, L. E., & Speca, M. (2010). Mindfulness-based cancer recovery: A step-by-step MBSR approach to help you cope with treatment and reclaim your life. *New Harbinger Publications*.
5. Cohen, S., Janicki-Deverts, D., & Miller, G. E. (2007). Psychological stress and disease. *JAMA, 298*(14), 1685-1687. doi:10.1001/jama.298.14.1685
6. Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*.
7. Lengacher, C. A., Reich, R. R., Paterson, C. L., Shelton, M. M., Shivers, S., Ramesar, Massie, M. J. (2004). Prevalence of depression in patients with cancer. *Journal of the National Cancer Institute Monographs*, 2004(32), 57-71.
8. Pitman, A., Suleman, S., Hyde, N., & Hodgkiss, A. (2018). Depression and anxiety in patients with cancer. *BMJ*, 361, k1415. doi:10.1136/bmj.k1415S., & Park, J. Y. (2019).
9. Zainal, N. Z., Booth, S., Huppert, F. A. (2013). The efficacy of mindfulness-based stress reduction on mental health of breast cancer patients: A meta-analysis. *Psycho-Oncology*, 22(7), 1457-1465.