ABSTRACT

Title of the study
A study to evaluate the effectiveness of meditation on depression and quality of life among women with breast cancer subjected to mastectomy admitted in selected hospitals at Chennai.

Purpose
To improve women with breast cancer subjected to mastectomy outcome related to depression and QoL.

Objectives:
The objectives of the study were to,
1. evaluate the effectiveness of meditation on depression among women with breast cancer subjected to mastectomy.
2. determine the effectiveness of meditation on QoL among women with breast cancer subjected to mastectomy.
3. identify the relationship between depression and QoL among women with breast cancer subjected to mastectomy.
4. associate the selected background variables with depression and QoL among women with breast cancer subjected to mastectomy.

Related literature were reviewed and Calistra Roy’s adaptation model was used for conceptual framework.
Methodology

The research design adopted for this study was quantitative quasi experimental non-randomized with the components of manipulation, non-randomization and control. The sample size was 300, 150 in each group selected through purposive sampling technique. Settings were Sri Ramachandra Hospital and Cancer Institute Adyar, Chennai. The instruments had 4 parts: Part I- Background and Clinical Variables, Part II- BDI-II, Part III- QoL – Breast Cancer Version and Part IV- Meditation performance check list. Data were collected from both groups on previous day of surgery, after 30th day and 90th day from the day they were discharged. The intervention (video) installed one to one basis on previous day of surgery, second and third post-operative day for the study group, but in the control group the video was shown on the 90th day after the assessment of depression and QoL.

Findings

- The level of depression among patients with breast cancer subjected to mastectomy between the study and the control group showed that in pretest 20 (13.3 %) women in the study group and 5 (3.3%) in the control group had minimal depression. 77(51.3 %) had mild depression in study group whereas, the control group showed 69 (46 %). 53(35.3 %) had moderate depression in the study group and the control group exhibited 76 (50.7 %). There was no significant difference between both the groups as depicted through chi square so, the homogeneity between the groups was maintained. The chi square value was 4.54 with p value of 0.103.

- In the posttest II level of depression, the study group had 102 (68 %) with minimal depression and control group had 15 (10 %). The study group had 43
(28.7 %) with mild depression while compared with control group 76 (50.7 %). The moderate level of depression in the study had 5 (3.3 %) and the control group had 59 (39.3%). The groups had significant difference exhibited by chi square value of 119.406 with p=0.000.

- The QoL among women with breast cancer subjected to mastectomy between the study and the control group showed that 116 (77.3%) in the study group and 143 (95.3%) in the control group had average QoL. 34 (22.7%) in the study group and 7 (4.7%) in the control group had poor QoL. The groups had no significant difference as shown by chi square value of 4.62 with p=0.099 during pretest. Thus homogeneity between the groups was maintained.

- Regarding the posttest I QoL among women with breast cancer subjected to mastectomy in the study and the control group projected that 102 (68%) had good QoL and 48 (32%) had average QoL in the study group. In control group 4 (2.7%) had good QoL and 135 (90%) had average QoL and 11 (7.3%) had poor QoL. There is a significant difference between the groups at p<0.001 which depicted that there is an improved QoL in the study group than the control group.

- In the posttest II QoL among women with breast cancer subjected to mastectomy in the study and the control groups showed that 11 (7.3%) had average QoL, 117 (78%) had good QoL and 22 (14.7%) had good QoL in the study group. In the control group 14 (9.3%) had poor QoL and 133 (88.7%) had average QoL and 3 (2%) had good QoL. There was a significant difference between the groups at p<0.001 which implied that there is an improved QoL in the study group than in the control group.
• Pretest mean depression of the study group was 18.03 with SD 4.19 and control group mean value was 19.23 with SD of 3.44. The independent t test value was 1.93 which is statistically not significant. There is no significant difference between the groups. In posttest I and II depression scores between the study and the control group, a significant difference existed which showed a significant reduction in depression at the level of p<0.001.

• Repeated measures ANOVA of depression among women with breast cancer subjected to mastectomy. In pretest the mean depression was 18.03, posttest I the mean depression was 14.23 and in posttest II mean was 11.12. There was a reduction in level of depression among the study group in pretest, posttest I and II which was highly significant at p<0.001, whereas in the control group, it was moderately significant between pretest, posttest I and II at p<0.01.

• In the study group overall QoL mean in the pretest was 173.99 and posttest I was 250.54. There was a significant improvement in QoL mean in the posttest I than the pretest mean at the level of P <0.001. When the pretest mean was 173.99 and the posttest II mean was 280.71, there was a significant improvement in QoL mean of the posttest II than pretest’s mean at the level of p<0.001. The comparison between the posttest I mean was 250.54 and posttest II mean was 280.71 at p<0.001.

• Repeated measures ANOVA of QoL among women with breast cancer subjected to mastectomy shown in the Table 24 proved that there was an improvement in QoL among the study group when compared with the control group at the level of p<0.001.

• Meditation performance among women with breast cancer subjected to mastectomy in the study group: 100% of the participants followed core
guidelines in both posttest I & II. 61% participants in posttest I and 82% posttest II followed core and pre requisite guidelines. 39% participants in posttest I and 18% participants in posttest II followed core and not the pre requisite guidelines.

- Correlation between depression and QoL among women with breast cancer in the study group. There was a strong negative correlation between depression and QoL during posttest I ($r = -0.848$) and II ($r = -0.875$) in the study group which was statistically significant at $p < 0.001$. There was a moderately negative correlation between depression and QoL during posttest I ($r = -0.466$) and II ($r = -0.606$) in the control group which was significant at $p < 0.001$.

- In correlation between meditation performance and depression among women with breast cancer in the study group: There was a strong negative correlation between meditation performance and depression during posttest I ($r = -0.856$) and II ($r = -0.707$) in the study group which was statistically significant at $p < 0.001$.

- There is an association between depression and clinical variables
  - Stages of cancer ($p<0.01$)
  - Types of treatment ($p<0.001$)

- Association was found between QoL and clinical variable
  - period of time & stages of cancer ($p<0.05$)
  - types of treatment ($p<0.01$)

- The multiple regression combination of the eight background variables as small linear relationship to the depression was $R^2$ value $= 5.6\%$. An estimated
5.6 % of variance of the background variables can be accounted for multiple regression combination on predictors- age, residence, educational status, marital status, occupation, religion, income and type of family. Residence was mildly related to depression and it has got a positive gradient. Gradient for age, educational status, marital status, occupation, religion, income and type of family were negative in the study group.

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- The multiple regression combination of the eight background variables has moderate linear relationship to the depression, R² value = 11.3 %. An estimated 11.3 % of variance of the background variables can be accounted for multiple regression combination on predictors- age, residence, educational status, marital status, occupation, religion, income and type of family. Educational status and occupation were strongly related to depression and it has got a positive gradient. Gradient for age, residence, marital status, religion, income and type of family were negative in the control group.

- The multiple regression combination of the eight background variables has small linear relationship to the QoL R² value = 7.9 %. An estimated 7.9% of variance of the background variables can be accounted for multiple regression
combination on predictors - age, residence, educational status, marital status, occupation, religion, income and type of family. Residence was mildly related to QoL and it has got a positive gradient. Gradient for age, educational status, marital status, occupation, religion, income and type of family were negative in the study group.

- The multiple regression combination of the eight background variables has moderate linear relationship to the QoL $R^2$ value = 5.2 %. An estimated 5.2 % of variance of the background variables can be accounted for multiple regression combination of predictors, age, residence, educational status, marital status, occupation, religion, family income and type of family. Residence and family income were mildly related to QoL and it has got a positive gradient. Gradient for age, educational status, marital status, occupation, religion, and type of family were negative in the control group.

**Conclusion**

- Meditation is effective in reducing the level of depression among women with breast cancer subjected to mastectomy. The meditation practice decreases the level of depression and improved, the QoL among women with breast cancer subjected to mastectomy. The results also projected that depression and QoL showed strong correlation in the study group. It can be implemented in the clinical and community area.

**Key words:** Meditation (video), Depression, QoL, Breast cancer, Follow-up.