Quality Of Life Stages Of Breast Cancer Throughout Treatment & Recovery

Author(s):

Gabrielle LaBove[1]
Steven Davison, MD[2]
Monica Jackson, PhD[3]

Background:
Breast cancer reconstruction helps restore a woman's body and identity; however there is little information on the quality of life after the initial surgery. We present the results of a prospective, three-year long, follow-up study of breast cancer patients. We hypothesized that specific psychological stages of recovery can be predicted and defined as: (1) survival, (2) restitution, (3) symmetry and (4) enhancement. The null hypothesis was that breast cancer recovery is unpredictable and not clearly defined.

Methods:
From January 2011 to 2014, 50 breast cancer patients from a reconstructive plastic surgeon's office were followed from initial cancer diagnosis to completion of their reconstructive surgery process at four time points (1, 3, 6 and 12 months) using a modified quality of life model from the National Medical Center and Beckman Research Institute. A repeated ANOVA was used to detect overall difference between the related stages, the Geenhouse-Geisser test was used to assess differences at the 0.05 significance level and the Bonferroni test was used to examine which stages were different.

Results:
Exploratory analysis indicated that Restitution and Symmetry stages have significant positive correlation (r=0.448, p-value=0); there is a negative relationship between Restitution and Enhancement (r=-0.198, p-value=0.004). Repeated measure ANOVA using the questionnaire showed that the means of the four time points are different (Survival ($F(1.033,150)$=2.8, P-value = .096). Symmetry ($F(2.364,118.216)$=16.453, P-value = 0). Significant difference was found in the stages using the Greenhouse-Geisser test. The Bonferroni test indicates all the stages are different from each other except stages 1 and 3 (p= 0.109) and that stages 2 and 3 do not show any statistical significance from each other (p=0.028).

Conclusions:

There is a statistically significant predictable difference in quality of life based on time after breast reconstruction surgery, which can be defined by four unique stages (Survival, Restitution, Symmetry and Enhancement). These findings provide reassurance and an educative tool to both the breast cancer patient and surgeon navigating the psychological aspects of breast reconstruction.

Survival
- A fear of cancer & death

Restitution
- Acceptane of cancer
- Decision for reconstruction

Symmetry
- A focus on breast/nipple revisions to match breasts

Enhancement
- A focus on greater body, self & life goals for happiness

Howard University College of Medicine [1] DAVinci Plastic Surgery [2] American University [3]