The Effect of the Clarity Project on Cognitive Functioning Following Chemotherapy: A Pilot Study

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Objective: Patients who undergo chemotherapy as part of their cancer treatment are at risk of psychiatric, neurological, and psycho-social dysfunction. These concerns can arise even when the central nervous system is not part of the cancer pathology. This study analyzed data that was collected from patients who participated in the Clarity Project following treatment with chemotherapy. The Clarity Project is a set of 12 two-hour group therapy sessions.

Method: Participants and their caregivers completed a series of rating scales prior to treatment and then the same set of instruments following treatment. The sample consisted of 15 cancer survivors (mean age=61.47 years; SD=10.32) and 8 caregivers (mean age=67.00; SD=10.99). Participants completed the Self-Administered Gerocognitive Examination (SAGE) and the Mayo Clinic "chemo brain" checklist of symptoms.

Results: Although the mean score on the Sage was higher on posttest (mean of 21) compared to the pretest (18.80) for the cancer survivors, the results were not statistically significant with either a Wilcoxon signed rank test, a paired samples t-test, and an analysis of covariance (ANCOVA) with age serving as the covariate. The Cohen's *d* effect size for the change over time was .498 which would be considered Moderate. When the entire sample was analyzed both the Wilcoxon signed rank test (p=0.047) and the dependent samples t-test (p=0.045) indicated a statistically significant change in the central tendency (median and mean, respectively) over time. The results of an ANCOVA with age serving as the covariate demonstrated a statistically significant reduction in the number of chemo brain symptoms (pretest mean of 44.25 and posttest mean of 37.25; p=0.036, $\eta^2 = 0.546$) over time. A total of 54.6% of the variance in the number of symptoms was accounted for by time.

Conclusion: The analysis of this small sample did suggest that participation in the Clarity Project following chemotherapy was associated with a (non-significant) increase in self-evaluation of cognitive functioning and a statistically significant reduction in self-reported chemo brain symptoms. This pilot study will serve as the basis for a larger study and this poster will discuss the results and implications for researchers and practitioners.