Does Change in Emotional Expression Mediate Cancer Survival?

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Initial Award Abstract (1995)
This proposal addresses the BCRP priority issues of prevention of breast cancer and prevention of disease progression. The overarching goal of this project is to determine the specific therapeutic component linking participation in supportive/expressive group therapy to observed differences in disease progression in women with metastatic breast cancer. Past research with supportive/expressive group therapy has shown that survival was extended in metastatic breast cancer patients by 18 months, doubling the survival time of a matched control group (Spiegel et al, 1989). It is vital that we begin to understand the possible therapeutic mechanisms and the underlying related physiological mechanisms responsible for this surprising finding of increased survival. Therefore, I propose to determine if change in emotional expression, amount of talk-time, or emotional control are therapeutic mechanisms related to survival, immune and endocrine function, and well-being in metastatic breast cancer patients who participate in a year of this group therapy.

A long-standing hypothesis links both incidence and progression of cancer with lower levels of emotional expression, or higher levels of repressive or suppressive coping styles. This literature has guided the present hypothesis. In the proposed study, each participant has been videotaped as they take part in the supportive/expressive group therapy sessions. A sample of these videotapes will be used to code the specific emotions and the intensity of those emotions expressed for each of these women. The emotions expressed will be related to each woman's endocrine and immune functioning, her psychosocial well-being, and her survival. If it is found that change in emotional expression is important to enhanced physical or emotional well-being, this information could lead to more specific psychosocial interventions for breast cancer patients. The ability to provide such specific interventions would reduce the human and economic costs of breast cancer in California not only in terms of extended lives, but of quality of life.

Final Report (1999)
In this project, we have coded each woman's emotional expression and talk-time from videotape as they participate over time in Dr. David Spiegel's supportive-expressive group for metastatic breast cancer. Past research with this model of group psychotherapy indicated that metastatic breast cancer patients who attended the group lived 18 months longer than a matched control group, doubling their survival time (Spiegel et al, 1989). We have coded

these measures because researchers have long thought that repressed emotion or low emotional expression (particularly of anger) predicted a higher incidence and faster progression of breast cancer. We wanted to understand if differences in emotional expression would relate to survival and, importantly, if the psychotherapeutic intervention changed emotional expression in ways that related to extended survival.

In our preliminary results (H = 28 with 69 tape-by-woman segments in the data set), long moments of indirect or constrained anger during the first few months of group therapy strongly predicted an earlier death ($p < .01$). By 3 years from study entry, all but 2 women with more constrained anger have died--compared with 6 women, who express no constrained anger or only express short moments of it, still living at 7 years post-study entry. The mean survival time was, thus, doubled for women who do not constrain anger (3.7 years compared with 1.8). This is the first behavioral study in a relatively naturalistic setting which links bottling up anger with shorter survival.

Preliminary results also suggest that if women have a healthy, responsive, stress-hormone level when they enter the study--they benefit from the group intervention in the following ways. They appear to live longer if over time in the group they 1) increase the duration of moments of genuine positive emotional expression, particularly affection, ($p < .03$). They also live longer if 2) they express longer moments of direct anger, fear, and sadness (It < .004). The data also suggest that women who have a flat or unresponsive stress hormone (cortisol) level do not improve their survival through emotional expression in the group. They appear rigid in their emotional coping style in a way not modified by the group. These results indicate that the physiologically unresponsive women may benefit from an additional or quite different kind of therapy. Future research should select those with poor stress-hormone responsivity and develop interventions to test whether women's survival time improves if they change their rigid coping style.