

Influence of Cancer on Emotional and Physical Health of Caregivers

Janice León

Beyond the Book Award

University of Miami

Caring for a loved one with cancer is a time-consuming task. Administering medications, accompanying patients to chemotherapy or radiation treatments and doctor's visits: all of these tasks are those a caregiver must attend to, often while also juggling a job and the care of other family members. Inevitably and unfortunately, the caregiver's health may be compromised due to the caregiving burden.

A meta-analysis has found that dementia caregivers have 23% higher levels of stress hormones and 15% lower antibody responses than non-caregivers (Vitaliano, 2003). These characteristics may increase the risk for stress-related diseases amongst caregivers. There is also evidence suggesting that the immune system suffers when exposed to chronic stress such as that of caregiving: elderly spousal caregivers of dementia patients reported suffering more days of infectious illnesses such as upper respiratory tract infections than controls (Kiecolt-Glaser, 1991). Kiecolt-Glaser also found that the prevalence of depression, depressive symptoms, and other affective disorders was significantly higher than in the control group. In addition, the caregiver's perception of social support (size of social network, frequency, and closeness) was significantly lower than that of controls (Kiecolt-Glaser, 1991).

Although these seminal works clearly illustrate how stressed caregivers would be vulnerable to poor health, the extent to which cancer caregivers develop morbid conditions due to the burden of providing care to their family members with cancer remains unknown.

Although there are similarities in caregiving to persons with cancer and Alzheimer's disease (upon which the majority of current caregiving literature has been based on), cancer caregiving imposes unique sets of burdens, compared with dementia caregiving: namely, the acute yet intensive nature of caregiving (Kim & Schulz, 2008). Indeed, a recent review of the literature

pertaining to cancer caregivers' quality of life suggested that caregivers of long-term cancer survivors suffer from poorer quality of life, particularly mental and physical health (Kim & Given, 2008).

Overall 5-year survival rates of cancer is currently 66% (Cancer Facts and Figures, 2010), making cancer a major chronic disease, rather than a disease associated with an immediate death sentence upon diagnosis. Recently accumulating evidence has documented the debilitating quality of life among cancer survivors years after the initial diagnosis. This has become a substantial concern for long-term survivors as well as cancer patients recently diagnosed with hopes for a healthy life years after (Ganz et al., 2002; Gotay & Muraoka 1998). The improved survival rates of cancer also impose further challenges to caregivers whose tasks for providing help to their family member with cancer has extended beyond the time of diagnosis and treatment (often known to be the peak of caregiving burden) and into the palliative care phase.

In addition, the extent to which caregiving burden relates to the caregivers' own health concerns, such as development of major diseases, cannot be examined properly in cross-sectional nor short-term follow-up data.

I proposed a study to examine the associations between care-recipients' health status, as an indicator of caregiving burden and caregivers' morbidity at 5 years after the initial diagnosis, a landmark for the long-term cancer survivorship phase. I examined this research question using a national dataset of cancer caregivers. The survivor's health status (such as whether or not he or she is in remission) and the health condition of the survivor evaluated by their caregiver at five years post-diagnosis served as indicators of the caregivers' health status.

Janice León

Influence of Cancer on Emotional and Physical Health of Caregivers

A total of 414 cancer caregivers participated in the survey at both two- and five-years post-diagnosis and provided valid data for the study. After controlling for the caregivers' age and number of morbidities reported at two-year post-diagnosis, hierarchical regression analyses revealed that whether the survivor was in remission at five years post-diagnosis was not related to caregivers' morbidity ($\beta = -.04$; $p = .189$). However, the survivors' health condition was related ($\beta = -.097$; $t(790) = -2.915$, $p = .004$), 24% of variances accounted for. Cancer caregivers, whose survivor's health was poorer at five years post-diagnosis, reported a greater number of morbid conditions.

These results illustrate that a cancer diagnosis and treatment do not only affect the patient, but also those around him, in particular his caregiver. The burden and stress that comes with caring for a close relative with cancer can take a toll on one's health years later. These results should be taken into consideration by physicians and healthcare workers when faced with cancer patients and their family caregivers. Emphasis should be placed on encouraging caregivers to try to dedicate time to caring for themselves and their health and feelings, and not solely on the concerns of the patient. Future studies should focus on exploring ways these burdens could be lessened, in particular those burdens that compromise the health of caregivers.

I also had a chance to further validate these findings in a clinic where I have recruited newly diagnosed prostate cancer patients and their spousal caregivers. We collect survey information and blood samples from both the patient and caregiver to assess not only the psychological but also the physiological impacts of living with cancer. As I have administered surveys to these individuals, I noticed that the caregiving wives were so profoundly involved in

Janice León

Influence of Cancer on Emotional and Physical Health of Caregivers

the diagnosis and treatment of their husbands, that many times when questioned about their health and feelings, they responded with the health of their ailing husband in mind. Their focus was not on their own health and concerns but on that of their husbands'. This all-encompassing burden they lived with—24-hours a day—and all of the tasks they had to do for their husbands resulted in their not having sufficient time to worry about and take care of their own health or think about their own lives and feelings. They acknowledged that they didn't have much time to dedicate to themselves and felt as if all they did during the day was worry about the patient and fulfill their duties as caregivers. Undoubtedly these women's health will suffer throughout the course of the patient's illness when they do not have time to visit their own doctors and mind their own health. Many times the questions we asked were issues they had not even pondered since the diagnosis, much less dedicate time to. These experiences allowed me to appreciate the issues of caregiver burden in real-time and firsthand in the clinic; issues whose effects I was later able to confirm in the data.

I have also witnessed the delicate, complex, and time-consuming process that is implicated in preparing blood samples for further analyses of stress hormones and cytokines. The intricacies and properties of blood must be taken into careful consideration when dealing with blood: the density of blood, its coagulation properties, its cell composition. In addition, I was able to observe under the microscope the blood cells of different samples after the completion of the processing; gaining the opportunity to observe firsthand what I had only read about in biology books. I value the exposure I have received to varied aspects of the research field: interviewing patients, processing blood samples in the lab, and designing and developing study materials. I have a thorough understanding of what the field of research entails: the

Janice León

Influence of Cancer on Emotional and Physical Health of Caregivers

process behind developing and approving new techniques or treatments, as well as learning and testing new ideas or theories.

My career ambitions to become a physician and provide medical care to the underserved communities of South Florida have been solidified by my research experiences with patients and seeing the issues they go through daily. I feel I am in a more knowledgeable position to advise and comfort and treat patients now that I have seen firsthand how the family suffers physically as well as emotionally when a loved one becomes ill. Although the family members may not be my patients, they should not be ignored and should be taken into account as well by physicians. I am more attuned now to the complaints and sufferings of caregivers, and I will be a more capable physician as a result. My experiences in the laboratory processing blood has also opened my eyes to the intricacies of labwork procedures and the importance of being careful with samples from patients: patients who will suffer directly if each step is not done with extreme care and precision. In addition, I feel more comfortable knowing what goes on behind-the-scenes whenever bloodwork is ordered, something I will undoubtedly do often as a physician.

References

American Cancer Society. (2010). *Cancer Facts & Figures 2010*. Atlanta: American Cancer Society; 2010.

Ganz, P. A., Desmond, K. A., Leedham, B., Rowland, J. H., Meyerowitz, B. E., & Belin, T. R. (2002). Quality of life in long-term, disease-free survivors of breast cancer: a Follow-up study. *Journal of the National Cancer Institute, 94*, 39-49.

Gotay, C. C., & Muraoka, M. Y. (1998). Quality of life in long-term survivors of adult-onset cancers. *Journal of the National Cancer Institute, 90*, 656-667.

Kiecolt-Glaser, J. K., Dura, J. R., Speicher, C. E., Trask, O. J., & Glaser, R. (1991). Spousal caregivers of dementia victims: longitudinal changes in immunity and health. *Psychosomatic Medicine, 53*, 345-362.

Kim, Y., & Given, B. A. (2008). Quality of life of family caregivers of cancer survivors. *Cancer, 112*, 2556-2568.

Kim, Y., & Schulz, R. (2008). Family caregiver's strains: Comparative analysis of cancer caregiving with dementia, diabetes, and frail elderly caregiving. *Journal of Aging and Health, 20*, 483-503.

Vitaliano, P. P., Zhang, J., & Scanlan, J. M. (2003). Is caregiving hazardous to one's physical health? A meta-analysis. *Psychological Bulletin, 129*, 946-972.