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Health and Well-Being in Older Married Female Cancer Survivors

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Abstract

OBJECTIVES—To investigate differences between older married female cancer survivors and a matched comparison sample on physical health and on effects of health on depressive symptomatology.

DESIGN—National survey data from the 1992 Health and Retirement Study.

PARTICIPANTS—Married women who reported having been diagnosed with cancer ($N = 245$) and married women who did not report a cancer diagnosis but who matched the survivors on age, race, and ethnicity ($N = 245$).

MEASUREMENTS—Outcome measure was depressive symptomatology (modified CES-D). Predictors were multiple indicators of health and demographic characteristics.

RESULTS—Cancer survivors reported significantly worse health on all indicators, but not higher depressive symptomatology after health and demographics were controlled. Predictors of higher depression were fatigue, pain, and lower education. These effects did not differ between groups.

CONCLUSION—Health impairment in cancer survivors highlights the need for ongoing follow-up care. Survivorship was associated indirectly with higher depressive symptomatology, through its relationship with health impairment.

Keywords

Cancer survivors; aging; female; health; depressive symptoms

This research investigates physical health and depressive symptomatology in older married female cancer survivors and a matched comparison sample without cancer. There is a pressing need to study cancer survivors' physical and mental health,^{1,2} especially older survivors.^{3,4} As survivors age, it is critical to consider the impact of comorbidities and physical symptoms such as fatigue and pain.^{5–7} It also is critical to separate effects of aging and cancer survivorship, in order to disentangle experiences that are unique to older cancer survivors from experiences that are common to aging individuals, regardless of survivor status. Older survivors may require different strategies for screening and treatment. One method for disentangling effects of cancer and aging is a comparison design. With notable exceptions,^{8–10} such designs have been used infrequently in research on cancer and aging.

The present study posed three research questions: (1) do older married female cancer survivors report worse health and higher depressive symptomatology than a matched comparison sample without cancer?, (2) which health indicators predict depressive symptomatology?, (3) are effects of health on depressive symptoms stronger for cancer survivors than for matched comparisons? We focus on married women because this is part of a larger research program on married couples and cancer.

Method

Sample

All data came from Wave 1 (1992) interviews in the Health and Retirement Study (HRS), a nationally-representative sample of adults ages 51 to 61.¹¹ The present sample includes 245 married women who replied affirmatively to the question “Has a doctor ever told you that you have cancer or a malignant tumor of any kind except skin cancer?” and a comparison sample of 245 married women who did not report having cancer. Comparison wives were matched on age, race, and ethnicity to the survivors.

The mean age of both groups was 54.1 years ($\pm SD = 5.4$). Most (91.4%) were White; 4.1% were Hispanic. Average education was 12 years, and median annual household income was \$47,900 for survivors and \$44,200 for comparisons. Average length of marriage was 28.6 years ($\pm SD = 11.0$) for survivors and 27.2 ($\pm SD = 11.9$) for comparisons. Nearly half (44.1% of survivors and 44.9% of comparisons) had others (besides the couple) living in the household. The two groups were not statistically different on any demographic characteristic.

Survivors were, on average, 9.6 years ($\pm SD = 8.8$) from diagnosis. The most prevalent cancers were gynecologic (37.5%) and breast (36.7%). Nearly one-third (32.2%) had received treatment in the past year, most often surgery/biopsy or chemotherapy/medication. Two-thirds (66.1%) saw a doctor for their cancer in the past year. Some (13.5%) had a prior cancer.

Measures

Depressive symptomatology was measured with an 8-item version of the CES-D¹² (possible range 0 to 24; higher = more symptomatology; $\alpha = .83$). Comorbidities were rated as the number (0, 1, 2, 3+) of six disease conditions (arthritis, hypertension, heart problems, diabetes, lung disease, stroke). Self-rated health was measured using a scale from excellent (1) to poor (5). Pain was assessed by asking “Are you often troubled by pain?” (1 = yes). A three-item fatigue scale measured how often during the past week the respondent lacked energy, was not well-rested, or felt tired (possible range 0 to 9; higher = more fatigue; $\alpha = .74$). Physical limitations were the number of physical activities (e.g., stooping/kneeling, getting up from a chair) for which the respondent reported any difficulty (possible range 0 to 11; higher = more limitations). Number of doctor visits (0, 1–2, 3+) and bed days due to illness (1 = 1 or more days) during the past year were also assessed. Age, race (1 = non-white), education, household income (logged), length of marriage, and having others in the household (1 = more than dyad), were controlled in multivariate analyses.

Results

Paired-*t*, Wilcoxon Signed Rank, and McNemar tests revealed that survivors had significantly worse health than comparisons on every indicator ($p < .05$). Survivors reported more comorbidity ($M = 1.02$ versus 0.83), worse self-rated health ($M = 2.84$ versus 2.30), higher fatigue ($M = 3.78$ versus 3.33), and more physical limitations ($M = 3.53$ versus 2.86) than comparisons. Survivors also were more likely to report pain (33.1% versus 18.8%),

three or more doctor visits (68.2% versus 39.2%), and one or more bed days (44.5% versus 28.2%).

Survivors reported significantly higher depressive symptomatology than comparisons, prior to controlling for any other variables (Model 1 in Table 1). After health and demographics were controlled, however, the between-group difference was no longer significant (Model 2).

Significant predictors of higher depressive symptom levels were greater fatigue, presence of pain, and lower education. The final model explained 48% of the variance in depressive symptomatology. There were no significant interactions between cancer status (i.e., survivor versus comparison) and any health or demographic measure. Additional analyses (not shown) substituting years since cancer diagnosis for cancer status yielded the same pattern of results.

Discussion

The present study adds to a growing body of research documenting health impairment in long-term survivors.^{4,5,10} Follow-up care for cancer survivors is a growing concern.⁴ The consistently worse health of survivors versus comparisons in our study highlights the importance of comprehensive and ongoing health assessment, even many years following a cancer diagnosis. Survivors' more numerous physician visits may offer critical opportunities for such assessment and monitoring. One limitation of these secondary data is that the type of physician (e.g., primary care, oncologist) respondents saw is unknown. These secondary data also do not include information about cancer stage. More links between nationally-representative surveys such as HRS and cancer-specific clinical and epidemiological data such as SEER (with protections for respondents' confidentiality) would greatly enhance knowledge about survivorship.

Prior studies comparing psychological distress in cancer survivors and individuals without cancer have found mixed results.^{8,9} Our finding of initially higher depressive symptom levels in survivors, until health and demographic measures were controlled, suggests the need for careful design of comparative research in order to take health and background characteristics into account. It also suggests that one path through which cancer may affect depressive symptomatology is through its effects on pain, fatigue, and general health.

Fatigue had the strongest relationship with depressive symptomatology, followed by pain. Others have noted the prevalence and importance of fatigue and pain in cancer populations as well.^{1,4,13,14} Diagnosing and treating fatigue and pain to reduce psychological distress appears to be important, but not just for cancer survivors, as we found no difference by cancer survivor status in effects of fatigue and pain on depressive symptom levels. Disentangling depression, fatigue, and pain will be a challenge, however.

Our study had several reasons for focusing on middle-aged women: several common female cancers are typically diagnosed in midlife;¹⁵ a number of other diseases (e.g., heart disease) and physical symptoms (e.g., pain) also become more prevalent during middle age;¹⁶ and women are more likely than men to be long-term cancer survivors.³ Although research regarding gender differences in the cancer experience is extremely limited, a recent review¹⁷ identified several studies where female cancer patients reported more pain, fatigue, and depression than male patients. Our study was confined to married women because this is part of a larger study on quality of life of survivors and their spouses. Moreover, the majority of middle-aged women in the U. S. are married.¹⁸ Generalizability of our findings to female survivors of more advanced age, male survivors, and survivors who are not married should be investigated in future research.

Our study contributes to a growing body of research seeking to unravel complex relationships among aging, cancer, and comorbidity. National surveys that include survivors who vary in cancer types, length of survivorship, comorbidities, age, gender, and other characteristics, as well as comparable adults without cancer, offer unique opportunities to investigate these important relationships. Such surveys also permit examination of the impact of survivors' health on the quality of life of their spouses, research we have currently underway.

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Table 1
OLS Hierarchical Regression Model Predicting Depressive Symptomatology (N = 490)

	Model 1		Model 2	
	B	(SE) β	B	(SE) β
Intercept	3.93***	(.25)	3.77***	(.26)
Cancer survivor	.75*	(.35)	.12	(.28) .02
Health indicators				
# of comorbid conditions			-.26	(.17) -.06
(Poor) self-rated health			.15	(.15) .05
Pain			.84*	(.35) .09
Fatigue			1.04***	(.08) .58
Physical limitations			.18	(.23) .03
# of doctor visits in past yr.			-.29	(.21) -.05
1 bed days in past yr.			.22	(.29) .03
Demographic characteristics				
Age			.01	(.03) .02
Race			.04	(.48) <.01
Education			-.16**	(.06) -.10
Annual household income			-.14	(.17) -.03
Length of marriage			-.02	(.01) -.07
More than dyad in household			.39	(.28) .05
Model R^2		.01*		.48***

* $p < .05$.

** $p < .01$.

*** $p < .001$.