The association of resilience and age in individuals with colorectal cancer: An exploratory cross-sectional study

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ABSTRACT

Background: Studies generally report lower emotional distress in older patients with cancer than in younger patients with cancer. The personality construct of resilience was previously found to be higher with age, but has not been assessed in relation to emotional distress in older patients with cancer.

Objective: To assess the mediating effect of resilience on the associations between age and emotional distress in patients with colorectal cancer (CRC).

Patients and Methods: An exploratory cross-sectional study of 92 individuals, aged 27–87 years, diagnosed with CRC stage II–III, 1–5 years prior to enrollment in the study. They completed the Wagnild and Young's resilience scale and Brief Symptoms Inventory-18, cancer-related problem list, and demographic and disease-related details.

Results: Older age, male gender, and less cancer-related problems were associated with higher resilience and lower emotional distress. A Structural Equation Modeling (SEM) analysis and mediation tests showed that, while controlling for cancer-related problems, resilience mediated the effects of age and gender on emotional distress.

Conclusions: The study enlarges the explanation for the consistent previous findings on the better adjustment of older patients with cancer. Increased professional support should be provided for patients with low resilience levels.

1. Introduction

Older patients with cancer (>65 years) represent more than 60% of cancer cases.[1] Demographic projections of developed countries anticipate that the number of older adults will expand over the coming decades and people will live to reach greater ages.[2] The anticipated expansion of the >65 age group followed by the expansion in number of older patients with cancer requires a widening of knowledge of factors that promote well-being in older patients with cancer.[1]

The effect of age on emotional distress in reaction to cancer diagnosis and treatment has recently enjoyed a surge of interest.

Most studies comparing the emotional distress of older and younger patients with cancer have reported that the former were less distressed (in terms of depression and anxiety) and better adjusted than the latter.[3–6] Although the subjects of most of the studies were patients with breast cancer[3,4] similar results were obtained for other types of cancer, such as prostate cancer[5] or lung cancer.[6] The few studies of patients with CRC also found that older patients (>65) reported a better quality of life and lower emotional distress.[7–10] A recent study of 1800 patients with CRC, five and twelve months post-diagnosis, found higher-level emotional distress[9] and a higher rate of post-traumatic symptoms in the younger patients was found in another study.[10]

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A very small number of studies do not support the above findings. In a study of over 700 individuals with prostate cancer, older patients reported less distress as measured by the distress thermometer and a better quality of life, but older age proved to be associated with higher levels of depression.[11] However, in this study the comparison was between groups within the range of 50–93 years of age only. Another study of patients with CRC found a negative association between age and depression in married male participants, but no association was found between age and anxiety or total emotional distress score.[12] However, a possible explanation of the contrasting results of these two studies may be that they examined male patients only, or that both studies presented correlational results only.

Several explanations have been proposed for the lower level of emotional distress in older patients with cancer found in the majority of studies. Scholars propose that younger patients suffer more intense stressors related to their being parents of young children, being in the middle of their careers, and bearing more intense work and economic strains.[4,8] Another explanation is that age groups differ in their expectations of life and of the future. Older adults may anticipate contracting various diseases with their advancing years.[13] Older individuals usually experience less death anxiety than do younger ones,[14] possibly due to a sense of accomplishment of life goals or personal maturation.[15] However, their lower level of distress may be due to less aggressive treatments[15] or to different patterns of reporting distress.[16]

The construct of resilience may also account for differences between age groups in coping with and adjusting to cancer. Studies showed that resilience predicted lower-level distress, better adjustment, and better quality of life among patients with cancer.[17,18] Thus, the construct of resilience is used as the theoretical basis for the present study. Resilience was conceptualized as a pattern of functioning indicative of positive adaptation in the context of significant risk or adversity.[18] It is expressed in an individual's capacity to recover from severe negative and traumatic experiences through the ability to adjust to different and changing situational demands, and to recover from adverse life events.[18–20] It was found that resilience moderates the negative effects of stressors and promotes adaptation and is associated with mental health.[21,22] However, more recent research has shown that resilience is also a construct that may change across life.[23,24] It may be promoted or impaired depending on the synergy shared between individuals and their environments and experiences.[23,24]

The definition of resilience includes the notion that it develops through exposure to significant risks[18] and is important to psychological well being in old age. While significant risks and adversities accumulate with age, research literature presents two possible trajectories of resilience in old age. In the first trajectory, resilience may weaken in old age due to physical and cognitive decline, the cumulative effects of personal and interpersonal losses, mounting negative experiences, and the loss of personal resources.[25,26] The second trajectory is one of strengthening resilience with age.[27,28] Over the years, with increasing encounters with challenging or negative experiences, individuals may gain experience, and learn and enrich a repertoire of efficient coping strategies.[25,28] Older individuals often develop perceptions and attitudes that promote adjustment to negative life events.[25] Accordingly, a high rate of

resilience was found in individuals aged 85–95.[27] Also, in a Swedish study of 1719 participants, from eight different samples, aged from 19 to 103 years,[29] and a Dutch study with 3265 participant aged 17 to 65+, being older was found to be associated with higher resilience.[30] Lower rates of post-traumatic symptoms were found in older individuals than in younger individuals who had undergone traumatic experiences,[31,32] although a few studies have found no differences between the age groups.[33,34]

Several studies assessed mediation models in which resilience, or components of resilience, served as a mediator between personal or environmental changes and psychological well being. For example, resilience factors were reported to mediate the relationship between social status and self-rated health,[35] perceived stress, and life satisfaction.[36] In addition, emotion regulation, defined as a component of resilience, was found to mediate the associations of age and affect.[37]

A mediating variable is one that explains possible associations between an antecedent variable and its outcome.[38] This definition suggests that an antecedent variable precedes the occurrence of the mediator, and both precede the occurrence of the outcome.[39] Although this definition may imply casual relations that cannot be inferred from cross sectional study designs, scholars have often suggested assessing the putative mediating role of specific variables as based on theoretical knowledge regarding the mediating role, and thus assessing the theoretical model.[40,41] Accordingly, the role of personal characteristics was often assessed within theoretical models, such as models of coping with stressors (e.g., Lazarus and Folkman),[42] using cross-sectional designs. For example, optimism was often assessed as a mediator between stressors and psychological well being.[40,41] Only one study approached the assumption that resilience may be a mediator between age and psychological outcomes,[37] while the role of resilience in explaining differences between older and younger patients with cancer in terms of emotional distress has not yet been studied. This study, although based on exploratory cross-sectional design, attempts to address this lacuna, by assessing the mediating role of resilience between age and gender and emotional distress. We chose to focus on patients with CRC in order to obtain a homogeneous sample in terms of the type of cancer and of functional disabilities, body image, or other personal and interpersonal consequences. In addition, due to its similar rate in both sexes, our sample of patients with CRC allows the examination of gender differences. According to the conceptual model, the demographic variables, age, gender and education, and the disease-related variables, stage of disease, time since diagnosis, and cancer-related problems, were hypothesized to be associated directly with resilience and indirectly via resilience with emotional distress.

2. Methods

2.1. Participants and Procedure

Ninety-two participants were enrolled in this study, with an age range of 27–87 year-old individuals, diagnosed with CRC 1–5 years prior to enrollment in the study. Fifty percent of the participants were younger than 65 years and the other 50%