

Cognitive and behavior change in various cancer got chemotherapy, does it make death rumination?

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INTRODUCTION

Multiple factors contribute to these cognitive changes. Moreover, some patients have been found to have poorer cognitive function than their healthy counterparts when they aware about their cancer diagnosis before they began therapy, [1] pointing to the possibility that factors other than treatment are contributing to the problem with higher level of death rumination.

Cognitive function is also interrelated with mood and functional ability. In particular, if someone reports a significant deterioration in cognitive function, [2] they are more likely to also experience worsening mood with death-rumination disorder. Conversely, individuals who are clinically depressed commonly experience poorer attention, thinking, and psychomotor slowing.

Self-reported death-rumination by cognitive problems may also be associated with other symptoms, such as sleep disturbance, and pain. Moreover, poorer cognitive function may be related to medications taken to manage these symptoms.

Patients receiving higher-dose therapy or a longer duration of therapy, particularly with some biologic agents, are also at increased risk for cognitive change. Similarly, patients receiving concurrent chemo, radiation or therapy delivered directly to the central nervous system are at greater risk. [1] Other factors that increase patients' risk of cognitive issues include behavior change and death-rumination.

NEED FOR THE STUDY

It is important to recognize that some patients with cancer are at greater risk for changes in cognitive function and behavior change while cancer rate increasing gradually. [Figure. 1] The negative thinking, anxiety, or depressive mood they experience across the cancer these experience may influence their

cognitive function and behavior, although clinically meaningful deterioration in objectively measured cognitive function and behavior change that make death-rumination in cancer patients across their treatment.

While death-rumination is a major contributor to the maintenance of affective disorders and has been linked to attention, memory control deficits. However, ruminators often report intentionally engaging in repetitive thought due to its perceived benefits. Deliberate re-processing may lead to the appearance of a memory control deficit that is better explained as a difference in cognitive style.

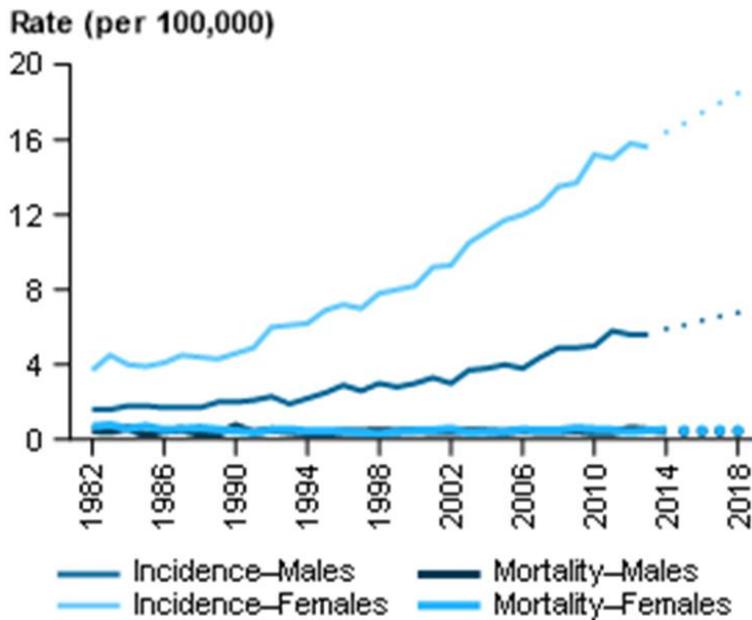


Figure 1

STATEMENT OF THE PROBLEM

As noted, while the multiple primary procedures and adjuvant therapies provided to cancer patients could contribute to cognitive and behavior changes that lead to death-rumination. Moreover, disease's condition and chemotherapy may influence trajectories of cognitive and behavior changes during treatment. [3]

METHODOLOGY

The search terms used for PubMed and ResearchGate were the following: (1) cognitive effects and cancer patients, (2) cognition and cancer and chemotherapy, (3) cognition disorders and behavior change, (4) cognition disorders and rumination disorder, (5) cognition problem and

death-rumination effects and cancer AND chemotherapy. Reference lists from publications retrieved and from relevant systematic reviews and meta-analyses were also examined to identify studies. The search was inclusive of studies published between 2012 and 2018.

RESULTS / FINDINGS

To ease interpretability of results, individual neuropsychological tests were categorized according to the predominant cognitive domain they assessed. The attention (ie, the ability to focused more on negative information), memory (ie, immediate and delayed recall as well as recognition of anything), negative thoughts (specifically, suspicious, down, and insecure), motor speed (ie, manual dexterity), verbal ability (ie, word finding, vocabulary, and speed and ease of word generation), rumination (concerning the utility and uncontrollability of repetitive thought).

Description of Study Participants

Included studies comprised a sample of 200 patients who received chemotherapy and local or endocrine therapy. The mean age of the chemotherapy sample was 44.74 years.

Meta-Analysis

Regarding visuospatial ability, study design was a significant moderator such that patients treated with chemotherapy performed significantly worse in cognitive function $F(1, 200)=4.188$, $p=.042$, behavior change $F(1, 200)=5.172$, $p=.024$, death-rumination $F(1, 200)= 4.221$, $p=.041$.

CONCLUSION

The current meta-analysis incorporate data from several studies examining the post-treatment effects of chemotherapy on cognitive functioning and behavior change in cancer patients. In addition, patients treated with chemotherapy performed significantly worse on thinking and attention.

As a result, it is known that the largest cognitive differences. It is currently clear whether the pattern of results reflects chemotherapy in cancer patients with worse cognitive functioning, an effect of cancer on behavior, negative thinking and death-rumination. Alternately, worsening cognitive functioning may be offset by the practice effects of longitudinal testing. [Figure. 2]

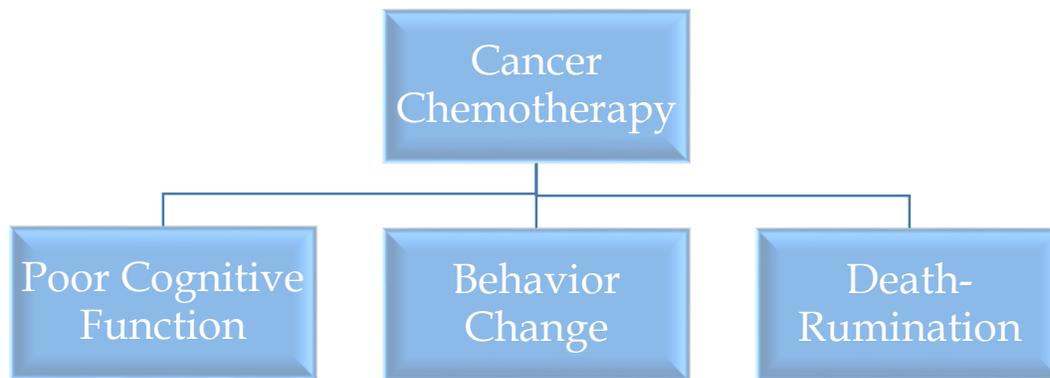


Figure 2

Management of cognitive deficits typically involves developing awareness of situations in which cognitive difficulties are likely to arise and rehearsing compensatory strategies. Preliminary research suggests that these strategies result in moderate to large improvements (ie, 0.5 to 1.0 standard deviations) in objective neuropsychological function and self-reported cognition after cancer treatment. [4] Regarding research implications, it should be noted that included studies focused on patients went into hospital and they bedded and then got chemotherapy. Cognitive functioning and behavior change in recurrent and advanced cancer should also be studied. Clinical and research efforts will help breast cancer survivors achieve the best possible cognitive functioning after completion of chemotherapy.

In summary, we have demonstrated how cognitive structure can be beneficial in psychiatry issues. Cognitive structure allow us to implement a cognitive theory of death-rumination and make testable predictions about performance on a sustained thinking task. This leads to new avenues for better understanding what the exact mechanisms are that underlie death-rumination and changing behavior in general. For example, in line with the idea that habits of death thought are crucial for rumination, recent work. While we can educate patients about the possibility of cognitive and behavior changes, we are just beginning to learn about appropriate interventions that may attenuate changes in cognitive function and death-rumination. Has shown that changing thought patterns can reduce future fear-related to death-rumination. However, more research is needed to determine the efficacy of these interventions and the optimal doses for the management of changes in cognitive function in patients with cancer.

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