Cognitive Processes of Cancer Patients: A Major Threat to Patients’ Quality of Life

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ABSTRACT

Objective: To explore the effects of intrusive and deliberate rumination on the quality of life of cancer patients.
Study Design: Descriptive cross-sectional design.
Place and Duration of Study: PIMS and NORI Hospital between July to September 2016.
Methodology: A sample of 100 cancer patients participated in the study. The patients fulfilling the inclusion criteria were given a written consent form. Event related Rumination Inventory and WHO Quality of Life-Brief scale was used for data collection.
Results: There were 57 male and 43 female patients within the age range of 18 to 66 years (mean = 36.62 ± 13.77 years). A significant negative correlation was found between intrusive rumination and all domains of quality of life as physical (r = -0.28, p<0.01), psychological (r = -0.19, p<0.01), social (r = -0.20, p<0.01), environmental (r = -0.17, p<0.05), and global (r = -0.26, p<0.01) functioning. Furthermore, results on regression analysis showed the significant prediction of the intrusive rumination on all domains of quality of life. The effect of deliberate rumination was found to be non-significant.
Conclusion: Intrusive rumination significantly negatively predicted all domains of quality of life, whereas, quality of life of cancer patients was not significantly predicated by deliberate rumination.


INTRODUCTION

The diagnosis of cancer not only holds the agony and torment of physical deterioration but also carries psychological distress and maladaptive cognitive patterns, which are even more anguishing and exacerbate the wellbeing of patients.¹ This psychological encumbrance may persist for weeks or even for months and seriously hampers the satisfaction with one's life via lowering his health related quality of life.²⁻⁵ Exemplifying this trajectory, cognitive model of psychopathology postulates that experiencing any sort of catastrophe (physical or psychological) evokes cognitive distortions or intrusive thoughts related to the trauma which, in turn, debauches one's perception of his quality of life and engenders the feelings of discontentment.⁶⁻⁹

Traumatic experience, as sudden diagnosis of cancer, can be seen as instigating or sustaining certain cognitive processes. Tedeschi and Calhoun emphasised the importance of cognitive processes in the wake of traumatic situations to trauma.⁷ Researchers had affirmed different roles of cognitive processes in the form of intrusive and deliberate rumination.¹⁰ Intrusive ruminations are the impulsive invasions of individual's cognitive world; thoughts about the stressful event that one does not choose to bring to mind intentionally. Deliberate ruminations about events, however, are engaged in voluntarily thoughts; and can be focused purposefully on trying to understand event, its meaning and implications, as well.¹⁰

The situation is awful in developing countries like Pakistan where people with this fatal disease not only abide the physical excruciation but also bear the overwhelming economic burden, which increases the co-morbid psychological care cost. But unfortunately, less research has been conducted on the problem under study. Few studies explored the psychosocial impact such as aggressive and withdrawal behaviours,¹¹ psychosocial factors affecting patients' wellbeing,¹² and psychosocial issues (i.e., psychological capabilities affecting patients' choices for self-management).¹³ However, the cognitive aspects, which are the rudimentary or underlying mechanism of the psychological distress and perceived quality of life of cancer patients, have entirely been neglected. The present study was, therefore, purported to examine the impact of cognitive processes on quality of life of cancer patients.

METHODOLOGY

This study was conducted using a cross-sectional descriptive research design on a sample of 100 cancer patients. Sample size was determined using G power
Convenient purposive sampling technique was used in order to collect the data. Inclusion criteria of the sample selection involved histologically confirmed malignancy, diagnosis during the past six months, and minimum 18 years of age. Data was collected from Pakistan Institute of Medical Sciences (PIMS) and NORI Hospital of Islamabad with the permission from hospital authorities and the consent of patients themselves.

Urdu version of Event Related Rumination Inventory (ERRI) was used to measure cognitive processes of the patients. EIRRI measures two types of cognitive processes including intrusive rumination (e.g., "I could not keep images or thoughts about my disease from entering into my mind") and deliberate rumination ("I thought about whether I could find meaning from such experience"). The responses of inventory based on 20 items were recorded on a 4-point Likert scale from 0 (not at all) to 3 (often). There is no reverse coded item in the instrument. Cronbach's Alpha reliability coefficients for subscales have been reported from 0.88 to 0.94 in the original study.

Urdu version of WHO-Quality of Life-BREF was used to assess patient's satisfaction with quality of life. This 26-item self-reported inventory is composed of four subdomains, i.e. physical functioning, psychological functioning, social relationships and environmental functioning; and two items for measuring global quality of life. QOL-BREF is a 5-point Likert scale, ranging from 1 (not at all) to 6 (very much). Reverse coded items are 3, 4 and 26. Cronbach's Alpha reliability coefficients for subscales have been reported from 0.51-0.87 in the original study.

Pearson Product Moment correlation was computed to examine the relationship among the study variables, while multiple regression analysis was carried out to study the impact of cognitive processes (rumination) on the quality of life of cancer patients. SPSS-21 was used in order to analyse the results of current study. The level of significance (p) was considered as significant statistically, if p<0.05. Percentages and frequencies were calculated for categorical variables while mean values and standard deviations were calculated for continuous variables.

RESULTS

The age range of the sample (57 males and 43 females) was between 18 to 66 years (mean=36.62 ±13.77 years). Out of the total sample, 47% (f=47) of the patients had breast cancer, about 28% (f=28) had lung cancer, 8% (f=8) patients had stomach cancer, 5% (f=5) had gynaecological malignancies, 6% (f=6) had gastrointestinal tumors, and the rest of the patients had been diagnosed with malignancies in head and neck, ovarian, bone and soft tissue and blood etc. Forty-three percent (f=43) patients were currently undergoing chemotherapy, 14% (f=14) were undergoing radiotherapy, 6% (f=6) had been treated surgically, and 27% (f=27) of patients were under surveillance. Multimodality treatment in combination as surgery, chemotherapy and radiation; surgery and chemotherapy; radiation and chemotherapy; and surgery and radiation were given to 10% (f=10) patients.

The alpha coefficients of the measures, such as cognitive processes intrusive and deliberate rumination and quality of life (i.e., physical functioning, psychological functioning, social relationships, environmental functioning, and global functioning), showed that these scales were highly reliable, while the values of skewness and kurtosis indicated normal distribution of the data (Table I).

Intrusive rumination showed significant negative correlation with all domains of quality of life, i.e. physical functioning (r = -0.28, p<0.01), psychological functioning (r = -0.19, p<0.01), social relationships (r = -0.20, p<0.01), environmental functioning (r = -0.17, p<0.05), and global functioning (r = -0.26, p<0.01). Deliberate rumination, however, did not show significant relationship (p>0.05) with any of the domains of quality of life.

Results of multiple regression analysis (Table II) showed the prediction of the intrusive and deliberate rumination
on all domains of quality of life. Findings revealed that after controlling the affect of type of cancer, stages of cancer and the treatment given to the patient, intrusive rumination emerged as a significant negative predictor and hampered the patients' quality of life by explaining 11% variance in physical functioning (F=8.06**, p=0.001), 10% variance in psychological functioning (F=7.10**, p=0.001), 7% variance in social relationship (F=4.98, p=0.008), 10% variance in environmental functioning (F=6.77**, p=0.002), and 6% variance in global functioning (F=4.34*, p=0.015). No significant variance was accounted by deliberate rumination in quality of life of patients, i.e. physical functioning (p=0.933), psychological functioning (p=0.173), social relationships (p=0.146), environmental functioning (p=0.055), and global functioning (p=0.439).

**DISCUSSION**

The current study was purported to determine the effect of cognitive processes such as intrusive and deliberate rumination on quality of life of cancer patients. Findings of the study illustrated that in cognitive processes, intrusive rumination, being a significant negative correlate, significantly decreased the quality of life (i.e., physical, psychological, social, environmental and global functioning) of cancer patients. These results are quite congruent with the literature in hand, which shows that intrusive rumination or the obsessive distorted thoughts are, in fact, the reflections of unmet and unresolved problems/uncertainties, which may result in emotional distress and thus hamper the wellbeing and quality of patients' lives.17-19 These are undesired thoughts related to the traumatic experiences (i.e., being diagnosed with cancer) which are strongly associated with psychological maladjustment.20 However, the study also found that deliberate rumination remained a non-significant predictor for any of the domains of quality of life of cancer patients. Literature suggests that deliberate ruminations is the process of extracting meanings and making sense (positive spin-off) out of the traumatic experiences (i.e., being diagnosed with cancer), which comes after the extensive processing of intrusive ruminations.7,8 Since, the subjects in the present study had a recent diagnosis (maximum of 6 months) of cancer and were undergoing different painful treatments which rather exacerbated their sufferings, thus they were less likely to draw any positive byproduct out of their disease or trauma. Therefore, deliberate rumination did not accounted for a significant effect in explaining quality of life of cancer patients in the present study.

The study holds theoretical as well as practical implications. At theoretical level, the study added significant contribution in the indigenous literature by exploring the important psychological and cognitive constructs of the cancer patients, whereas on practical grounds, it may help clinicians and doctors in making the treatment procedures more efficient and sophisticated by incorporating psychological aspects of patients' lives.

**CONCLUSION**

The present study found that intrusive rumination had a significant negative relationship with quality of life and
significantly hampered each of the domains (i.e., physical, psychological, social, environmental, and global functioning) of patients' quality of life; whereas, deliberate rumination did not show a significant effect on any of these domains of quality of life.

REFERENCES