
Blunting as an Information Processing Style in Cancer Patients

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Abstract

The monitoring blunting hypothesis [4] examines the ways in which threat related information is cognitively processed under stress and explores the role of individual preferences to scan for (monitoring) or cognitively avoid (blunting) threat related cues in regulation of arousal and distress. Within this frame-work, the present report pertains to an empirical study of mental health correlates of blunting in hundred recently diagnosed cancer patients fulfilling specified criteria.

The pattern of results suggested that high blunting (compared to low blunting) assessed within ten days of cancer diagnosis was associated with perceived reduction in physical distress, low scores on depression and high scores on positive states of mind and positive affect, assessed seven weeks post diagnosis. Implications of the study results and future research needs are discussed.

Key words -

**Cancer,
Blunting,
Depression,
Positive states of mind**

Individuals differ in their ability and/or inclinations to process information related to threat, in face of an aversive or stressful event and such predispositions lead them to tune into and seek or tune out and cognitively avoid or transform threat related cues [1]. The efficacy or otherwise of such personal preferences in coping style depends partly on the extent to which the particular coping style is compatible with the ongoing demands inherent in the situation [2], [3]. In this context, the monitoring and blunting hypothesis provides a framework for examining the ways in which individuals cognitively process information about aversive events and attempts to delineate the conditions under which information increases or decreases arousal levels. Monitoring refers to the extent to which the individual remains sensitized to and keeps continuing to scan for threat relevant cues whereas blunting indicates the extent to which the individual is inclined towards cognitively avoiding or tuning out threatful information and thereby removing oneself from the psychological presence of danger signals. The available research data indicate that information seeking or high monitoring and low blunting tends to maintain high levels of stress, more so in situations where such a style has low instrumental value [1], [5], [6].

The present report focuses on the mental health correlates of blunting in recently diagnosed cancer patients. The main objective of this segment of the study was to examine whether subgroups of cancer patients identified to be high and low on blunting at the time of cancer diagnosis differ from each other on depression, positive states of mind, positive affect and perceived reduction in physical distress, as assessed during the initial treatment phase.

Material and Methods

Sample: Hundred cancer patients (sixty females and forty males, mean age: 38.6 years) fulfilling specified criteria for case inclusion constituted the sample of the study. The criteria set up were meant to restrict the age-range to 20 years to 60 years, exclude cases with severe physical impairment or debility and those with documented neurological involvement or organic lesions. In none of the cases, the duration between the date of diagnosis and the first point of assessment exceeded more than ten days. As far as the distribution of cases across different sites of cancer are concerned, cancer of cervix, breast and oral cavity constituted 28%, 18% and 16% of cases respectively.

Cancer of larynx, stomach, lung and oesophagus comprised 8%, 7%, 4% and 5% of cases respectively. Another 14% of cases fell in a miscellaneous category with varying diagnoses.

Tools Used

- a) The Miller Behavioural Style Scale [7] consists of four hypothetical stress evoking scenes of an uncontrollable nature. Out of the eight statements that follow each scene, half reflect a monitoring style and half reflect a blunting style. The individual is required to check all the statements that might be applicable for him or her. Monitoring and/or blunting measures may be derived by summing up all the items endorsed on monitoring and blunting subscales respectively. The test reliability indices in the 0.8 range have been reported over a three month period [7]. The scale has been validated in a variety of settings. It has been found to be unrelated to socio demographic variables (e.g. sex, race, age, educational or marital status) and to traditional trait measures such as anxiety, repression-sensitization, social desirability etc. The available data suggest that subjective and physiological concomitants of monitoring and blunting manifest themselves under high threat but not under low threat or non-threatening conditions [8], [9].
- b) Centre for Epidemiological Studies - Depression Scale [10], [11] was used to assess the severity of distress associated specifically with depression. The internal consistency of the sixteen items version (with a provision of four alternative response categories) has been reported to be 0.90 and the items have been found to load heavily on four factors, namely depressed affect, positive affect, somatic and retard activities and interpersonal difficulties [12].
- c) Positive States of Mind Scale [13] consists of six items with four alternative response categories. These items tap various aspects of desirable states of mind such as focused attention, productivity and responsible care giving. The data regarding its reliability and convergent as well discriminating validity have been reported by the authors.
- d) Positive Affect Scale was developed in the context of the present study for the purpose of assessing t [13] and the Depression Scale [10] used in the study.

In the pilot study phase, minor modifications in the wordings of items were made, wherever found necessary. For translation of scales into Hindi, translation - back translation procedure was used with the assistance of two sets of bilingual experts. In this phase, reliability as well as concurrent validity data for all the translated versions were re-obtained and their correlations with the original English

versions were also established.

It may be noted that in all the state measures (Depression, Positive States of Mind, Positive affect), Scale instructions were worded to include a uniform time-frame of 'about one week'.

Assessment Procedure

In the main study, assessments were carried out twice. The first assessment was carried out within ten days of cancer diagnosis (before treatment initiation), whereas the second assessment was carried out seven weeks post cancer diagnosis, in average. At the time of second assessment, the treatment (usually radiotherapy, singly or in combination with other treatment modalities) was in progress having been initiated about three weeks earlier. Blunting (predictor variable) was assessed only at the point of first assessment whereas Depression, Positive States of Mind and Positive Affect scales were administered at the first as well as the second point of assessment.

Results

As no standard cut off-points were available to be applied to the present study sample, in order to obtain sub-groups of patients high and low on blunting; the total sample of cases was divided into groups high and low on blunting by variables, at the point of first assessment (i.e., at one week post diagnosis) too; although on depression, the difference between high and low blunting groups fell short of statistical significance (Table I).

Table I - Comparison of groups high and low on blunting on different variables

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Note:

1. Figures within parentheses indicate standard deviations of the corresponding means.
2. Point-1: At the first point of assessment one week post cancer-diagnosis.
3. Point-2: At second point of assessment seven weeks post diagnosis.

In the low blunting group, depression scores rose significantly (Table II) from the point of first assessment, one week taking cases beyond ± 0.5 range. This method resulted in the formation of groups which differed significantly from each other on blunting ($t = 18.39$ $p < 0.01$).

Table II - Changes on depression scores in low blunting group from first to the second assessment

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Note:

- Point-1 - First point of assessment one week post cancer diagnosis
- Point-2 - Second point of assessment seven weeks post diagnosis.

Table I shows that the groups high and low on blunting, differed significantly from each other at seven weeks post diagnosis on depression, positive states of mind and positive affect. The group high on

blunting scored higher on positive states of mind and positive affect and lower on depression compared to the group low on blunting. A similar pattern of findings was obtained on all the post diagnosis to the point of second assessment, 7 weeks post cancer diagnosis.

In the group high on blunting 24 out of 33 (72.7%) reported that they perceived a significant reduction in their physical distress since treatment initiation whereas 9 (27.3%) did not perceive any such reduction. On the other hand in the low blunting group, 21 out of 44 (47.7%) reported significant reduction in physical distress as per their perception whereas 23 (52.3%) perceived no such reduction.

The chi square obtained ($\chi^2 = 4.8$, $df = 1$) was significant at 0.05 level. (Perceived reduction in physical distress was assessed during a semi-structured interview which was a part of the larger study).

In line with the above pattern of results, blunting (as assessed within ten days of cancer diagnosis) positively correlated with Positive States of Mind ($r = +0.23$ $p < 0.05$) and Positive Affect ($r = +0.27$ $P < 0.05$) as assessed seven weeks post diagnosis.

Discussion

In the present study, the high blunting group had lower scores on depression, and blunting also had a positive correlation with both the indices of well being used i.e. positive states of mind and positive affect. Moreover, the low blunting group showed a significant rise in depression from the point of first to the second assessment. This is in corroboration with earlier studies [6], [14], [15] which have indicated that in face of threatening events low blunters/high monitors experience higher levels of stress and demonstrate greater subjective and physiological morbidity than high blunters; more so in situations where levels of information available and/or the potential level of control is low or where information seeking has little instrumental value.

The finding of a positive association of blunting with well being indices is in line with the body of research evidence [5], [16] which suggests that individuals low on blunting/high on monitoring may be less likely to use effective stress modulation strategies for attention deployment in such a way as to be able to regulate their painful emotions by distancing themselves from the psychological presence of danger. Another set of studies [2], [17] have indicated that individuals high on monitoring/low on blunting are less likely to perceive their coping strategies as effective in modulation of their distress compared to those high on blunting/low on monitoring. The present study design does not permit the examination of the extend to which, success in modulation of painful emotions and a sense of self efficacy might have contributed to the generation, maintenance or decelerated rate of deterioration of positive states of mind and positive affect, in the high blunting group compared to the low blunting group.

Those high on blunting compared to those low on blunting were more likely to report a perceived reduction in physical distress, during the study span. This is in corroboration with the findings of previous research [5] which indicates that low blunters (& high monitors) are more likely than high blunters (& low monitors) to scan for, not only external threat relevant information but also for internal bodily cues and are found to be more inclined to detect or overinterpret new or changing physical symptoms and exhibit slower rates of improvement.

On the whole the present study results show an association of blunting with indices of positive mental health in recently diagnosed cancer patients. These results that strengthen the hypothesis regarding the

efficacy of high (compared to low) blunting need to be viewed in the context of the research evidence which indicates that the effectiveness of a particular coping style is influenced by its compatibility with the ongoing situational demand. Such coping demands imposed by a situation tend to change with the passage of time [18]. Time frame of the study ranged from the point of cancer diagnosis upto the later phases of the initial treatment regimen. The major adaptational demands during this phase of study included: initial attempts at resolution of crisis reactions to cancer diagnosis, attempts at familiarising oneself with the task of remaining for prolonged periods in the oncology-settings, undergoing laborious routines of investigations and adjusting to the arduous treatment regimen. These are more or less qualitative different from the adaptational demands during the period preceding diagnosis (e.g. early attention to the signs and symptoms of illness and efforts to seek professional help without delay) and those during the later phases of the treatment/remission of symptoms. It may be speculated that the situational demands during the period immediately following cancer diagnosis (when crisis resolution to cancer diagnosis is just beginning to occur), favour blunting as the coping style. This becomes more likely in the situations wherein the copious amounts of information desired by those low on blunting/high on monitoring is not forthcoming or has low instrumental value in changing the threatful nature of the event. In the present study, although no formal situational analysis was carried out, qualitative observations tended to indicate a trend towards provisions of minimal level of information, routinely at nodal points such as at the time of diagnosis, upon formulation of the treatment plan etc. It may be speculated that the non-availability of copious amounts of information regarding the illness, treatment and prognosis etc. as well as the probable low functional value of such information in the time frame of the study may have led to an additional advantage in the use of high blunting as the coping style.

The extent to which the obtained patterns of relationships of blunting monitoring with indices of mental health change over time and with changes in situational demands across different health care settings is an issue which needs to be addressed in future studies Moreover, a relatively little explored but potentially fruitful line of enquiry relates to individual differences with regard to skills in appraisal of situational demands and flexibility in the use of coping strategies.

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