Psychological Distress and Adversarial Growth among Cancer Patients

Vijay Viegas\(^1\) and Joslyn Henriques\(^2\)

\(^1\)Abbe Faria Post Graduate Department of Psychology, St. Xavier’s College, Mapusa – Goa, India. 
\(^2\)Department of Psychology, Dhempe College of Arts and Science, Miramar-Goa, India. 
*Corresponding Author E-mail : vijaygoa24@gmail.com

https://dx.doi.org/10.13005/bpj/2002

(Received: 22 February 2020; accepted: 22 July 2020)

The diagnosis of cancer and its treatment is a traumatizing occurrence that creates psychological distress in almost all cancer patients. The psychological distress that these patients experience could reduce their responsiveness to the treatment they are undergoing and could lead to protracted hospitalization. In order to provide the best possible care and interventions to patients battling cancer, it is paramount to identify the patients who over the course of the disease are most likely to experience psychological distress. Thus, the present study was intended to examine the relationship between psychological distress and adversarial growth among cancer patients and to understand whether sex influences the variables under study. Methods: A prospective cohort of patients with cancer (n=7230) were recruited from public hospitals in Goa. A convenient sampling technique was employed. The tools used for data collection were the brief symptom inventory by Derogatis (1975) and the silver lining questionnaire by Södergren and Hyland (2000). Descriptive statistics, Karl Pearson’s product-moment correlation, and t-test were used to analyze the data. Results: Results indicated a significant negative correlation between psychological distress and adversarial growth among cancer patients (r = -0.62, P<0.01). Significant differences were found in psychological distress (t = 1.48, P<0.01) and in adversarial growth (t = 0.11, P<0.05) among cancer patients as a function of sex. Conclusion: An Inverse Relationship Exists Between psychological distress and adversarial growth. Female cancer patients showed higher psychological distress while males showed higher adversarial growth. These findings thus have significant implications for the adherence of these patients to the treatment that they are undergoing and to the outcomes of the treatment. It is, therefore, reasonable to incorporate screenings and psychosocial care as a part of the routine for cancer patients who are undergoing treatment.

**Keywords:** Adversarial Growth; Cancer Patients; Psychological Distress.
as strong of a negative stigma as cancer”. Hence, this negative stigma that people have, can generate fears which can affect how a person responds to a cancer diagnosis. Research evidence suggests that as people battle with the likelihood of an unpredictable disease trajectory, they experience an unending ambiguity about what is to come, no matter what the type of cancer is.3

Numerous research studies suggest that about 30% of patients can experience psychological distress or other mental health conditions that are significant, on being diagnosed with cancer4-7. Research has also found that hopelessness, anxiety, fear, and depression besides the feeling of pain, are associated with the reception of a cancer diagnosis.8 The consequences of the illness too could lead to psychological distress among the patients9. According to some more research reports, among cancer patients, the common psychiatric disorders that follow the use of adjuvant therapy include anxiety, fatigue, adjustment disorder, and depression.6, 10-11 The psychological distress that is ubiquitous in patients with cancer, is linked to lesser chances of survival of these patients.12-14 This psychological distress is likely to occur at any time during the disease trajectory and has the possibility of worsening with time.13, 15 The psychological distress experienced has been found to affect the patient’s quality of life.16-17 Evidence also indicates that the patients are likely to have poor social functioning, poor emotional wellbeing, and poor general health.18

As indicated by the numerous research studies cited above, psychological distress among cancer patients is inevitable, the diagnosis of a terminal illness can wreak havoc in anyone’s life. The patient could be stunned, shocked and could be immersed by strong emotions. However, with time, many patients could begin finding meaning during their time of illness. Research has indicated that these benefits could include improved interpersonal relationships, a greater appreciation of life, a change in priorities, and greater spirituality.19 The positive benefits also include a re-evaluation of former goals, an alteration of priorities, personal growth, and the unearthing of skills and new pursuits.20-25 This phenomenon has been referred to by psychologists as adversarial growth or posttraumatic growth. Tedeschi et al. define adversarial growth as “positive psychological changes experienced as a result of the struggle with traumatic or highly challenging life circumstances”.24 There is increasing evidence available over the last few decades, which suggests that life-threatening illnesses can not only lead to an increase in psychological distress but it could also lead to positive life changes.26-28 Exhibiting hope and optimism during illness are linked to positive health and thus, lower rates of depression, anger, and better adjustment to negative outcomes and eventually, longer survival rates than patients who are pessimists.19 Therefore, during the trajectory of the illness, even with high levels of psychological distress, patients could simultaneously experience positive feelings29-31 which suggests that both negative and positive feelings may be viewed as a two-dimensional construct and not as two extremes on a continuum.32-36

Based on the knowledge of the authors and a thorough literature review, there is a scarcity of research carried out on the psychological distress and adversarial growth among cancer patients. There is also a paucity of studies on sex differences in psychological distress and adversarial growth among cancer patients. Research studies in the Indian context are a bare minimum. Thus, the primary objective of the present study was to examine the relationship between psychological distress and adversarial growth among cancer patients and to examine significant differences in psychological distress and adversarial growth among cancer patients in relation to sex. A better understanding of the mental health of cancer patients can help create awareness and could help in developing interventions that could develop adversarial growth.

**MATERIALS AND METHODS**

**Objectives of the Study**

To examine the relationship between psychological distress and adversarial growth among cancer patients.

To examine significant differences in psychological distress and adversarial growth among cancer patients with regard to sex.

**Hypotheses of the Study**

**Ha1**

There exists a significant and negative correlation between psychological distress and
adversarial growth among cancer patients.  

Ha2  
Significant differences exist in psychological distress among cancer patients as a function of sex.  

Ha3  
Significant differences exist in adversarial growth among cancer patients as a function of sex.  

Sample  
A prospective cohort of patients with cancer (n=230) was recruited from public hospitals in Goa. A convenient sampling method was employed and based on the availability of the sample group, male and female participants between the age range of 30-55 years were included in the current research. The patients diagnosed previously with any psychiatric condition were excluded from the study.  

Tools Used for Data Collection  

Personal Data Sheet  
Included socio-demographic information about the sample.  

Brief Symptom Inventory  
The brief symptom inventory by Derogatis et al. (1975) measures psychological distress experienced by an individual. The inventory comprises of 53 items which are ranked on a five-point scale that ranges from 0 (not at all) to 4 (extremely). The items on the inventory cover nine symptom dimensions which include: somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The scale also consists of three global indices that measure the current or past level of symptomatology (global severity index), the intensity of symptoms (positive symptom distress index), and the number of reported symptoms (positive symptom total). For the purpose of this study, only the global severity index was considered.  

Silver Lining Questionnaire  
The silver lining questionnaire by Sodergren and Hyland (2000) measures adversarial growth based on three factors: changes in life philosophy, changes within the self, and enhanced relationships. The questionnaire consists of 38 items which are rated on a five-point scale ranging from strongly agree to strongly disagree. For the purpose of this study, the total score on the scale was considered.  

Procedure  
The respondents were contacted personally, the purpose of the visit was made known to them, and their consent was sought for participation. Written informed consent to participate and view their medical records, was obtained from the patients who agreed to participate in the study. No identifying information was included in the questionnaires, in order to ensure anonymity. The medical records of the participants were viewed in order to confirm the validity of the diagnosis, date of diagnosis, treatment method, and the stage of the disease. The data for the study was collected from 130 cancer patients (62 Males, 68 Females) admitted in public hospitals in Goa. The tools used for data collection included the brief symptom inventory by Derogatis et al. (1975) which was used to measure the level of psychological distress in the cancer patients; and the silver lining questionnaire by Sodergren and Hyland (2000) which was used to measure adversarial growth in the sample group. Upon completion of the questionnaires, the participants were debriefed about the study and thanked for their participation. The questionnaires were then scored and subjected to statistical analysis.  

Tools used for Statistical Analysis  
On completion of the data collection, the collected data was scrutinized, scored, and coded. Descriptive statistics, Karl Pearson’s Product Moment Correlation, and t-test were used to analyze the data.  

RESULTS AND DISCUSSION  

Relationship between Psychological Distress and Adversarial Growth among Cancer Patients  
The relationship between psychological distress and adversarial growth among cancer patients was examined using Karl Pearson’s product-moment correlation. As indicated in table 1, the correlation coefficient was found to be -0.62 showing a moderate negative correlation which is highly significant (P<0.01). This indicates that the higher the psychological distress, the lower will be the adversarial growth and vice versa.  

Receiving a cancer diagnosis can cause a complete disruption in the life of almost any person creating a threat to their sense of security and order in life. Besides experiencing pain associated
with the illness, the patients could experience hopelessness, fear, anxiety, and depression. As per the findings of Singer et al., Mitchell et al., and Vehling et al., about 30% of patients can suffer from psychological distress when diagnosed with cancer. This is probably because there is a lot of negative stigmas attached to cancer – that cancer represents pain, suffering, and eventually death. People hold on to these deeply rooted fears even though with advancements in the medical field, most cancers are now treatable. No matter what the type of cancer is, people keep experiencing uncertainty about what is to come and deal with the likelihood of an unpredictable course. The psychological distress that these patients experience could eventually make the person feel hopeless and thus the person may not be able to see anything positive. To worsen things, higher levels of psychological distress could hinder a patients’ prognosis thus making him/her susceptible to more pain and thus elevating the levels of distress.

Psychological distress could be probably very high when the person just receives the diagnosis. However, with time, and with appropriate social support, the person may begin to see the illness more positively. Their interpersonal relationships may improve and they may begin to have a greater appreciation for life. They may also unearth new skills and pursuits. All these positive changes could decrease the level of psychological distress.

The above finding is supported by research conducted by Stiegelis et al. who in their study discovered that the higher the psychological distress, the lower was the positivistic outlook. This finding is also supported by a study by Ackroyd et al. who found that psychological distress is reduced if the positivistic outlook is enhanced in cancer patients. This would automatically reduce the psychological distress experienced by the patient and thereby also help in the treatment.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Distress</td>
<td>106.80</td>
<td>55.12</td>
<td>-0.62**</td>
</tr>
<tr>
<td>Adversarial Growth</td>
<td>125.20</td>
<td>40.05</td>
<td></td>
</tr>
</tbody>
</table>

**Significant at 0.01 level

<table>
<thead>
<tr>
<th>Sex</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Distress Male</td>
<td>93.13</td>
<td>58.70</td>
<td>1.48**</td>
</tr>
<tr>
<td>Female</td>
<td>122.43</td>
<td>48.50</td>
<td></td>
</tr>
</tbody>
</table>

**Significant at 0.01 level

<table>
<thead>
<tr>
<th>Sex</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adversarial Growth Male</td>
<td>126.07</td>
<td>33.88</td>
<td>0.11</td>
</tr>
<tr>
<td>Female</td>
<td>124.44</td>
<td>45.88</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 0.05 level
Differences in Psychological Distress among Cancer Patients with Regard to Sex

An observation of table 2 which indicates the mean, standard deviation scores and t-value for psychological distress as a function of sex, reveals that the mean scores for male and female cancer patients were 93.13 and 122.43 respectively with corresponding standard deviations of 58.70 and 48.50. The t-value was computed to be 1.48 which was found to be highly significant (P<0.01), thus indicating that significant differences exist in psychological distress among cancer patients with regard to sex. Comparing the mean scores, it is observed that female cancer patients have higher psychological distress as compared to male cancer patients.

A possible reason for this finding could be that receiving a cancer diagnosis could cause a psychological blow that can lead to cognitive and emotional crises and obstruct distress among the patients.\textsuperscript{39-41} With regard to women, the blow may be worse for several reasons. First of all, cancer can be more troublesome for the roles that women play than the ones that men play. Women are usually portrayed by traditional ideas of feminity as caring, nurturing, and compassionate.\textsuperscript{42} Rather than prioritizing their own needs and accomplishments, women are socialized to prioritize the needs of their families and to nurture and care for others. Research evidence also indicates that women are more responsive to others’ needs (emotional and physical) and indulge in care work more often than men.\textsuperscript{43-44} Therefore, even when women suffer from chronic illnesses, they are more likely than their male counterparts to be confronted with the continuing demands of the household and thus, to neglect their own health because of their family responsibilities.\textsuperscript{45} While on the other hand, when males suffer from chronic illnesses, they are usually cared for and nurtured by their wives and other family members.\textsuperscript{46-47} When women juggle multiple roles and simultaneously deal with their illness and the physical symptoms of the illness, their resources are likely to get exhausted thus leading to problems in adjustment and distress.\textsuperscript{48} In order to recover from the illness, a woman would require to put themselves first and prioritize their needs, but, the breaking gender norms of putting the needs of others first could create stress and could lead to an identity crisis among these women. Moreover, a women’s distress could increase with the guilt of putting a burden on others because of their illness.\textsuperscript{49} Since women accept more family obligations and providing of care and cast a more extensive net of worries than men do,\textsuperscript{47} this passionate expense of caring may build women’s’ defenselessness to stressors thereby making them more prone to psychological distress as compared to men.\textsuperscript{44}

As per the National Cancer Institute,\textsuperscript{50} “despite the fact that men face a more prominent lifetime risk of cancer, women are more likely to be diagnosed with cancer earlier in life”. Receiving a cancer diagnosis at a more youthful age, particularly before the age of 45, is related to more significant levels of misery contrasted with more established ages.\textsuperscript{51-52} A conclusion of malignant growth might be a significant stun for more youthful individuals, while more seasoned individuals are probably going to envision the beginning of constant disease with cutting edge age.\textsuperscript{53} More youthful female patients go up against the chance of imperilled regenerative capacity and early menopause, which may affect their self-concept.\textsuperscript{54} Women who are younger when diagnosed with cancer may feel disconnected from their friends and may encounter neglected childcare needs and monetary glitches due to their sickness.\textsuperscript{53}

Further, as concluded by Yoshiuchi et al.,\textsuperscript{56} “changes in appearance cause serious distress for cancer patients, which is manifested as five D’s: Death; Dependence on family or medical staff; Disfigurement; Disruption of life, purpose or desire; and Disability”. With regard to women, cosmetic issues can undoubtedly influence their mental state and personal satisfaction. Past investigations demonstrated that women with breast cancer experience the ill effects of mental misery because of unfriendly impacts and long-lasting physical deformation.\textsuperscript{57} Irreversible changes as well as transitory changes in appearance, for example, chemotherapy-instigated alopecia, additionally affect the mental health of these patients.\textsuperscript{58-59} Additionally, these changes in appearance may identify with sexuality issues.\textsuperscript{60}

This finding is bolstered by Hagedoorn et al.\textsuperscript{61} and Sterba et al.\textsuperscript{62} whose reviews uncovered that female cancer patients as well as female partners of male cancer patients had mental trouble and low personal satisfaction. Research by Bultz
and Carlson and Stommel et al. likewise reveal that among patients with cancer, women report more significant levels of psychological distress as compared to men. **Differences in Adversarial Growth among Cancer Patients as a Function of Sex**

The mean, standard deviation scores, and t-value for adversarial growth as a function of sex can be seen in Table 3. As depicted in the table, the mean scores for male and female cancer patients were found to be 126.07 (SD 38.88) and 124.44 (45.88) respectively. The t-value was computed to be 0.11 (P< 0.05). Hence, comparing the mean scores, it is observed that males have a higher adversarial growth as compared to females.

Cancer is normally seen as a perilous and conceivably horrendous ailment, recognitions exacerbated by its surprising beginning and wild nature. Besides, cancer patients need to cope with the changes caused due to the ailment to which they need to adjust during their treatment direction. Regardless of generous trouble that is related to the diagnosis of cancer and its treatment, numerous patients show unprecedented versatility. Studies have indicated that weakening malignant growth and its treatment can be a possibility for self-awareness, just as for upgraded mental and enthusiastic prosperity that might be related to better adapting to the demands related to the illness. In any case, not every person responds to afflictions similarly, with some stronger than others.

As found in the current study, males have better adversarial growth than women. A potential explanation behind the above finding could be that women usually shuffle a larger number of jobs than men, and when women should at the same time manage their ceaseless ailment, their assets may get depleted, prompting change issues and pain. Breaking gender norms could lead women to engage in negative ruminative contemplations that they are unequipped for doing what society or their family expects of them. In addition, the pain that women experience might be exacerbated by the guilt of troubling others with their disease. Research indicates that women have more ruminative thoughts as compared to men and these negative ruminative thoughts have been associated with higher levels of depression in women. Therefore, brooding on negative thoughts regarding their ailment and their incapability to function like they used to before the illness, may affect the adversarial growth of women. On the other hand, when males experience any chronic illness, they tend to rely on their independence.

The current study aimed at investigating the relationship between psychological distress and adversarial growth among patients with cancer and examining significant differences in psychological distress and adversarial growth among cancer patients with regard to sex. Our study found a significant and negative correlation between psychological distress and adversarial growth among cancer patients, thus indicating that higher levels of psychological distress would lead to lower adversarial growth and vice versa. Significant differences were found in psychological distress among cancer patients with regard to sex with female cancer patients scoring higher on psychological distress than males. Significant differences were also found in adversarial growth among cancer patients with regard to sex with males obtaining a higher score on adversarial growth than females. A better understanding of the psychological distress experienced by cancer patients can help in raising awareness and could also help in developing interventions that could develop adversarial growth. Further, understanding the components that separate cancer patients and cancer survivors who experience adversarial growth from those who do not, might have critical clinical ramifications and could help guide interventions to help cancer patients and cancer survivors with their recuperation from cancer.

The results of the current study highlight primary data on the incidence of psychological distress and adversarial growth among patients with cancer in the state of Goa. Finding a way to diminish the psychological distress not just improves the quality of life among patients with cancer but also helps them to adhere to the treatment. Routine screening should be attempted and psychosocial support services ought to be accessible for these patients. Future research could incorporate the level of psychological distress before and after treatment and differences in psychological distress among patients with different types of cancer. Further research could likewise be attempted to examine the viability of psychosocial support and endeavors to improve techniques to reduce psychological distress.
distress and increase adversarial growth among these patients.

ACKNOWLEDGMENT

We are thankful to the doctors at the hospitals that we visited for granting us permission for conducting our research on their patients. We are exceptionally grateful to all the participants who shared their precious time and contributed to our study.

REFERENCES

50. Kroenke CH, Rosner B, Chen WY, Kawachi I,


