Psychological Correlates of Breast Cancer: An Exploratory Study

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ABSTRACT

Despite the tremendous success attained by the biomedical model in the 20th century for the diagnosis and treatment of fatal diseases, the present scenario necessitates the incorporation of the social, psychological, physiological and even spiritual aspects of person’s life, thus adopting a holistic approach for the betterment of mankind. Evidences suggest that occurrence of diseases like Coronary heart disease, Cancer, Diabetes, etc. is attributable to individual personality type, perceived stress, coping and life style to a great extent. On similar lines, the present piece of research work stresses on identifying the relation of personality, stress, Type ‘C’ coping style and emotional intelligence with breast cancer. Specifically, two groups of women, i.e. breast cancer patients (N=20) and normals (N=30) were compared for aforesaid variables. Four subscales of Karolinska Scale of Personality namely, detachment, social desirability, indirect aggression and inhibition of aggression; Type C Behaviour Questionnaire Perceived Stress Scale and Emotional Intelligence Scale were administered individually. Results indicated significant differences in inhibition of aggression, stress, other’s emotion appraisal, use of emotion and emotional intelligence between breast cancer patients and their normal counterparts, suggesting the importance of psychological factors in the occurrence and management of breast cancer. Findings stress upon integrating psychological principles into general medicine and understanding disease prone personality types. Further, identification of the psychological vulnerability of high risk persons aids in promoting preventive strategies for better health and well being.

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Today the major health problems of the world stem from chronic diseases that develop, persist or recur over a long period of time. These disorders specifically include Cancer, Cardiovascular Disease (CVD), Diabetes and AIDS. Although these diseases are not new, the proportion of people who die of them has increased drastically since 1900. Specifically, death rates from cancer have increased more than threefold during the first decade of the 20th century. Worldwide nearly 20 million people are alive with cancer today, by year 2015 AD, there will be 30 million. In fact, cancer is the third largest killer disease (World Health Report, 2001) and will become an increasingly important fact in the global burden of diseases in the decades to come. The estimated number of new cases each year is expected to rise from 10 million in 2000 to 15 million by 2020 (WHO, 2002). Similarly, the WHO health report (1999) estimated 30.9 per cent of all deaths in 1998 as well as 10.3 per cent of the total disease related burden as attributable to CVD. By 2015, CVD will account for 34 per cent of all male deaths and 32 per cent of all female deaths in India. And thus cancer and cardiovascular diseases are likely to remain the two leading causes of death for a number of years.

Though, all these diseases result from an interaction of genetic, behavioural and environmental conditions, evidences suggest that occurrence of these diseases are attributable to individual behaviour and life style to a great extent and thus psychology has become involved in health care and other health related issues. An individual’s risk of heart disease or lung, throat, or bladder cancer is greatly increased by smoking cigarettes, leading a sedentary life, and consuming a high fat diet. Each of this behaviour is rooted, to varying degrees, in psychological and social factors.

These facts and findings laid the importance of integrating psychological principles into general medicine for the identification, management and prevention of these killer diseases. More specifically, understanding of these disease prone personality types and psychological vulnerability helped in identifying the high-risk persons and promoted prevention through community programmes. Thereby, an alternative holistic approach to medicine had been advocated which considered social, psychological, physiological and even spiritual aspects of person’s health. Consequently, the Psychosomatic Medicine (Mc Hugh & Vallis, 1986); Behavioural Medicine (Schwartz & Weiss, 1978); Behavioural Health (Matarazzo, 1980); Health Psychology (APA, 1976); Psycho-oncology (Holland, 1998); Clinical Health Psychology (Belar, 1997) have emerged significantly.
Moreover, with recent advances in psychoneuroimmunology (PNI), researches are paying more attention to psychological factors, in particular, the role of stress in development of cancer and other diseases. In humans, stressful events—excessive exercise, exams, divorce, bereavement, caring for a terminally ill relative, environmental catastrophe, unemployment, and occupational environment, have been shown to affect immune functioning (Herbert and Cohen, 1993). Delahanty and Baum (2001) have found that women with breast cancer typically have lower T and NK cells counts and activity levels in comparison to healthy women. Lower levels of immune activity are also linked to decreased cancer survival times, as well as greater (and faster) cancer recurrence (Delahanty and Baum, 2001).

However, the question of who is likely to get cancer is a difficult one. There are many types of cancer from breast cancer to skin cancer to leukemia and many individual factors, such as gender, age and ethnic background affect this susceptibility. Although overall a higher percentage of men (43.48%) develop cancer than women (38.34%), women are more likely to develop any cancer before age 60. Further, women are more commonly diagnosed with breast cancer and men with prostate cancer. However, lung cancer is the top killer of both genders.

Specific to the breast cancer is that its incidence is rising in every country of the world especially in developing countries such as India. This is because more and more women in India are beginning to work outside their homes, which allows the various risk factors of breast cancer to come into play. These include late age at first childbirth and shorter duration of breast-feeding. The incidence varies between urban and rural women (www.doctorndtv.com). About five per cent of breast cancer are hereditary, i.e., due to genes being transmitted either from father or from the mother. Thus, the family history of breast cancer increases the risk, if a women has a mother, suffered from breast cancer, her risk increases about three fold while having a sister with cancer, the risk increases by about 2-3 fold. Globally, breast cancer was the leading site of cancer in women accounting for 376,000 deaths, followed by cancer of stomach (208,346 deaths) and colon rectum (252,000) deaths, cervical cancer ranked fourth, and accounted for 247,000 deaths in women in 1996.

Perhaps, Cancer is the most feared disease and it is thus not surprising that people worry about cancer, especially those at higher risk of experiencing the disease in their life times (McCaul, Branstetter, O'Donnell, Jacobson and Quinland, 1998). McCaul and Mullens (2003) proposed three possible relationships between worry and breast cancer screening. Worry about cancer
prompts denial of vulnerability and avoidance of thinking about cancer, thus serving as a barrier to engaging in self protective behaviours. A second hypothesis suggests that brief emotional moments of fear will serve to motivate self-protective behaviour. And, finally a curvilinear hypothesis explains that activating high levels of negative affect and anxious arousal prompts maladaptive avoidant ideation — avoidant thinking that reduces intentions to perform the self-protective behaviour.

Whatsoever, in relation to causative role of relevant psychological factors in cancer proneness number of researches highlighted the same. Greer and Morris (1978); Dattore, Shontz and Coyne (1980) investigated the relationship between suppression of emotions and cancer. Further, these results showed that cancer patients were not only more likely to suppress emotions but also to score high on the depression scale of the MMPI years before they developed cancer.

Specifically, the role of personality factors in development of cancer has been suspected for centuries Leshan & Worthington, 1956. Early researches attempted to tie specific cancers to particular personality structures. For example, breast cancer was attributed to conflicts surrounding motherhood and femininity, inability to discharge negative emotions and unresolved hostility towards the mother (Rennekar & Cutler, 1952). Another line of investigation explored the idea of cancer prone personality — an individual who is easy going and acquiescent, repressing emotions that might interfere with smooth social and emotional functioning. The cancer prone person is described as inhibitive, oversocialised, conforming, compulsive and depressive. Temoshok & Dreher (1992) defined an “immunosupression prone” personality pattern in AIDS patients, which is similar to the “Type C” coping style observed with cancer patients. Compliance, conformity, self-sacrifice, denial of hostility or anger and non-expression of emotions were qualities associated with an unfavourable prognosis in cancer patients. Moreover, Type C seems the exact opposite of the Type A individual (angry, hard driving), a high-risk candidate for heart attack. The Type C person always has to feel happy and in control. Thus cancer prone personality is characterised by a tendency to suppress the expression of emotion and an inability to deal with stress, leading to feeling of hopelessness, helplessness and finally, depression (Eysenck, 1990). More recently, unmitigated communion has been linked to depressive symptoms among women with breast cancer along with poor mental and physical functioning (Helgeson, 2000).

Grossarth Maticek Eyseact & Vatter (1988) clearly demonstrated that personality is a major risk factor in cancer and CHD. They found that persons prone to certain kinds of illnesses showed different types of reactions to interpersonal stress. These different behaviour types are related to cancer, CHD, and endogenous depression (Schmitz, 1992).

Thus, there is enough evidence to suggest that occurrence of these diseases are attributable to individual personality type, coping style, perceived stress and life style to a great extent. Considering such diverse and vast perspectives of these lifestyle and fatal diseases, the present study primarily focuses upon cancer and that too upon breast cancer from the standpoint of biological, psychological and social factors acting together. Specifically, the present research work stresses on identifying the role of some psychological factors as related to breast cancer. In particular, it studies the relationship of personality, Type C coping style, stress and emotional intelligence with breast cancer and thus compares the breast cancer patients with their normal counterparts on aforesaid psychological attributes.

METHOD

Design: The ex post facto research design using criterion and control group has been used for the present study. 20 females diagnosed with breast cancer comprised the criterion group and a homogenous group in relation to socio-demographic variables of 30 females formed the control group. The two groups are compared for the probable psychological correlates of breast cancer.

Sample: The sample of the present study was drawn from R.K. Birla centre, SMS hospital. 20 breast cancer patients were taken for the study as the criterion group. Another group was drawn from normal women population who were not suffering from any of the disease, for these 30 women were taken as control group. Age range of both the group of women was 35 to 45 years. Groups were equated for relevant socio-demographic variables.

Tools: The following questionnaires were selected and administered to the chosen sample:

   Four subscales are of relevance of the present study. These are detachment; social desirability; indirect aggression and inhibition of aggression.

2. Type C Behaviour Questionnaire (Temoshok & Dreher 1992).

Procedure: After the selection of appropriate questionnaires for the research work, the chosen sample of patients (breast cancer) were administered the selected questionnaires. Data were also collected from a control sample of subjects (females). The respondents were assured of the confidentiality. Scoring was done for each of the scale used. For the purpose of observing psychological differences between cancer patients and control women t-ratio was computed.

RESULTS

<table>
<thead>
<tr>
<th>Variables</th>
<th>Breast Cancer Patients (N=20)</th>
<th>Control group (N=30)</th>
<th>(t-ratio)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Detachment</td>
<td>14.50</td>
<td>4.76</td>
<td>13.03</td>
</tr>
<tr>
<td>Social desirability</td>
<td>20.30</td>
<td>3.74</td>
<td>23.47</td>
</tr>
<tr>
<td>Inhibition of aggression</td>
<td>20.20</td>
<td>3.14</td>
<td>16.20</td>
</tr>
<tr>
<td>Indirect aggression</td>
<td>5.70</td>
<td>3.03</td>
<td>4.97</td>
</tr>
<tr>
<td>Stress</td>
<td>18.30</td>
<td>3.81</td>
<td>13.47</td>
</tr>
<tr>
<td>Self emotions appraisal</td>
<td>11.85</td>
<td>2.48</td>
<td>13.13</td>
</tr>
<tr>
<td>Other emotions appraisal</td>
<td>11.15</td>
<td>2.37</td>
<td>12.47</td>
</tr>
<tr>
<td>Use of emotion</td>
<td>10.20</td>
<td>3.17</td>
<td>12.73</td>
</tr>
<tr>
<td>Regulation of emotion</td>
<td>12.30</td>
<td>2.75</td>
<td>11.83</td>
</tr>
<tr>
<td>Emotional intelligence</td>
<td>45.50</td>
<td>9.36</td>
<td>50.17</td>
</tr>
<tr>
<td>Type C behaviour</td>
<td>45.55</td>
<td>7.07</td>
<td>42.80</td>
</tr>
</tbody>
</table>

* 0.05 levels.

Table 1 gives a picture of results so obtained and reveals that there are significant differences in some of the variables among breast cancer patients and normal women, suggesting the relation of psychological factors in the occurrence and management of breast cancer.

Examining the means, it is clear that mean score of 20.20 on inhibition of aggression for cancer patient was quite higher than that of control group women (16.20). This mean difference is highly significant indicating that
those suffering from the disease have a tendency to inhibit their aggression and offer an emotional resistance to their thoughts or actions when compared to normals. Control subjects are quite expressive and do not inhibit aggression but express it the way they feel and there is no suppression of emotions.

Results table also reveals stress level of breast cancer patients as quite high to the normal women. The mean value for cancer patients was found to be 18.30 and for control it was 13.47 showing that there exists a significant difference in the means of the two.

Comparison of emotional aspect Intelligence of breast cancer patients with control group women did not reveal significant difference on other’s emotions appraisal for which the mean for breast cancer patients corresponds to 11.15 and the same for normal was 12.47 and on use of emotion where the mean for cancer patients was 10.20 and the same for control group it was 12.73. With regards to overall emotional intelligence the mean for patients was 45.50 and for control group it was computed to be 50.17, showing that there is significant difference in the emotional intelligence of breast cancer patients and control group women. To put in more specific words, emotional intelligence of control group women was found to be markedly better than the cancer patients.

However, Type C behaviour as such did not differ significantly in the two groups, still on some important grounds like inhibition of aggression, level of stress and emotional intelligence, it can be assumed that patients show some of the important features of Type C behavioural style but not a clear portrait of such type. Overall the results reveal the significant relationship of inhibition of aggression, level of stress, and managing one’s own with breast cancer in women.

**DISCUSSION**

The findings of the present study are supported by one of the early studies by Greer and Morris (1978) who investigated the relationship between suppression of emotion and cancer. In this prospective study, women admitted to a hospital for biopsy of a lump in breast. All had reasons to be anxious while waiting for their test results. They placed women into one of three groups — (1) Those who suppressed emotions. (2) Those who were extreme in their expression of feelings. (3) Those who were apparently normal in their emotional response. Five year follow up study revealed that suppression or denial of anger was significantly related to increased chances of a later diagnosis of breast cancer.
Many earlier and recent researches have shown the impact of the immune surveillance theory saying that immune cells constantly patrol the body for abnormal cells, which they hunt down and kill. However when the immune system is overwhelmed by number of cancer cells or weakened by stress the immune surveillance system is suppressed and cancer may develop (Holland 2002). Further, it has been evidenced that stress has been associated with both autonomic and immune dys-regulation and the onset of a number of diseases including CHD and cancer (Bennett, 2000).

More specifically, some investigators have advanced the notion of a cancer prone personality (Bahason, 1981; Renneker, 1981; Scherg, 1987; Solomon, 1987) and the Type C coping style (Temoshok, 1987; Temoshok & Dreher, 1992). In Indian context, the role of personality in relation to cancer and similar fatal diseases has been extensively studied by Mohan, (2000), who validated the Personality Stress Questionnaire developed by Eysenck and Grossarth Maticek (1990) and demonstrated the strong evidence concerning the relationship between personality type and diseases like cancer, CVD, etc.

Recent research advances on gender related traits and health incorporated Agency and Communion as two fundamental ways of relating to the world and their association with illnesses, such as prostate cancer (Helgeson and Lepore, 1997); breast cancer (Piro, 1998) and heart disease (Fritz, 2000). Further, unmitigated agency and unmitigated communion has been linked with health outcomes. Being overly nurturant, intrusive, controlling and non-assertive of unmitigated communion type people lead to both greater exposure and vulnerability to others’ problems and the ultimate psychological distress and self reports of poor health behaviour (Helgeson & Fritz, 2000), which makes them similar to the Type C persons, a cancer prone personality. Similarly, studies of cardiac patients have linked unmitigated agency to multiple indicators of psychological distress, including anxiety, hostility, impatience, cynicism, aggressiveness as well as lower levels of life satisfaction and general well being (Helgeson and Fritz, 1999) and the Type A behaviour pattern, a coronary prone personality.

What so ever, under the broad heading of health psychology all the serious and fatal diseases and under the arena of psycho-oncology, primary and secondary prevention, adaptation to cancer, interventions to improve quality of life, health outcomes among cancer patients and cancer survivors have been researched extensively (Kilbourn & Durning, 2003; Holland, 2002). Similarly, impact of breast cancer on psychosocial and psychosexual adjustment is also studied recently by number of researchers (Walsh, Manuel and Avis, 2005; Wimberly Carver, Laurenceau, Harris and Antoni, 2005;

The present piece of work too inspite of its limitations due to small sample size and restricted methodology suggests the relative importance of psychological factors in the causation, curation and prevention of serious physical ailments and fatal diseases.

**IMPLICATIONS**

Worldwide, it is estimated that 53,18,000 new cases of cancer have been diagnosed and 35,22,000 people have died from cancer in 2000. Across geographic regions incidence and mortality rates for specific cancers may vary based on environmental and lifestyle factors; however, the overall burden of cancer incidence and mortality is relatively evenly divided across developed and developing countries (Ferlay Bray, Pisani and Parkin, 2001). Given the number of people affected by cancer — and the likelihood that the number will continually increase — there is an ever increasing need for clinical health psychologists to become involved in oncology.

Moreover, due to the importance of life style factors in the development of cancer and psychological factors in early detection behaviour, clinical health psychologists can assist in the design and implementation of behaviour change strategies to improve both primary and secondary prevention.

**REFERENCES**


www.doctorndtv.com

http://www.who.int2002/