

## Illness Beliefs of Women Cancer Patients and their Relationships with Social Support

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The effect of social support on health-promotive and health protective-behavior has been examined in a number of studies. The present study examines the relationships between illness beliefs and social support in cervix cancer patients. Measures of illness beliefs and social support were administered. The analysis revealed individual and psychosocial causes to be more strongly represented in the belief system of women than environmental or supernatural causes. Patients received emotional and practical support more than social companionship and informational supports. Interpersonal, physiological and psychological consequences of illness were negatively correlated with all types of support. Patients characterized by high level of social support felt less severe consequences of illness and believed in self or doctors control of disease, whereas patients with low social support perceived more severe consequences of illness and believed in supernatural control of their illness. The findings are discussed and their implications are pointed out.

Keywords:

**H**igh level morbidity is a serious problem facing women folk in our country. Reports (WHO, 2000) indicate chronic diseases to be the major cause of morbidity in India, Bangladesh, Myanmar, Indonesia and Thailand. Chronic health problems, such as diabetes, cancer, arthritis, asthma, tuberculosis and heart attack, are more common today than ever (Dalal, 1999), and cancer is identified as one of the ten leading causes of death in India (National Cancer Registry Programme, 2002). The WHO (2000) reports cervical cancer as the most common form of cancer affecting women from developing countries. If not detected and treated early cervical cancer kills the victim.

Researchers have examined patients' knowledge, attitude and beliefs about their chronic illnesses (e.g., hypertension, diabetes, and cancer). Studies suggest that people spontaneously engage in search for causes of their illness. A common sense understanding of the causes of illness is often a social construction derived from the cultural

models of illness (Mishra, 2008). Weiner (1985) indicates that causal search is activated when the outcome is negative and expected. Dalal and Agrawal (1987) found that negative outcomes tended to promote causal search among patients. Studies of causal attribution with orthopedic (Dalal & Pandey, 1988), tubercular (Dalal & Singh, 1992) and heart patients (Agarwal & Dalal, 1993) reveal that God's will and *karma* are frequently attributed as causes of diseases by Hindu patients. Such causal beliefs were also found to play an important role in treatment-related decisions made by the patients (Dalal, 2000).

The studies mentioned above place emphasis on specific ethno-cultural considerations in dealing with health problems. Helman (1990) brings out the cultural and social aspects of health. Mishra and Awasthi (2004) have shown that individuals' culturally determined systems of belief about health and illness are major influences on their health behavior and practices. Right from the perception of health

problems to their treatment, people's cultural context seems to play an important role. Social and cultural changes taking place in communities add further complexity to the health issues (Mishra & Vajpayee, 1996). Schoenberg (1997) found that communities undergoing socio-cultural changes tended to maintain both the traditional and modern (biomedical) health orientations and practices.

The extent to which individuals' belief system about illness causation determines the psychological consequences of that illness has been addressed in some studies carried out with women patients suffering from the cancer of cervix (Awasthi, Mishra, & Shahi, 2006), and diabetes (Awasthi, & Mishra, 2007; Mishra, Awasthi, & Singh, 2004). Beliefs of these patients regarding a number of issues related to illness causation, consequences, and controllability were compared with those of the matched samples of women (non-patients) drawn from the normal population. The role of support system and coping strategies in perceived controllability and consequences of chronic illness was also studied.

The findings broadly suggested the coexistence of internal (individual, psychosocial) and external (supernatural, environmental) causes of illness in the belief system of patients. The degree of social support received from family and friends was positively related to physiological and psychological wellbeing of the patients. High social support tended to reduce the severity of the negative consequences of illness. Those with high level of social support also strongly believed that the illness was either in their own control or in the control of doctors. High social support reduced the experience of disease-related pain and promoted hope for better outcomes.

Research on causal explanations of illness shows their relationships with improved coping and emotional adjustment to life-threatening illnesses (Turnquist, Harvey, & Anderson, 1988). Attribution research with breast cancer patients has found that in the

face of a cancer diagnosis both characterological and behavioral self-blame lead to heightened psychological distress even at 7 and 12 months of post diagnosis (Bennett, Compas, Beckjord, & Glinder, 2005). The tendency to make behavioral causal attributions in the face of lung cancer is widely recognized as being caused primarily by smoking behaviors, a modifiable cause that may inspire guilt and distress among those who have failed in attempts to quit or who have opted not to in spite of all knowledge of the potential consequences (Faller, Schilling, & Lang, 1995).

Based on the existing research, it is difficult to tell which type of causal attribution is likely to be linked to negative outcomes of illness. In a descriptive interview study, Mumma and McCorkle (1982) found that many individuals with lung cancer stated that they did not know what caused their illness, or reported a combination of smoking-related and environmental factors (e.g., asbestos exposure). Faller et al. (1995) found that lung cancer patients frequently identified smoking and work-related toxins as the commonest cause of their illness. Although both these studies reported smoking behavior as the most frequent causal attribution, smoking was less frequently identified as a cause than the actual history of smoking behavior could indicate (Mumma et al., 1982). Lung cancer patients, who made attributions to themselves, were more likely to exhibit depression, were less hopeful, and showed less adaptive coping with their illness.

Much of the research with women suffering from life threatening chronic illnesses (e.g., cervix cancer) shows that they pass through a period of significant life changes that require immense psychological and social support. Lack of support during this phase interferes with their psychological and physical functioning. A beneficial role of social support in psychological and physical wellbeing of patients of heart surgery (Oxman & Hull, 1997), stroke (Glass & Maddox, 1992),

coronary heart disease (Greenwood, Muir, Packham & Madeley, 1996), cancer (Ell, Nishimoto, Mediansky, Mantell & Hamovitch, 1992) and dialyses (Elal & Krespi, 1999) indicates a strong association between social support and improved psychological adjustment.

The characteristics of a social network and the functional aspects of interactions between its members are considered important in studies of the effect of social support. Social relationships are formed by people who provide emotional support, companionship, instrumental help, and advice (Scott & Wenger, 1996). Functional network of support relates to the quality of life. Lin and Ensel (1989) indicate that social well-being is directly influenced by the number of stressors and resources that a person possesses. Cava and Musitu (2000) consider it as a consequence of the interrelationship of physical, psychological and social factors. Hence, social support works as a resource that resounds in social wellbeing, health, the overall quality of life of patients and their longevity (Hanson & Carpenter, 1994).

Some studies indicate that the relationship between social support and wellbeing differs by age group. Green, Richardson, Lago and Schatten-Jones (2001) found that social network predicted the feelings of loneliness only in younger adults, whereas the quality of relationship (presence of romantic partner) predicted older adults' wellbeing. Multi-componential models of psychological health (West, Livesey, Reiffer, & Sheldon, 1986) indicate that there are possible cognitive, behavioral and emotional mechanisms that may explain the relational constructs of social support and their impact on wellbeing.

It is now generally accepted that the perception of and satisfaction with social support is beneficial to the patients. However, factors like patients' internal and external attributions or locus of control beliefs can also

be associated with their health and wellbeing. Researchers (Lefcourt, Martin, & Saleh, 1984; Sandler & Lakey, 1982) have demonstrated individual differences in people's ability to utilize social support. Significant interactions have been found between negative life events and social support in predicting psychological distress for individuals who attribute to internal events, but studies have failed to demonstrate the same results with individuals who attribute to external factors when confronted with negative life circumstances. These findings suggest that people having internal causal attribution may utilize social support only as an aid to cope with stress.

Other researchers (Brown & Fitzpatrick, 1988; Kamel, Badaway, El-Zeiny, & Merdan, 2000; & VanderZee, Buunk & Sanderman, 1997) have reported similar findings with respect to the association between internal locus of control beliefs and perception of social support. Dialysis patients having internal locus of control beliefs were found to perceive greater degree of social support and adhere strictly to dietary and fluid restrictions than those with external locus of control. It seems that internal attribution style, internal locus of control beliefs and their association with perception of social support are important psychological factors influencing not only the general well-being of patients, but also their compliance with treatment regimens.

Sarason, Sarason and Pierce (1990) consider perceived support a part of individuals' personality. Hence, the same level of support may create different beliefs about support availability in different individuals. Research indicates greater effect of perceived social support on individuals' psychological well-being than the actual amount of support one has been provided with (Helgeson, 1993). Nevertheless, depending on the nature of people's personality, the satisfaction they derive from the available social support might be more critical than the perceived availability of social support.

Moos-Morris, Petrie and Weinman (1996) investigated the relationship between illness cognition, coping and adjustment in the patients of chronic fatigue syndrome. The findings revealed that positive interpretation of health problems and social support were positively related to internal control and self-oriented health beliefs. Such findings about control beliefs and their relationship with social support have not always been borne out. For example, patients with internal locus of control beliefs have been found to perceive greater degree of social support than those with external locus of control beliefs (VanderZee, et al, 1997). They have also found the relationship between social support and psychological wellbeing to be stronger for patients with external than internal control beliefs. Dalgard, Bjork and Tambs (1995) have revealed that, when encountering negative life events, social support buffers the development of mental disorder. This outcome, however, is observed only for patients with external control beliefs. Even depression has been found to be highest among people with external control beliefs who perceive little support (Grassi, Malacarne, Maestri & Ramelli, 1997). These findings indicate a strong association between social support and psychological wellbeing for patients with external control beliefs. This goes against the findings reported earlier for internal control beliefs.

Studies discussed above indicate that very little work has been done that links health beliefs to social support. The association between different kinds of illness belief and social support has not been analyzed in the context of chronic illnesses. In the present study, an attempt was made to analyze the relationship between illness beliefs (causation, consequences and controllability) and social support in women cancer patients. It was hypothesized that:

1. Women patients with high social support would believe more strongly in internal than external causation of illness.

2. Women patients with high social support would believe in less severe consequences of illness than those with low social support.

3. Women patients with high social support would consider self and doctor as control agents of illness more strongly than those with low social support.

### **Method**

#### **Participants:**

The study was carried out with 100 women patients suffering from cervix cancer. The patients were drawn from various medical centers and hospitals located in Varanasi city. The age of patients ranged from 30 to 65 years. Women from rural and urban areas were equally represented in the sample. The sample belonged to middle and upper middle class families.

#### **Measures:**

The following measures were used in the study; psychometric properties and other details of the measures can be found in Awathi et al (2006):

**Illness Causation Belief Measure:** It comprised 20 items related to four factors, i.e., individual, psychosocial, supernatural, and environmental causes. The individual and psychosocial causes represented the internal causes of illness; supernatural and environmental causes represented the external causes of illness. The participants rated each item on a 5-point scale in terms of the perceived degree of its importance in the causation of cancer ("very much"=5, "very little"=1). The scores on these measures ranged from 5 to 25.

**Illness Consequences Belief Measure:** It comprised 15 items related to physiological, psychological, and interpersonal consequences of disease (see Awasthi, et al., 2006). The participants were asked to rate each item on a 5-point scale for its consequence (very much = 5, very little= 1).

The score range on each consequence measure was 5 to 25.

**Illness Controllability Belief Measure:** It consisted of 3 items that assessed the degree to which the participant believed that the disease was controllable by “self”, “external agents” or a “doctor”. Each item was rated on a 5-point scale, ranging from “not at all” (1) to “very much” (5).

**Social Support Measure:** This measure (Arora & Kumar, 1998) focuses on support providers, the nature of support expectation and its delivery. Emotional, informational, social companionship and practical supports are assessed. The measure consists of 38 items. Emotional support consists of 15 items, social and informational support consist of 6

items each, and practical support consists of 11 items. Four types of responses are sought: (a) who gives you this support, (b) from whom do you expect this kind of support, (c) how much support do you expect, and (d) how much support do you get? For question “c” and “d”, a 7-point scale is used (not at all =0, very much=6). This paper uses data obtained under “d” category (i.e., the degree of support patients received).

**Results**

**Social Support and Illness Beliefs**

The mean scores and SD of high and low social support groups (based on median split) on illness causation, consequences and controllability beliefs are given in Table 1.

**Table 1: Mean, SD scores and t value of Women Patients’ on various Measures of Illness Belief and Social Support**

Illness Beliefs	High Social Support		Low Social Support		t- value
	Mean	SD	Mean	SD	
<b>Causations</b>					
Individual	14.68	4.98	17.12	4.02	2.70 **
Psychosocial	12.84	4.15	13.28	4.27	0.52
Supernatural	11.02	4.80	14.32	5.86	3.08**
Environmental	12.06	4.16	12.32	4.18	0.31
<b>Consequences</b>					
Interpersonal	14.96	4.66	20.12	3.65	6.17**
Physiological	13.70	3.49	17.50	3.69	5.29**
Psychological	14.98	4.67	20.26	4.52	5.80**
<b>Controllability</b>					
Self	1.58	0.94	1.02	0.15	3.66**
Doctor	4.03	0.96	3.40	1.15	2.97**
Supernatural	1.46	1.10	1.67	1.12	0.96

\*p< 0.05, \*\*p<0.01

Women patients with low social support generally scored lower on all illness causation measures than those characterized by high social support. The difference between the groups was significant only on individual and supernatural causation measures. The mean scores of the high social support group were significantly lower on interpersonal, physiological and psychological consequence measures as compared to those of the low social support group. With respect to illness controllability belief, the high social support

group scored significantly higher on “self” and “doctor” control measures than the low social support group. The groups did not differ significantly on the supernatural control belief.

Table 2 shows the values of correlation across illness causation, consequences, controllability beliefs and social support measures. Individual causation was positively correlated with interpersonal, physiological, and psychological consequences, suggesting that greater attribution of disease to individual causes is linked to more severe consequences

of illness. Psychosocial causes were negatively correlated to self-control, indicating that attribution to psychosocial causes undermines an individual's control over illness. Supernatural causes were positively correlated with interpersonal, physiological, and psychological consequences of illness, representing the greater severity of illness consequences with attribution of illness to supernatural causes.

On the other hand, individual, psychosocial, and supernatural causes were negatively correlated (Table 3) with emotional, informational, social companionship and practical supports indicating that women who received less support believed more strongly in individual, psychosocial, and supernatural

causes of cancer than those who received more of support.

Interpersonal, physiological and psychological consequences were found to be negatively correlated with "self" and "doctor" control. On the other hand, a positive relationship between supernatural control and illness consequences was clearly in evidence, suggesting that greater attribution to supernatural control is linked to the experience of more serious illness consequences. While the consequences of illness were negatively correlated with belief in "self" and "doctor" for disease control, there was also evidence for a negative correlation between illness consequences and social support measures.

**Table 2. Intercorrelation of scores across illness causation, consequences and controllability measures.**

Variables	PC	SC	EC	IC	PC	PC	SC	DC	SC	
IndividualCauses	0.24**	0.19	0.31**	0.37**	0.41**	0.32**	-0.00	-0.25**	0.18	
PsychosocialCauses	-	0.17	0.37**	-0.08	0.04	-0.01	-0.20*	0.11	0.08	
Super NaturalCauses	-	-	0.18	0.23*	0.21*	0.25**	-0.11	-0.18	0.42**	
EnvironmentalCauses	-	-	-	-0.00	0.09	-0.04	-0.01	0.14	0.09	
InterpersonalConsequences	-	-	-	-	-	0.43**	0.66**	-0.22*	-0.44**	0.20*
PhysiologicalConsequences	-	-	-	-	-	-	0.51**	-0.06	-0.32**	0.38**
PsychologicalConsequences	-	-	-	-	-	-	-	-0.24*	-0.39**	0.19*
Self Control	-	-	-	-	-	-	-	0.28**	0.00	
Doctor Control	-	-	-	-	-	-	-	-	0.10	

\*p<0.05, \*\*p<0.01

**Table 3: Intercorrelation of scores across illness causation, consequences and controllability and social support measures.**

Variables	ES	IS	SS	PS	OS
IndividualCauses	-23**	-18**	-24**	-31**	-26**
PsychosocialCauses	-0.05	-0.06	-0.05	-0.05	-0.04
SupernaturalCauses	-0.31**	-0.27**	-0.19*	-0.35**	-0.30**
EnvironmentalCauses	0.01	0.09	0.05	0.05	0.01
InterpersonalConsequences	-0.54**	-0.55**	-0.48**	-0.63**	-0.61**
PhysiologicalConsequences	-0.52**	-0.56**	-0.44**	-0.52**	-0.52**
PsychologicalConsequences	-0.56**	-0.55**	-0.49**	-0.55**	-0.58**
Self Control	0.15	0.24**	0.28**	0.30**	0.24**
Doctor Control	0.29**	0.37**	0.29**	0.30**	0.31**
SupernaturalControl	-0.14	-0.10	-0.06	-0.14	-0.12

\*p<0.05, \*\*p<0.01

“Self” control was negatively correlated with informational and social companionship support, and positively with practical support, indicating that belief in “self” control undermines patients’ perception of informational and social companionship supports. On the other hand, “doctor” control was positively correlated with emotional, informational, social companionship and practical support.

Multiple Regression Analysis was attempted by using different measures of illness causation, illness controllability and social support as predictor variables; and illness consequences as a criterion variable. Since no theoretical hierarchy of the variables was established, a stepwise regression was carried out. Findings revealed that practical support, doctor-control and supernatural control accounted for approximately 49% of the variance in score on interpersonal consequences measure ( $F_3, 96, 30.92, p < .01$ ). “Doctor” control ( $b = -0.30$ ) and practical support ( $b = -0.52$ ) made negative predictions (less serious consequences). Maximum contribution was made by practical support, which accounted for approximately 40 per cent of the variance ( $F_1, 98, 65.14, p < .01$ ) in scores. Doctor and supernatural control accounted for approximately 7 per cent and 3 per cent of the variance in scores respectively.

Informational support, supernatural control and individual causes accounted for approximately 49% of the variance in score on physiological consequences measure ( $F_3, 96, 30.84, p < .01$ ). Informational support contributed approximately 32 per cent ( $F_1, 98, 45.82, p < .01$ ), supernatural control contributed approximately 11 per cent, and individual causations contributed approximately 7 per cent to the variance in scores on the physiological consequences measure. While informational support ( $b = -0.49$ ) made a negative predictions (less serious consequences); the prediction made by individual causes ( $b = 0.26$ ) and supernatural control ( $b = 0.29$ ) was in the positive direction (serious consequences).

With respect to the prediction of psychological consequences, results indicated that overall support ( $b = -0.44$ ), “doctor” control ( $b = -0.27$ ) and supernatural causes ( $b = 0.17$ ) explained approximately 41 per cent of the variance in scores ( $F_3, 96, 22.20, p < .01$ ). Overall support contributed approximately 34 per cent to the variance in scores ( $F_1, 98, 49.56, p < .01$ ), “doctor” control accounted for approximately 5 per cent of the variance, and supernatural causation accounted for approximately 3 per cent of the variance in scores. Overall support and “doctor” control emerged as negative predictors of psychological consequences (less serious consequences).

**Table 4: Summary of stepwise MRA**

S.No.	Predictor Variables	Multiple R	R <sup>2</sup>	R <sup>2</sup> adj.	df	F Ratio
Interpersonal Consequences						
1	Practical Support	0.632	0.399	0.393	1, 98	65.14**
2	Doctor’s Control	0.684	0.468	0.458	2, 97	42.75**
3	Supernatural Control	0.701	0.491	0.476	3, 96	30.92**
Physiological Consequences						
1	Informational Support	0.564	0.319	0.312	1, 98	45.82**
2	Supernatural Control	0.655	0.429	0.417	2, 97	36.44**
3	Individual Causation	0.701	0.492	0.475	3, 96	30.84**
Psychological Consequences						
1	Overall Support	0.580	0.336	0.329	1, 98	49.56**
2	Doctor’s Control	0.620	0.385	0.372	2, 97	30.35**
3	Supernatural Causations	0.640	0.410	0.391	3, 96	22.20**

\* $p < 0.05$ , \*\* $p < 0.01$

### Discussion

The study revealed that patients generally reported receiving greater amount of emotional and practical supports than social companionship and informational supports. Beliefs in interpersonal, physiological, and psychological consequences of illness were negatively correlated with all social support measures. Patients characterized by high level of social support believed strongly in individual and psychosocial causation of illness, felt less severe consequences of illness and believed that their disease was in control of themselves or the "doctor". On the other hand, patients with low level of social support believed strongly in individual and supernatural causation of illness, perceived more severe consequences of illness, and had faith in supernatural control of their illness.

The findings do not support our hypothesis that patients characterized by high social support would believe more strongly in internal than external causation of illness. Patients who obtained low level of social support tended to attribute illness to individual (internal) and supernatural (external) causes more strongly than to psychosocial and environmental causes as compared to patients characterized by high level of social support. These results are not in consonance with those of other researchers (e.g., Cause, Hannan & Sargeant, 1992; Lefcourt et al., 1984; Sandler & Lakey, 1982; VanderZee et al., 1997), who reported that people with internal control beliefs perceived greater degree of social support than those with external control beliefs.

One possible explanation for our different results may be that individuals differ in their "ability" to utilize social support. Researchers (Lefcourt et al., 1984; Sandler et al., 1982) have found significant interactions between negative life events and social support in predicting psychological distress for individuals who attributed control over events in their lives to themselves (internal control

belief), but do not find these interactions among those attributing causal agency to environmental forces (external control belief).

Studies of social support have often employed the Inventory of Socially Supportive Behaviors (ISSB), which asks respondents to report about supports they had received in the last month. Cohen and Wills (1985) are critical of the use of this measure, as "it confounds the availability of support with the need for and use of support" (p. 340). Cohen and Hoberman (1983) found significant interactions between socially supportive behaviors and life events. These results were opposite to the buffering hypothesis, since individuals under low, instead of high stress, experienced support as a buffer. This counterintuitive finding may be due to the confounding indicated by the positive relationship between social support and distress. Barrera (1986) points out, however, that a positive association between social support and distress does not contradict the buffering hypothesis.

The hypothesis that patients with low social support would believe in more severe consequences of illness, whereas those with high social support would believe in less severe consequences of illness was fully substantiated by the findings. This finding provides a basis for understanding social support as a stress buffer, i.e., as a determinant of the perception that one can handle the situation with the help of supporters. Other studies also indicate that perceived availability of social support has a positive effect on physical and psychological well-being (Cohen, Gottlieb & Underwood, 2000), and our findings are consistent with this conclusion.

Social support can promote mental and physical health through several mechanisms. In a previous study, Awasthi and Mishra (2007) found that patients characterized by high social support felt less severe consequences of illness. It was argued that social relationships could reduce negative psychological states



(e.g., anxiety, depression), which might influence physical health either through a direct effect on physiological processes that influence resistance to disease, or through behavioral patterns that reduce the risk for disease and mortality. In health research, supportive social relationships have been conceptualized as operating in three possible ways to alleviate the problem of stress. Firstly, social support may enhance health by fulfilling many of the human needs such as affection, approval, social contact and security. Secondly, support may reduce interpersonal tensions and enhance positive effects in the environment. Thirdly, support may buffer an individual's exposure to stress resulting from the anticipation or experience of the chronicity of disease.

In the present study patients with high social support considered "self" and "doctor" as control agents for their illness more strongly than those with low social support. This finding suggests a "buffering effect" of social support, which protects people mainly when they are under trouble (Cohen et al., 1985). The belief in "self" and "doctor" control of illness leads to a strong hope for positive outcomes. Other studies have indicated that cancer patients, who believe that they have control over their illness, are better adjusted to illness than those without such beliefs (Lazarus, 1983; Taylor, Lichtman, & Wood, 1984). While control beliefs may represent what is called "illusions of control", they still have positive consequences for patients and lead to better psychological adaptation on their part (hence termed "healthy illusions"). In this sense belief in "self" and "doctor" control seems to play a vital role in cancer patients' adjustments towards their illness in particular and life in general.

The study has some clear implications for psychological well-being of patients suffering from chronic illness. The lesson is that patients should be provided with adequate social support in order to reduce the feeling

of severe consequences of illness. The finding that women with high social support have a stronger belief in "self" control than those with low social support suggests that social support can enhance their feeling of "self-efficacy", which is a sign of positive psychological growth. The finding that individual's own efforts and the efforts of the doctor can control illness also bears great promise for community health activities. The extent to which reduction in the felt severity of illness consequences is one of the goals of health science, our findings seem to bear great promise for promoting psychological wellbeing of cervix cancer patients.

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