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Original Research Paper

Coping and Psychological Distress in Patients Undergoing Elective Surgery: Role of Pre-Operative Psycho-Education

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ABSTRACT

Surgery is associated with an increase in emotional arousal and has a negative impact on the adjustment and recovery from the surgery. Uncertainty, perceived loss of control and post-surgery pain, financial matters, and aspects related to returning back to his/her family role are all sources of stressors for the patient undergoing elective surgery. Coping has also been found to play a mediating role in reducing stress and promoting post-surgery adjustment. When surgery is associated with high levels of psychological distress and anxiety the role of psycho-education becomes significant. The present study aims at investigating the role of pre-operative psychoeducation on coping and psychological distress. The findings indicated significant differences in the two groups, control and experimental on coping and hospital anxiety and depression. The results revealed that preoperative psychoeducation can enhance coping strategies and mitigate anxiety and depression in patients undergoing elective surgery.

Keywords: *Anxiety, Coping, Elective Surgery, Preoperative Psychoeducation*

Hospitalization for a major surgery is associated with both anxiety and pain. Furthermore hospitalization for a surgery connotes physical and psychological distress in patients (Powell & Johnston, 2007). Despite the unremitting care by specially trained staff, the environment of the hospital is always considered as overwhelming and potentially hostile for the patients. The strange alien and stress producing environment effects the patient's recovery, quality of life, morbidity and mortality. With the increase in the number of surgeries, and the medical care becoming more and more mechanized, patients get little time to interact with the health care professionals. The communication and interaction between medical care professionals and patients which can act as a psychological buffer in reducing the anxiety in patients is often seen missing in the present medical care setting. The significant increase in the number of surgeries has worsened the conditions.

Anxiety is an unpleasant feeling which majority of the patient's hospitalized for elective surgery experience. Anxiety has been found to have an adverse effect on the surgical

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procedure, prognosis and postoperative recovery (Kain, Saverino, Alexander, Pinus, & Mayes, 2000; Mathews & Ridgeway, 1981). Patients undergoing surgery were assessed on an anxiety scale on the day prior to surgery the levels of anxiety were found to be close to levels described in patients with anxiety disorder showing that persons who undergo surgical procedures are under strong preoperative distress (Chaudhury *et al*., 2006). Renal recipient patients were found to have high trait anxiety with respect to post-surgical pain (Chapman & Cox, 1977), showing that the perception stress during surgery significantly effects the anxiety levels.

Previous literature demonstrates that patients awaiting for elective surgery have enunciated various reasons for their pre-operative anxiety, a few of them are fear of surgical errors (McCleane & Cooper,1990), postponement of surgery (Sanjuan et al. 1999), fear of not waking up after surgery (McGraw & Hanna, 1998), worry about being carried to the operation theatre like a dead person on a trolley and not receiving the reasonable care and attention from the medical professional and caregivers (Ebirim & Tobin, 2010), General Anesthesia was found to be the highest anxiety provoking situation, possible pain, discomfort, the operation in specific and being unconscious were some of the other factors for pro-operative anxiety (Badner et al,1990).

Surgery is associated with an increase in emotional arousal and has a negative impact on the adjustment and recovery from the surgery. Uncertainty, perceived loss of control and anxiety are sources of stressors for a patient. Furthermore post-surgery pain, financial matters, and aspects related to returning back to his/her family role are all sources of stressors. The patients need to employ certain coping mechanisms to overcome these stressors. Use of effective coping strategies helps in enhancing postoperative recovery (Cohen & Lazarus, 1973). Coping has also been found to play a mediating role in reducing stress and promoting post-surgery adjustment (Ray & Fitzgibbon, 1981).

Improvement in health care requires both meeting the patients' needs and delivering patient centered care. Patient centered care include trust, effective communication to accept their medical condition, information, education of patients to transmit knowledge and help patients participate in the treatment process, social support to reduce anxiety and depression (Chivukula, Swain, Rana & Hariharan, 2013). Ebirim & Tobin, (2010) suggest that explanation of pre-operative events during pre-operative visits can help a patient understand and have a realistic expectation of the event of surgery. Improving doctor-patient communication, pre-operative preparation by giving prior information about the procedure, communicating about the outcome of the surgery, providing social support etc. can help in reducing the anxiety and enhance the coping strategies in patients. This can be done through peer intervention where a person with successful history of surgeries interact with the patient prior to surgery explaining the personal experiences and the recovery process. When surgery is associated with high levels of psychological distress and anxiety the significance of psycho-education is an important area of study.

Objectives

1. To find out if the role pre-operative information in reducing psychological distress among patients undergoing elective surgery.
2. To find out the effectiveness pre-operative information on coping in patients undergoing elective surgery.

METHODOLOGY

Design

Pretest-posttest control and experimental group design was followed for the current research. The participants were divided into a control group, wherein there was no intervention and an experimental group where the participants were given 45-50 minutes pre-operative psychoeducation intervention.

Participants

The sample consists of two groups such as control and experimental. In control group 46 male and 29 female ICU admitted patients were participated. In experimental group 42 male and 33 female participants were participated. The mean age of participants of control group was 54.03 and 53.93 is the mean age of experimental group. The mean duration of hospital stay in control group was 1.93 and in experimental group was 1.89.

Instruments

Three measures were used for the study

1. **Pre-operative Psycho-education:** Pre-operative psycho-education is parallel intervention planned and tailor made for the patients opting for the different elective surgeries. The pre-operative psycho-education would constitute of a book let comprising the required information about the surgery and also a psycho educational component to reduce the anxiety and psychological distress in patients. The pre-operative psycho-education would be provided to the intervention group, prior to the surgery.
2. **Hospital Anxiety and Depression Scale:** Hospital Anxiety and Depression Scale (HADS): HADS (Zigmond & Snaith, 1983) was used to measure the levels of anxiety and depression. The scale consisted of 14 items, equally divided into two sub-scales such as anxiety (Items 1, 3, 5, 7, 9, 11, and13) and depression (Items 2, 4, 6, 8, 10, 12, and 14). The scale consisted of 4-point rating scale ranging from 'Never' (0) to 'Almost every time' (3). Scoring was done as per the procedure laid down in the manual. Total score of each of the sub-scales was found by summing the item scores and the range varied from 0 to 21 for each sub-scale. Sores ranging from 0 to 7 on both the subscales were considered to be in the normal range, 8 to 10 were considered to be borderline and 11 to 21 in abnormal range.
3. **The Brief Cope:** The Brief Cope Scale was developed by Carver (1997). It is a self-report four point Likert scale which consisting of 28 items, used to assess a number of different coping behaviours and thoughts a person may have in response to a

specific situation. The scale has 14 subscales each comprising of two items. The 14 subscales include self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioural disengagement, venting, positive reframing, planning, humour, acceptance, religion, and self-blame. 28 coping behaviours and thoughts (2 items for each subscale) are rated on a scale of 1 (—I haven't been doing this at all‖) to 4 (—I've been doing this a lot‖).The scale was Internal reliability ranges from 0.57-0.90.

Procedure

The hospitals in Hyderabad and Vishakhapatnam were listed out, using the internet source. Those hospitals who signed the Informed Consent to participate in the study were included in the study. Six hospitals, three from Hyderabad and three from Vishakhapatnam agreed to grant permission and extend their cooperation. Permission order with signed consent form was received from the hospitals, along with the identity cards for the investigator. On completion of this formality, data collection was initiated. The duty doctor/ nurse helped the investigator acquire details about the pre-operative elective surgery patients.

The investigator explained the purpose of her visit and sought their written consent for participation in the study. The patients' history and basic information was obtained. Only those who fulfilled the inclusion criteria were administered the scales. All the two assessment was completed by both groups. For the control group participants the assessment was done in one session (20-35 minutes). For experimental group the both intervention and assessment was done in three sessions, 40-45 minutes each. After the patient responded to all the scales, he/she was debriefed and thanked. The responses of the patients were analyzed and the results were interpreted.

RESULTS

The sample was found to be homogeneous. The results of the current study were analyzed by descriptive statistics (M and SD) and independent t-test.

Table 1 Descriptive statistics and t-value on Coping and its subscales and Hospital Anxiety and Depression of control group (n=75) and experimental group (n=75)

Variables	**Group**		**t**
	Control	Experimental	
	M(SD) (n = 75)	M(SD) (n = 75)	
Coping			
Self-distraction	2.81 (.86)	3.69 (1.60)	4.19***
Active coping	2.28 (.64)	4.48 (1.03)	15.78***
Denial	6.01 (1.57)	4.32 (.95)	7.99***
Substance use	2.04 (.35)	2.04 (.35)	.000***
Emotional support	5.24 (1.68)	5.88 (1.27)	2.63**

Instrumental support	4.41 (.77)	4.33 (1.34)	.46
Behavioral disengagement	3.05 (1.15)	3.35 (1.83)	1.17
Venting	4.12 (1.09)	3.20 (1.15)	5.03***
Positive reframing	4.00 (.82)	4.72 (1.56)	3.54**
Planning	3.56 (1.43)	4.04 (2.04)	1.67
Humor	2.11 (.35)	1.12 (1.08)	7.54***
Acceptance	3.44 (.66)	1.84 (1.88)	6.94***
Religion	6.53 (.89)	3.20 (3.05)	9.13***
Self-blame	5.36 (1.15)	2.80 (1.27)	12.94***
HADS			
Anxiety	10.13 (3.70)	3.75 (3.89)	10.30***
Depression	10.51 (1.95)	4.69 (4.60)	10.09***

*Note. *** p<.001; **p<.01*

HADS- Hospital Anxiety and Depression Scale

From table 1, it is observed that the mean of self-distraction of control group in chronic illness patients was 2.81 (SD = .86) and in experimental group was 3.69 (1.60). The result also revealed that there is significant difference between control group and experimental group in relation to self-distraction (t = 4.19, p < .001). The mean of active coping in control group among chronic illness patients was 2.28 (SD = .64) and in experimental group was 4.48 (1.03), the difference between both the group was found to be significant (t = 15.78, p < .001). The mean of denial in control group among chronic illness patients was 6.01 (SD = 1.57) and in experimental group was 4.32 (.95) and the difference between both the group was found to be significant (t = 7.99, p < .001). The mean of substance use in control group among chronic illness patients was 2.04 (SD = .35) and in experimental group was 2.04 (SD = .35). The result also revealed that there is significant difference between control group and experimental group in relation to self-distraction (t = .00, p < .001). The mean of emotional support in control group among chronic illness patients was 5.24 (SD = 1.68) and in experimental group was 5.88 (SD = 1.27). The result also revealed that there is significant difference between control group and experimental group in relation to self-distraction (t = 2.63, p < .001). The mean of instrumental support in control group among chronic illness patients was 4.41 (SD = .77) and in experimental group was 4.33 (SD = 1.34). The mean of behavioral disengagement in control group among chronic illness patients was 3.05 (SD = 1.15) and in experimental group was 3.35 (SD = 1.83). The mean of venting in control group among chronic illness patients was 4.12 (SD = 1.09) and in experimental group was 3.20 (SD = 1.15). The result also revealed that there is significant difference between control group and experimental group in relation to self-distraction (t = 5.03, p < .001). The mean of positive reframing in control group among chronic illness patients was 4.00 (SD = .82) and in experimental group was 4.72 (SD = 1.56). The result also revealed that there is significant difference between control group and experimental group in relation to self-distraction (t = 5.34, p < .001). The mean of planning in control group among chronic illness patients was 3.56 (SD = 1.43) and in experimental group was 4.04 (SD = 2.04). The mean of humor in control group among chronic illness patients was 2.11 (SD = .35) and in experimental group

was 1.12 (SD = 1.08). The result also revealed that there is significant difference between control group and experimental group in relation to self-distraction (t = 7.54, p < .001). The mean of acceptance in control group among chronic illness patients was 3.44 (SD = .66) and in experimental group was 1.84 (SD = 1.88). The result also revealed that there is significant difference between control group and experimental group in relation to self-distraction (t = 6.94, p < .001). The mean of religion in control group among chronic illness patients was 6.53 (SD = .89) and in experimental group was 3.20 (SD = 3.05). The result also revealed that there is significant difference between control group and experimental group in relation to self-distraction (t = 4.19, p < .001). The mean of self-blame in control group among chronic illness patients was 5.36 (SD = 1.15) and in experimental group was 2.80 (SD = 1.27). The result also revealed that there is significant difference between control group and experimental group in relation to self-distraction (t = 12.94, p < .001).The mean of anxiety in control group among chronic illness patients was 10.13 (SD = 3.70) and in experimental group was 3.75 (SD = 3.89). The result also revealed that there is significant difference between control group and experimental group in relation to self-distraction (t = 10.30, p < .001).The mean of depression in control group among chronic illness patients was 10.51 (SD = 1.95) and in experimental group was 4.69 (SD = 4.60). The result also revealed that there is significant difference between control group and experimental group in relation to self-distraction (t = 10.09, p < .001).

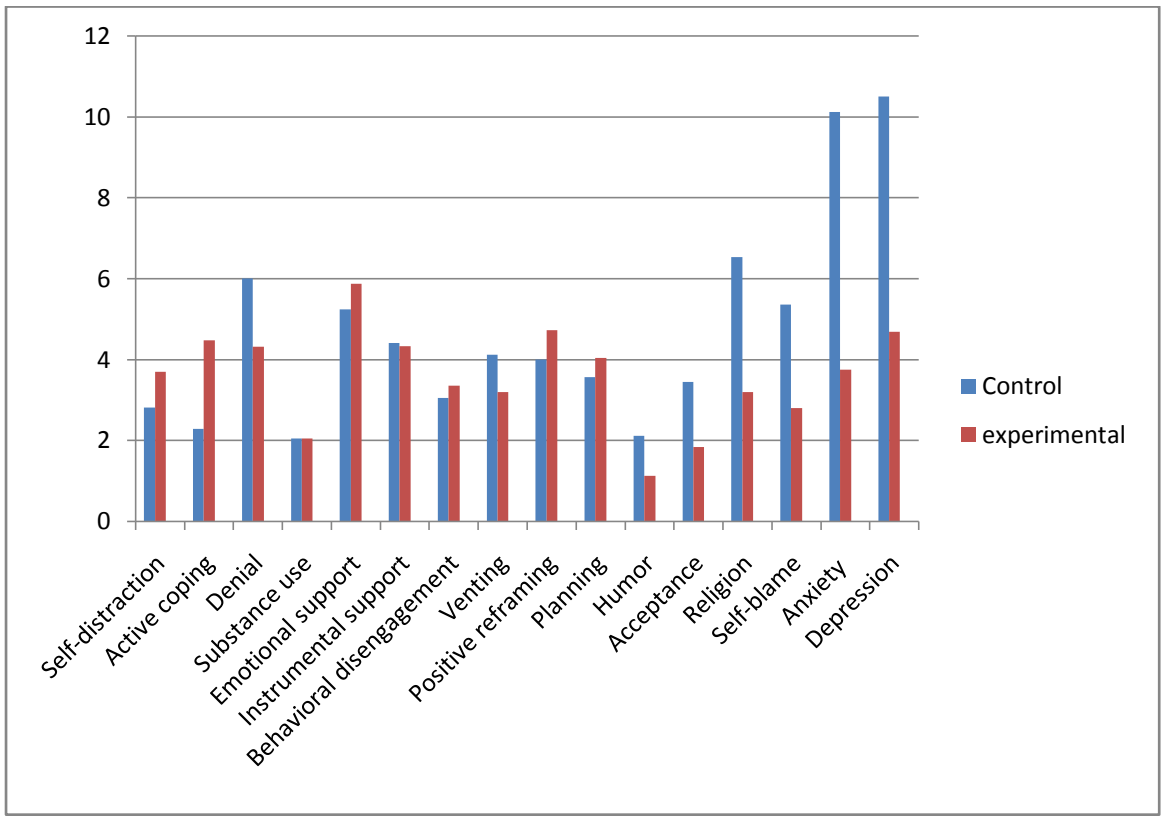

Figure 1: Represents the mean of all dimension of Coping and Hospital Anxiety and Depression of control and experimental groups

DISCUSSION

The present study was initiated to find out the effectiveness of preoperative psychoeducation in reducing psychological distress and enhancing coping strategies. The results of the study showed that there was a significant difference between the control and experimental group on the subscales of coping. The elective surgery patients who were mediated with preoperative psychoeducation were found to use more of emotional based coping viz. self-distraction, emotional support, positive reframing and problem-based coping strategies like active coping. Coping involves appraising the stressors by using cognitive, behavioral and emotional approaches and meeting the demands of the situations (Folkman & Lazarus, 1985). The results of the study show that the elective surgery patients who were exposed to pre-operative psychoeducation used constructive coping mechanisms to appraise the anxiety provoking surgery. Strategies like using emotional support and positive reframing produce favourable outcome and help the patients to enhance wellbeing, and reduce psychological distress (Holmes & Stevenson, 1990), which in turn increases the positive outcomes of the surgery. Positive reframing is found to decrease anxiety, help patient adapt to the illness and enhance quality of life (Rowe & Allen, 2004). The results also revealed that the patients in the control group (who are not subjected to the intervention) used coping strategies like denial, venting, acceptance, religion and self-blame. Patients who were not provided with psychoeducation continued to use self-blame as one of the coping strategy. In a study that investigated coping in breast cancer survivors it was found that self-blame was related to more perceived stress. (Bussell & Naus, 2010) It was observed from the study that instrumental support, behavioural disengagement and planning were not found to be significantly different in both the groups. Instrumental support is related to support from other and is tangible in nature. India is a collectivistic society, and when a patient undergoes a surgery invariably support pours in. This must be a reason that most of the patients did not differ on this coping strategy.

The findings of the study show that most of the participants in the intervention group positively appraised the stressful situation of undergoing a surgery and made attempts to reduce the anxiety and depression levels. This could be associated to the decrease in the levels of anxiety and depression in both the groups. The pre-operative psychoeducation possibly helped patients enhance their coping strategies which in turn could mitigate the levels of anxiety and depression in patients. Literature has emphasized that the anxiety in elective surgery patients is due to lack of information of the procedure and preparing of the patient physically and psychologically for the surgery, (Lack et al. 2003., Gilmartin, 2004), lack of information about the surgical procedure, anesthesia and post-operative biomedical issues (Kindler et al., 2005), which could be related to pain, diet and breathing techniques (Mitchell, 2003). All the above issues related to pre and post –surgery were covered in the psychoeducation intervention given to patients. The intervention included written information which was discussed with the patient by the investigator a day before surgery, relaxation and breathing exercises, counseling and a interaction with a participant who successfully underwent a surgery. Preoperative teaching guides (Watt-Watson et al., 2004), media based

interventions (Lee, Chui and Gin, 2003) were found to be effective in improving knowledge and reducing anxiety**.**

When surgery is associated with high levels of psychological distress and anxiety the significance of psycho-education is an important area of study. This gives a holistic perspective to medical care. The significance of biopsychosocial approach to the patient care can play a vital role in patient centred approach. Enormous amounts are spent by the hospitals on the medical equipment, pathological and diagnostic services. A multidisciplinary treatment plan which includes a psycho-educational intervention imparted by a health psychologist in the team will go a long way in preventing anxiety and distress in patients. The present study assumes a lot of significance in the context of India emerging as a country that is attracting medical tourism.

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