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The impact of Coping Styles on the Levels of Anxiety and Depression among Patients with Spinal Cord Injury

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Abstract: *The purpose of the present research was to investigate the frequency of different coping styles and their impact on the levels of anxiety and depression among patients with spinal cord injury in Peshawar. Sample of the study consisted of seventy (N=70) male and female patients, with age range (14-58) years from Paraplegic Institute Hayat Abad Peshawar. A demographic sheet, the Hospital Anxiety and Depression scale, Pashto version (Irfan etal., 2016) and Brief cope questionnaire (Carver, 1997) were administered on the subjects using interview format. Subjects were selected through purposive sampling technique. Frequency of different coping styles was investigated through finding out average responses on the respective scales in the given questionnaire. Regression analysis was conducted to check the impact of different coping styles on the levels of depression and anxiety among these patients. It was concluded from the present study that most frequently used coping styles of patients with spinal cord injury were religion, positive reframing and active coping. More cases were lying in abnormal and borderline categories of anxiety and depression as compared to normal categories. Self-distraction and instrumental support were negative whereas self-blame was found to be a positive and significant predictor of depression. Similarly self-blame and denial also played a significant role in increasing levels of anxiety in this clinical population.*

Keywords: Spinal Cord Injury, Anxiety, Depression, Coping Strategies

Introduction

Coping involves all those efforts which an individual undertakes to deal with the burden of a demanding situation. The efforts are both on cognitive and behavioral levels and the stressful condition may be related to some personal or environmental factors of the individual (Lazarus & Folkman, 1988). People use both problem-focused and emotion-focused strategies to cope with stressful situations of life. Using "Problem-focused strategies" the individual directly deals with elements of the stressful situation while using "emotion-focused strategies" the person will try to change one's internal feelings related to the stressful situation. But some researchers actually challenge the above-mentioned difference between coping strategies. Other types include engagement and disengagement coping (Tobnin, 1989), repression and sensitization (Cohen, 1991), avoidant and approach coping, avoidant coping occurs during illness whereas approach coping is found to be unrelated to health (Patterson etal, 1995). Different studies have proved that patients with prolonged diseases, who involve their emotions while coping with disease face more anxiety and depression as compared to those who focus on some problem-solving

strategies (Kennedy, Marsh, Lowe, Grey, Short, & Rogers, 2000). On Coping Strategies Inventory by Tobin, Holroyd, Reynolds, and Wiggle (1989) Asian Americans were found to be more socially withdrawn and avoidant in the face of stress as compared to Caucasian Americans (Chang, 2001). Patients with spinal cord injury were mainly facing problems in adjustment to sexual, vacation, and occupational areas of life in Taiwan (Yi Wu & Chan, 2009 Optimism, striving for sovereignty and religious coping were the techniques used by the patients with Brain and Spinal injury at Tehran University of Medical Sciences (Babamohamadi, Negarandeh & Dehghan-Nayeri, 2011). In recent years, psychologists have begun to recognize how cultural differences influence human behavior, and their coping strategies in the face of stress and challenge. In eastern collectivistic cultures a lack of connection with family and friends was found to be a significant cause of solitude as compared to western individualistic cultures (Lykes & Kemmelmeier, 2014).

Spinal cord injury is a very stressful and challenging situation in one's life but was not given proper consideration in Pakistan till the Earth quake 2005 in the Northern Areas of Pakistan. As a result of that major catastrophe many people died and numerous of survivors had to face spinal cord injury. Research has discovered that fire arm injury was a cause of spinal cord injury that can only be found in Pakistan, other causes were common with other countries (Darain, Ilyas, Zeb, Ullah & Muhammad, 2017). While analyzing the quality of life of these patients it was found in another study at Paraplegic Centre Hayatabad, Peshawar, Pakistan; that the psychological wellbeing was more affected as compared to, social , relationship and physical areas of life. Patients with spinal cord injuries had moderate level of quality of life (Shah & Ilyas, 2017).

This research was aimed at investigating the role of different coping strategies and their impact on the levels of anxiety and depression among the patients with spinal cord injury in KP. In eastern and even most of the western societies the use of social, cultural and spiritual explanations as a way of dealing with illness are common. It was discovered through past studies that in spinal cord injury adjustment was related to personality, support provided by family and friends, and a spiritual connection (Catherine Wilson, Lisa DiPonio, Brad Trumpower Duggan, Colette, & Michelle, 2016). There is no doubt that a person having spinal cord injury is actually in an extremely challenging situation as compared to someone with other common forms of disorder. It is therefore possible only through researches in this area that we can know about the ways used by patients with spinal cord injury in order to adjust to the challenging situations of life and overcome the related anxiety and depression successfully. The consequences of spinal cord injury can't be retreated and are a major cause of depression and anxiety among these patients. Having knowledge of the coping styles or strategies used by SCI patients can help a psychotherapist better know about the causes of the psychological problems prevailing among these patients and this will in turn help him/her to modify their schemas in error successfully.

Research Objectives

1. To know about the prevalence of different coping styles among patients with spinal cord injury
2. To find out the levels of anxiety and depression among these patients
3. To study the impact of different coping strategies used by the patients of spinal cord injury on the prevailing anxiety and depression among them
4. To design a coping oriented support program to enhance the level of psychological adjustment as a result of better coping.

Research Hypotheses

1. Patients with spinal cord injury will use multiple types of coping strategies in order to adjust with their illness.
2. Spinal cord injury patients will show high levels of anxiety and depression.

3. Different coping strategies will have a different impact on the levels of depression and anxiety among patients with spinal cord injury.
4. Coping strategies found to be useful in alleviating depression and anxiety will be recommended to be incorporated in a coping orientated support program for these patients.

Methodology

Design

This is an exploratory study and a cross-sectional survey design was used. The survey consisted of a demographic sheet and two standardized Self-report measures

Sample

The sample was composed in patients suffering from spinal cord injury receiving rehabilitation at paraplegic center Hayat Abad. Inclusion criteria were that, the participant was at least 14 years of age, undergoing rehabilitation for spinal cord injury of any level. Patients of lower ages than this and those considered by ward staff to be too physically unwell to participate were excluded from the study. Patients with a major head injury or those unable to communicate will also be excluded from the study.

Measures

Researcher-developed demographic survey questionnaire actually a self-report measure was used to collect data on age, gender, marital status etc.

The Hospital Anxiety and Depression Scale Pashto Version (Irfan etal., 2016)

This scale provides a measure of anxiety and depression experienced over the last week. It was a translated version of The Hospital Anxiety and Depression scale (Zigmond & Snaith, 1986). The scale has 14 items, 7 for measuring depression and anxiety each. Scoring was done through a 4-point scale i.e 0-3. Cronbach's coefficient alpha for the translated version was found to be 0.70.

The Brief COPE (Carver, 1997)

Brief cope (Carver, 1997) is a self-report inventory which measures 14 coping styles a person uses under certain stressful circumstances. The 14 subscales are "self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religion, and self-blame". Present study is making use of only 13 subscales excluding "humor" as it does not seem appropriate to be used with patients of spinal cord injury. Internal reliabilities of the full scale range from □= 0.57-0.90 (Carver, 1997).

Procedure

List of the names of those patients who met the criteria of the present study was prepared and discussed with the staff at the center. 70 eligible participants were approached and the study was explained to them. Informed consent was obtained before conducting their interview. Scales were administered in an interview format. Data obtained was analyzed using SPSS.

Results

Table 1

Psychometric Properties of Scales in the Study (N=70)

Scale	No of items	Mean	SD	α	Range		Skew
					Potential	Actual	
Brief cope	26	68.88	5.79	.52	26-108	58-84	.58
HADS	14	16.94	5.77	.66	0-42	5-32	.09

HADS: Hospital Anxiety and Depression scale

Descriptive Statistics for the Sub scales of Brief Cope(N=70)

coping strategies	N	Mean	Std. Deviation
Self-distraction	70	4.58	1.68
Active-coping	70	6.00	1.91
Emotional-support	70	5.24	1.46
Instrumental- support	70	6.00	1.27
Positive-refraining	70	6.17	1.22
planning	70	5.87	1.39
acceptance	70	5.65	0.99
Religion	70	7.08	0.98
Denial	70	4.60	1.81
Behavioral-disengagement	70	4.97	1.80
Venting	70	5.45	1.08
substance use	70	2.57	1.31
Self-blame	70	4.10	1.80

Table 2 shows average responses given by 70 participants on sub scales of brief cope. The highest mean value is on the scale of religion. Similarly active coping, positive refraining and Instrumental support is also having relatively higher mean values then the other coping styles.

Table 3

Desctiptive Statistics for HADS Anxiety Catagories*(N=70)*

HADS Anxiety	N	Mean	Std.Deviation
Normal	27	4.00	2.25
borderline	17	8.82	0.80
abnormal	26	12.65	1.97

Table 3 shows number of patients and their mean responses in all the three categories of HADS anxiety. These results show that total number of patients with borderline and abnormal anxiety is

greater than patients with normal anxiety.

Table 4

HADS depression	N	Mean	Std.Deviation
Normal	24	5.75	1.11
Borderline	31	9.00	0.77
Abnormal	15	12.10	1.30

Descriptive Statistics for HADS Depression Catagories*(N=70)*

Table 4 shows number of patients and their mean responses in all the three categories of HADS depression. These results show that total number of patients with borderline and abnormal depression is greater than patients with normal depression.

Table 5

Hierarchical Multiple Regression Analysis Showing Self Distraction, Self-Blame and Instrumental Support as Predictors of Depression (N=70)

	B	Std.Error	B	t	sig
Step 1					
(Constant)	12.27	0.76		16.08	.000
Self- distraction	-0.81	0.15	-0.53	-5.18	.000
Step 2					
(Constant)	9.25	1.04		8.82	.000
Self- distraction	-0.63	0.15	-0.41	-4.24	.000
Self- blame	0.54	0.14	0.39	3.85	.000
Step 3					
(Constant)	11.61	1.53		7.55	.000
Self- distraction	-0.56	0.15	-0.37	-3.77	.000
Self -blame	0.48	0.14	0.33	3.43	.001
Instrumental-support	-0.40	0.19	-0.20	-2.06	.043

Table 5 shows hierarchical regression analysis for different coping strategies predicting depression among patients with spinal cord injury. These results show that self-distraction causes a greater decrease in the level of depression when working alone as compared to when working together with self - blame and instrumental support.

Table 6

Hierarchical Multiple Regression analysis showing self - blame and denial as predictors of anxiety (N=70)

	B	Std.Error	B	t	sig
Step 1					
Constant	3.02	1.05		2.85	.006
Self -blame	1.308	0.23	0.55	5.52	.000
Step 2					
Constant	1.15	1.30		0.89	.000
Self- blame	1.12	0.24	0.47	4.62	.377
Denial	0.56	0.24	0.24	2.32	.023

Table 6 shows that Self -blame causes a greater increase in the level of anxiety i.e at ≤.001 when working alone, but in the presence of denial Self- blame has no significant effect instead denial itself is proved to be a significant predictor at ≤.05 level for anxiety.

Discussion

Present study was conducted to know about the coping styles adopted and their impact on the levels of depression and anxiety among patients with spinal cord injury. Results of the descriptive statistics showed that religion, active coping, positive refraining and Instrumental support had highest mean values. Researchers have found that positive reframing, emotional

support, active coping, Self-blame and acceptance, and coping were frequent response styles of cancer patients in USA (Anderson, Vogel, Chlan, & Betz, 2008)

Another purpose of this research was to investigate the levels of anxiety and depression among these patients. It was discovered that borderline and abnormal categories taken together had more cases as compared to normal category of both anxiety and depression. As per the third objective of the study it was discovered that not all the coping styles as measured by brief cope (Carver,1997) but only a few were found to be showing a significant impact on both the levels of anxiety and depression faced by these patients. Self - distraction caused a greater decrease in the level of depression but its impact was decreased when subjects were also using the coping strategies of self - blame and instrumental support. The two later variables also had significant impact on depression but self-blame increased whereas instrumental support decreased the intensity of depression in our study population. Other researchers had found that use of coping strategies had certain negative outcomes, such as anxiety and depression after spinal cord injury in adults (Galvin & Godfrey, 2001). Similarly, there was a significant increase in the levels of anxiety as a result of using self- blame and denial. Research has proved that spinal cord injured patients using different coping strategies had a different level of psychological distress (Frank etal.,1987). Last objective of the present research was focused at designing a coping related support program for these patients. Such a program should include a through education about spinal cord injury, videos and live role modelling and discussions regarding coping with its stressors and the disease itself. It may involve cognitive re-constructing, relaxation techniques, and activity scheduling, problem-solving training and social skills training (Li, Bressington, & Chien, 2017)

Summary

Present study was conducted to investigate different coping styles and their impact on the levels of depression and anxiety in the spinal cord injured patients in KP The sample consisted of seventy (N=70) male and female subjects, with age range (14-58) years from Praplegic Institute Hayat Abad Peshawar. A demographic sheet, The Hospital Anxiety and Depression scale, Pashto version (Irfan etal., 2016) and Brief cope (Carver, 1997) were administered on the participants using interview format. Purpose sampling technique was used to select participants for the study. Results showed that religion, positive refraining and active coping were mostly used by these patients. Similarly self-distraction and instrumental support decreased, whereas self-blame significantly increased the levels of depression. Self-blame and denial were found to be significant predictors of anxiety. A coping focused support program was recommended for dealing with anxiety and depression in the patients with spinal cord injury.

Conclusion

It is concluded from the present study that most frequently used coping styles of patients with spinal cord injury in KP were religion, positive reframing and active coping. More cases were lying in abnormal and borderline categories of anxiety and depression as compared to normal categories. Self-distraction and instrumental support were negative whereas self-blame was found to be a positive and significant predictor of depression. Similarly self- blame and denial also played a significant role in increasing levels of anxiety in this clinical population.

Limitations and Recommendations

Major limitation of the study was the use of an English scale i.e brief cope which was administered in interview format. Among other limitation was the length of this scale as the patients were unable to pay attention to it for a long period of time. These things together affected the reliability of the scales. It is recommended that cope English version should also be translated in Pashto to be used in KP. The impact of other background variables is also needed to be studied in the future researches.

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