

The Impact of Coping Strategies on Psychological Adjustment across Male and Female Spinal Cord Injured Patients

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ABSTRACT

The present study aimed to examine the impact of coping strategies and psychological adjustment across male and female Spinal Cord Injured (SCI) patients. Purposive sampling technique was employed based on cross-sectional design. The data was collected through two questionnaires. The result revealed that psychological adjustment was significantly correlated with Positive coping strategies ($r = .36$, $p = .002$) and Problem focused coping strategies ($r = .45$, $p = .000$). On the other hand psychological adjustment was significant negative correlation with Active avoidance ($r = -.69$, $p = .000$) and Religion & Denial coping strategies ($r = -.38$, $p = .001$). The result revealed that positive coping strategies were positively significant predicted psychological adjustment ($B = 2.15$, $p = 0.01$; $B = -.20$, $p = n.s$) for male rather than female respectively. The result also displayed that problem focused strategies were positively significant predicted psychological adjustment ($B = 2.22$, $p = .05$; $B = .54$, $p = n.s$) for female rather male respectively. The result shown that active avoidance coping strategies were negatively significant predicted psychological adjustment ($B = -1.52$, $p = .05$; $B = -.67$, $p = n.s$) for male and female respectively. The study suggested that the gender was significant moderator between coping strategies and psychological adjustment in Spinal Cord Injured patients. The study recommended that male patients are more vulnerable on problem focused coping strategies whereas females are more predisposed on positive and active avoidance coping strategies. This study would be helpful in clinical and rehabilitation settings for SCI patients.

KEYWORDS: Coping Strategies, Psychological Adjustment, Spinal Cord Injured.

1 INTRODUCTION

Life encompasses various stages and experiences that require specific responses or copings to tackle the situations. The way individual respond to certain problems or stresses lead toward adjustment or maladjustment. As individuals who suffer with traumatic condition of spinal cord injury (SCI) faced many hindrances to perform activities of their daily living. Spinal Cord Injury caused temporary or permanent defect in spinal cord normal functioning by limiting and diminishing its sensory and motor functioning. This leads to bunch of problems in physical and psychological aspects of lives. SCI is denoted as tetraplegia (if injury is in cervical region) and paraplegia (if injury is in thoracic, lumbar and sacral region) [1].

On 8th October 2005 a disaster earthquake struck Northern areas of Pakistan which unfortunately leaves approximately 600 people in traumatic loss of Spinal cord injury [2]. Other researchers [3] expressed that individual with SCI usually revealed uncertainty and weakness in control and think themselves as dependant. As a result SCI patients employed different ways of dealing based on emotional and problem focused copings. As [4] described copings as rational and reasonable ways to hamper apprehensions. Galvin and Gdfrey [5] explore relationship between traumatic life experiences and psychological adjustment which is mediated by coping appraisal. Gender also plays role in coping mechanism as [6] documented differences in coping mechanism of male and female participants. They indicated that female employed emotion oriented coping mechanism as compared to male which might be due to cultural prospects that make female prone to emotional expression. It further revealed that emotion oriented coping was related to psychological distress.

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A study documented that prevalence of SCI is greater in female as compared to males. As spine fracture is 70% in female among sufferers [7]. A study indicates female and male ratio of SCI (4:1) in developing countries [8].

Spinal cord injury is quite intricate condition that indulge sufferer in challenging life tasks that needs constant efforts of years to achieve acceptance or adjustment with existing potentials [3]. In 1970 find that in early 1940s about 80% - 90% sufferers of SCI expired within weeks [9]. Later on in 1940s progressive developments SCI were able to live about ten years [10]. This statistics improved with the passage of time due to rehabilitation advancements. As disability is a multidimensional phenomenon [11]. It is required to find out the useful coping mechanism to increase adjustment of SCI sufferers [12].

Some researches revealed that emotion-focused coping strategies caused poor psychological adjustment in SCI patients as compared to problem focused coping mechanisms [13,14]. One more research showed that emotion-focused coping strategy is the most crucial predictor of psychological adjustment [15]. Further use of active coping mechanism decreased distress which ultimately increases psychological adaptation [16]. Sufferer of SCI adjusted with their altered self that is adaptation with new circumstances. To acquire this altered self or state of adjustment it is required to explore the effective coping mechanism across male and female SCI patients [17]. Further it is described that adjustment in life long illness as recognition of one's remaining potentials and accept one's limitation and able to confer outside the environment [18]. A study concluded coping mechanism as predictor of social and physical adjustment among SCI patients and highlighted utilization of healthy copings in psycho social rehabilitation plan of these sufferers [19].

2 OBJECTIVES

- To discover the relationship between coping styles and psychological Adjustment among SCI patients
- To study the moderating role of the gender between coping styles and psychological adjustment among SCI patients.

2.1 Hypotheses

H1 Psychological adjustment is positively correlated with positive coping strategies & problem-focused coping strategies among SCI patients.

H2 Psychological adjustment is negatively correlated with active avoidance & religion and denial coping strategies among SCI patients.

H3 Male spinal cord injured patients showed more positive coping styles and problem focused coping styles as compared to female spinal cord injured patients.

H4 Female spinal cord injured patients showed more active avoidance coping strategies & religion and denial coping strategies as compared to male spinal cord injured patients.

2.2 Sample

The current study consist sample of 70 spinal cord injured sufferers from National Institute of Rehabilitation Medicine (NIRM) Islamabad, Pakistan. Purposive sampling was used. The demographics were name, age (20-40), gender and level of injury (ASIA-A).

2.3 Instruments

Consent Form and Demographic information sheet was administered along two questionnaires. Brief COPE abbreviated version's [20] translated Form [21] was used to measure coping strategies. For scoring Hasting described model was used in four subscales (Positive, problem focused, Active Avoidance, and Religious & Denial) [22]. Items were summed separately for each subscale. To measure psychological adjustment five point Likert scale of psychological adjustment was used [23]. This was consisted on twenty seven items and composed on positive and negatively framed questions. Positively and negatively framed questions were summed for psychological adjustment total score.

2.4 Procedure & Data Analysis

The data was collected from rehabilitation hospital in Islamabad. Informed consent was taken by SCI patients. Data was collected individually by the researcher. All the participants were assured about the confidentiality.

Data analysis was completed with the help of Statistical Package for Social Sciences (SPSS) 16.0 version and SEM. The reliability (Cronbach's alpha) was calculated for both Scales [24]. To found relationship between four subscales of coping strategies and psychological adjustment Pearson correlation was done. t-test was done to calculate the gender differences between these two variables[24]. The present study has planned to investigate the impact of coping styles on psychological adjustment across gender (male and female) SCI Patients. The numerous studies have been conducted on current study variables. Firstly few studies have been conducted and emphasized that the coping strategies are the predictor for different variables like psychological adjustment[19], occupational stress, [25], emotional well-being[26] depression[5] positive and negative attitudes [27]. A study indicated coping mechanism with reference to psychological and medical problems for example patients with hypertension and depression[28]. Secondly, different models of adjustment emphasize that coping strategies are imperative factor for psychological adjustment like five stage theory that described five stages of emotional adjustment after physical trauma and disability. On final stage of this model explained new role of altered self is accepted after different reactions and coping styles employed by the person [29]. Stage theory of adjustment explains that the person cognition changed by different individual factors like personality and coping styles etc as a result acceptance of disability and it is overcome gradually by different natural supporting factors [30, 31]. Both models are supporting this research that the coping strategy is the very crucial factor for psychological adjustment. Similar to these models previous both studies have been conducted on similar variables like role of coping strategies as a predictor of psychological adjustment[32] and social adjustment physical functioning of spinal cord injury persons[19]. The both studies have been extended and revised with new variable like a gender of the patients. As reported these previous studies did not focus on the role of the gender variable. Gender is most controversial variable between coping styles and psychological adjustment. So this study took gender as a moderator between coping styles and psychological adjustment among SCI patients.

3 RESULTS

Table 3.1 Alpha Reliability coefficients for Brief COPE & Psychological Adjustment Scales (N = 70)

Scale	N	α
Psychological Adjustment	27	.78
Brief COPE	28	.69

Table 3.1 revealed the mean scores, standard deviation, skewness and kurtosis for the subscale of coping strategy and psychological adjustment. The table values showed that problem focused subscale of coping strategy and psychological adjustments have the highest mean value for the complete sample.

Table 3.2 Descriptive statistics, Skewness, and Kurtosis for study variables (N=70)

Variables	N	Min	Max	M	SD	Skewness	Kurtosis
AAC	70	10	40	21.89	5.676	.428	.559
PFC	70	14	28	23.33	3.119	-.766	.423
PC	70	11	26	20.60	3.285	-.699	.382
RD	70	9	16	11.86	1.804	.281	-.810
PA	70	15	75	59.94	15.257	-1.481	1.456

Note. AAC=Active Avoidance coping, PFC=Problem Focused coping, PC=Positive Coping, RD= Religion & Denial Coping, PA= Psychological Adjustment.

Table 3.2 shows skewness and kurtosis for normal distribution of psychological adjustment and subscale of coping strategy [24].

Table 3.3 Pearson Product Moment Correlation between Active avoidance coping strategies, and Religion & Denial coping strategies and Psychological Adjustment among SCI patients (N= 70)

Variables	Psychological Adjustment	p
Active avoidance coping strategies	-.69**	.000
Religion/Denial coping strategies	.38**	.001
Positive coping strategies	.36*	.002
Problem focused coping strategies	.45**	.000

Table 3.3 depicts that there is significant inverse relationship between Active avoidance and Religion/Denial coping strategies and Psychological Adjustment. This table also shows significant positive relationship between Positive and Problem-focused coping strategies and Psychological.

Table 3.4 *Moderating Role of Gender between Coping Strategies and Psychological Adjustment Across Male and Female Spinal Cord Patients (N = 70).*

Variables	(D.V)Psychological adjustment			
I.V	B	SE	β	P
Male				
Positive coping	2.15	.83	.337	.010
Problem focused coping	.54	.92	.112	.562
Active Avoidance Coping	-1.52	.62	-.468	.015
Female				
Positive coping	-.20	.76	-.050	.789
Problem focused coping	2.22	.88	.466	.012
Active Avoidance Coping	-.67	.50	-.201	.181

* $p \leq 0.05$, ** $p \leq 0.01$

This table 3.4 shows conditional model fit the data sufficiently, $\chi^2(2) = 4.26$, $p < .119$, $\chi^2/df = 2.13$ RMSEA = .05, CFI = .96, NFI = .94, IFI = .97. Predictor variables explained for 43% of the variance in psychological adjustment for male spinal cord patients. The result revealed that Active Avoidance was negatively significant predict the psychological adjustment ($\beta = -1.52$, $p < .05$) and positive coping was positively significant predict the psychological adjustment ($\beta = 2.15$, $p < .05$) for male spinal cord patients. The results further revealed that Predictor variables accounted for 23% of the variance in psychological adjustment for female spinal cord patients. The result revealed that problem focused coping was positively significant predict the psychological adjustment ($\beta = 2.22$, $p < .05$) for female spinal cord patients.

Table 3.5 *Mean, Standard deviation and t- values for psychological adjustment between male and female spinal cord injured patients. (N= 70)*

Scale	Male (n = 35)		Female (n = 35)		t
	M	SD	M	SD	
Psychological Adjustment	104.94	16.33	87.54	6.09	4.49

** $p \leq .001$

Table 3.5 result shows that male spinal cord injured patients have more psychological adjustment ($M = 104.94$, $t = 4.49$, $df = 68$, $p < .001$) as compared to female spinal cord injured patients ($M = 87.54$, $t = 4.49$, $p < .001$)

3.6 Figures

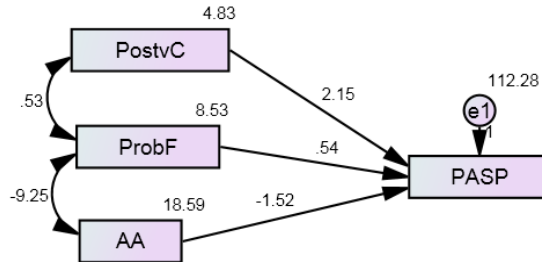


Figure 1. Trajectory of Male Spinal Cord Patients (N = 35)

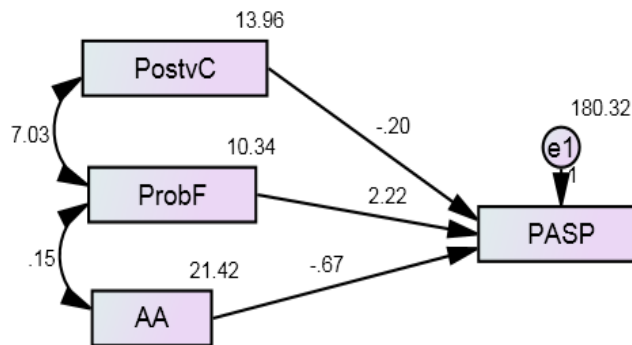


Figure 2. Trejectory of Female Spinal Cord Patients (N = 35)

4 DISCUSSION

The central aim of the study was to find out the relationship between two variables like coping strategies & psychological adjustment and to further explore the impact of these variables across male and female spinal cord injured patients. H1 is supported that assumed positive relationship between positive & problem-focused coping styles and psychological adjustment among SCI patients. Present findings are consistent with another study that the problem focused coping strategies (e.g. coping strategy of acceptance i.e. modifying life values and arranging latest priorities) were highly connected with better adjustment and well-being among SCI patients [26]. Findings also related that Positive coping strategies were apt to be used by a majority of spinal cord injured sufferers and these positive coping styles were related to higher life satisfaction [33]. Findings supported H2 that active avoidance coping strategies are inversely related with psychological adjustment among SCI. Another study concluded same findings that avoidant coping strategies were vulnerable for psychological problems [34]. The result revealed that Active Avoidance was negatively significant predictor of psychological adjustment ($\beta = -1.52$, $p < .05$) and positive coping was positively significant predictor of psychological adjustment ($\beta = 2.15$, $p < .05$) for male spinal cord patients. The results further revealed that Predictor variables accounted for 23% of the variance in psychological adjustment for female spinal cord patients. The result also revealed that problem focused coping was positively significant predictor of psychological adjustment ($\beta = 2.22$, $p < .05$) for female spinal cord patients. H3 has been supported which assumed that female SCI patients use more Active avoidance and Religion and Denial coping styles as compared to male SCI patients. Previous findings on survivors of the earthquake in Turkey, 1999 are consistent which reflects severe reactions (depression, anxiety and somatization) more by female than male [35]. Same gender differences were reported by [36]. Few studies indicated that women are prone to strain and they utilize emotion focused coping skills as denial and religion contrary to men [37, 38]. H4 is supported that male SCI patients use positive coping strategies as compare to female SCI patients. These results are consistent with another research that concluded men were more likely to use positive copings e.g. humor than women as a means of coping [39]. These sex differences in utilization of coping mechanisms were due to gender role in societies [40]. A study previously mentioned about presence of problem-focused coping in males whereas more support seeking and emotion focused coping in females [38]. But the H4 was not supported by findings which assumed male SCI patients utilize problem-focused coping strategies as compare to female SCI patients. Results of the study do not showed significant difference between male and female SCI patients which might be due to impact of SCI and counseling or therapeutic intervention. So patients were taking psychological rehabilitation services at rehabilitation unit and SCI patients were aware regarding biological and psychological consequences of their injury. As SCI have variant consequences on sexual health of male and female patients. Early studies addressing the impact of spinal cord injury on sexuality mainly focused on sexual abilities such as penile erection, ejaculation and reproduction [41, 42]. SCI specific to level) hinders male sexual/reproduction functioning more rather female. Finally the utilization of trainings and counseling regarding problem focused coping would be helpful for better adjustment.

5. LIMITATIONS & RECOMMENDATIONS

This study was comprises on victims of 2005 earthquake therefore findings to make generalizations about other populations is not plausible. In future descriptive studies will be beneficial to describe the mechanism of coping across gender in detail. Indigenous tool for measuring coping strategies will be effective in future as religion can provide positive role in coping despite negative in muslim societies.

6. CONCLUSION

The statistical findings showed that four subscales of coping strategies communicate with psychological adjustment. The higher psychological adjustment was predicted by the positive & problem focused coping strategies used by male spinal cord injured patients. This study has been beneficial for rehabilitation psychologists to take clues from this research and make coping strategies more effective across male and female SCI.

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