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Original Work

Gender differences in psychological adjustment among spinal cord injured patients

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ABSTRACT: In the present study gender differences in psychological adjustment of Spinal Cord Injured (SCI) patients was studied. The sample of 70 SCI patients (35 male and 35 female) was selected from the National Institute of Rehabilitation Medicine (NIRM) Islamabad, Bagh and Muzafabad, (Azad & Jammu Kashmir AJK). Purposive sampling technique was used for data collection. Psychological Adjustment Scale PAS was used. This questionnaire was found to be reliable (Cronbach's Alpha = .78). The findings indicated that there was significant gender difference in psychological adjustments as male SCI patients were more adjusted than female SCI patients.

KEY WORDS: *Rehabilitation Medicine; Gender differences; Psychological adjustment; Spinal cord Injured patients*

INTRODUCTION

Spinal cord injury is an overwhelming and distressing trauma experienced by a large number of people especially after the earthquake that affected Northern Pakistan on October 8, 2005. This traumatic event rendered approximately 600 patients paraplegic which is the largest ever number stated for any disaster¹. Spinal cord injury is a defect to the spinal cord resulting in a change, in its normal sensory, motor, or autonomic function. It can be either temporary or permanent. The two terminologies that come up around the categorization of spinal cord injury (SCI) are: tetraplegia, an injury in the spinal cord in the cervical region with associated loss of muscle strength in all four extremities, and paraplegia, an injury to the spinal cord in the region of thoracic, lumbar, or sacral segments².

When people suffer spinal injury, they sustain an injury at a specified level of the spinal cord and are given a qualifier representing the severity of injury that is "complete"/"incomplete". They are sometimes informed that their injury level is classified according to the American Spinal Injury Association (ASIA) Classification, as an ASIA A, B, C, or D. Conventionally, "complete" spinal cord

injury is described as having no voluntary motor or sensory function below the injury location. An "incomplete" injury suggests that below the primary level of the injury some function still remains. The ASIA Committee determined the usage of this criterion to its reasonable perimeter which is if the individual has any spinal level under which there is no neurological function, this individual would be categorized as having "complete" injury. This interprets into a simple definition of "complete" spinal cord injury: a person is a "complete" if they do not have motor and sensory function in the anal and perineal region representing the lowest sacral cord sacral S4- sacral S5³.

The percentage of women with SCI is greater than that of women reported with other illnesses caused by traumatic incidents. A study disclosed that females with spine fractures were 70% among sufferers. While behavioral and occupational risk factors usually enhance the risk of a man's being affected by SCI, the occurrence of natural disasters particularly in the early morning when majority of people stay at home, causes a greater number of women to get injured⁴. Even in developing countries a ratio of approximately 4:1 has been found between men and women suffering from SCI⁵.

Some researchers⁶ describe that the complexities attached to the injury of spinal cord may direct to lower life quality, meager care of self and serious

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complications of varied medical factors. The estimate reveals that the ratio of suicide committed by persons with spinal cord injury is two to six times greater than the people without spinal cord injury⁷.

The concept of adjustment is as old as the human race on earth and human beings have greater capacity to adapt to new situations than other living beings. A well-adjusted individual demonstrates harmonious behaviors and feelings and is a good fit between himself, his abilities and environment⁸. The implication is that the individual is involved in a rich, ongoing process of developing his or her potential, reacting to and in turn changing the environment in a healthy, effective manner.

Natural disasters like earthquakes that leave a huge number of people with SCI throw emphasis on the requirement of a system of care and rehabilitation. To think about how the psychological and medical rehabilitation systems will work and cater in similar conditions of disaster is very fruitful for us in Pakistan. This study is an effort to scientifically find out the gender differences in psychological adjustment among SCI patients.

The hypothesis of the present study is that male SCI patients will be more psychologically adjusted as compared to female SCI patients.

METHODOLOGY

Participants

The data was collected from National Institute of Rehabilitation Medicine Islamabad, Bagh and Muzafabad, (Azad & Jammu Kashmir AJK). SCI patients were the participants in the study. The age range of these participants was 20 to 40 years. The sample consisted of (35 male and 35 female) SCI patients who were taking psychological rehabilitation services. The sampling procedure for selecting the sample is Non probability purposive sampling. Demographic details of the sample included age, gender and level of injury.

Tool

Psychological Adjustment Scale

The Psychological Adjustment Scale (PAS) was developed and translated⁹. The Psychological Adjustment Scale consists of 27 items. The coefficient alpha of psychological adjustment scale has been calculated and that was 0.83 while the split half reliability of the scale is 0.85. Item total correlation co-efficient values calculated separately for the five sub-scales of PAS showed that the content validity of all the sub-scale is high. The PAS consist of positive and negatively framed questions. Each item was rated on 5 point Likert type scale. The items are summed for positively

and negatively phrased items separately. Later on total score on psychological adjustment scale was found by addition of positively and negatively scored items.

Procedure

After selection of the tool, participants for the current study were contacted from NIRM, Islamabad. Most of the participants were individually approached by the researcher at spinal cord injured unit of NIRM. After approval of concerned authorities of the NIRM the data collection was started. Informed consent was taken and the purpose of the study was explained to the spinal cord injured patients. They were requested to give their true responses. There was no time limit.

RESULT

The present study was conducted to find out the gender differences among SCI patients. For this purpose, Psychological Adjustment Scale (PAS) assessed psychological adjustment.

Following tables indicate the results obtained from the data analysis. Internal consistency reliability of Psychological Adjustment Scale (PAS) was ascertained using Cornbach's alpha. The scale was deemed reliable for the present study with alpha reliability of .78 (**Table 1**). The result in **Table 2** reflects that there was a significant difference of psychological adjustment found between male and female spinal cord injured patients that also supported the hypothesis of current study. This indicates that male spinal cord injured patients have more psychological adjustment (M= 104.94) as compared to female spinal cord injured patients (M=87.54). **Table 3** indicates that 92.9 % of the sample falls in the category of high and 7.1 % falls in the low category on psychological adjustment, which depicts the presence of Psychological Adjustment in majority of the sample.

Table 1. Alpha reliability of Psychological Adjustment Scale (PAS) (N=70)

Scale	R	Items
PAS	.78	27

Table 2. Mean, Standard deviation and t- values for psychological adjustment based on the scores of Psychological Adjustment Scale (PAS) between male and female spinal cord injured patients. (N= 70)

Scale	Male (n = 35)	Female (n = 35)	t	Cohen's d
PAS	M-104.94 SD-16.33	M-87.54 SD-6.09	4.49**	1.41

Table 3: Frequencies (f) and percentages (%) of Psychological Adjustment in spinal cord injured patients based on the scores of PAS (N= 70)

Levels of Psychological Adjustment	f	%
Low	5	7.1
High	65	92.9
Total	70	100

DISCUSSION

The aim of the present study was to find out gender differences in psychological adjustment among spinal cord injured patients. The tragedy, which became the cause of death of thousands of people eventually, left the survivors in a psychological and emotional trauma. An earthquake often come with no warning, hits swiftly and is uncontrollable and affects a large population leaving injury, destruction, and death afterwards. After an earthquake, survivors are at increased risk, with the loss of loved ones and livelihood, for experiencing denial, psychological distress and psychological maladjustment.

The present study focused on spinal cord injury patients regarding their psychological adjustment. This further studied gender difference in terms of their psychological adjustment. It was found in epidemiological studies that the susceptibility to disaster was more in women than in men. A study was conducted on the adult survivors of the earthquake that struck Turkey in 1999 to find out the gender difference regarding short term psychological effect. The findings of this study revealed that the severe reactions (depression, anxiety and somatization) of psychological nature were reported more by women than men after that catastrophic earthquake¹⁰. It has been further seen that among spinal cord injured patients, males were more adjusted than females after their respective treatment. Though they couldn't be brought back to the same level of adjustment, which they had before the disaster, yet they were somewhat adjusted considering their residual abilities and the facilities society provides them. Hypothesis of the current study indicated that male SCI patients were more psychologically adjusted as compared to female SCI patients. The findings of the current study reflects that male SCI patients have high (53.8%) psychological adjustment as compared to female (46.2%) SCI patients.

Females usually live in a congested environment. The same stale routine and stagnant atmosphere seldom allows them to come out of the psychological problems caused by the disaster in the form of a lifelong spinal cord injury. Contrary to that, males have more opportunities to overcome

their problematic psychological state and this leads to a better psychological adjustment. Thus the environment a person stays in most of the time matters a lot. A study described that females have demonstrated higher levels of denial and centering on emotions¹¹. Another study explored the gender relationship to environmental hurdles and societal participation or community integration. The Craig Handicap Assessment and Reporting Technique (CHART) were applied to evaluate community integration and the Craig Hospital Inventory of Environmental Factors was applied to evaluate barriers. For this study the sample of 2048 patients participating in the Model Spinal Cord Injury Care System was considered. Gender was related with environmental barriers; females experienced more across all domains¹².

Women with SCI experience double impact of being female and disabled. Being women, they have greater risks of psychosocial health troubles than men. As persons with disabilities, they may be even more susceptible to this gender disparity. Another study explored that the females scored considerably higher on somatic symptoms and psychological distress as compared to males¹³. Although it is unrealistic to assume that people can be completely emotionally prepared for stressful situations such as severe natural disaster but psychological preparedness can help in coping with the stress of the unfolding situation and can help to reduce the distress after disaster. So psychological preparedness training may be helpful as it includes having realistic expectations that an emergency situation such as a flood or earthquake can very rapidly become uncontrollable, unpredictable and life threatening. Being able to anticipate that such a situation could occur can help people to 'let go' when necessary and leave the situation to the expertise of emergency services.

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