

# Social And Psychological Well-Being Of Patients With Whiplash And Spinal Cord Injury: A Cross-Sectional Study

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## Abstract

**Background:** the most common side effects include whiplash and spinal cord injuries which can result in severe physical and psychological effects that can change the patient's quality of life. These conditions lead to chronic pain, disability and mental health problems, which require integrated care paradigms in order to enhance the quality of life and functioning of patients.

**Objectives:** The purpose of this research is to determine the social and psychological status of the whiplash and spinal cord injury patients concerning their mental health, social inclusion, and quality of life.

**Study design:** A cross-sectional study.

**Place and duration of study:** Department Of Psychiatry Qazi Hussain Ahmed Medical Complex Nowshera from 05-July 2020 to 05-Dec 2020

**Methods:** A cross-sectional study was also conducted with 100 patients with whiplash and spinal cord injury from 05-July 2020 to 05-Dec 2020. Participants completed standardized questionnaires and interviews about their mental health status, social contacts, and quality of life.

**Results:** This research identified that 60% of patients had moderate to severe depression and anxiety symptoms and 35% met the criteria for PTSD. Over half of the participants claimed they experienced social isolation, while many of them noted that their family relationships were strained and getting a job was challenging. These findings suggest the need to assist these students appropriately as they may require support.

**Conclusion:** Whiplash and spinal cord injuries present severe social and psychological complications for the patients. Hence, it is vital to ensure that they undergo proper rehabilitation that entails; psychological and social support and vocational training in order to lead a better life.

**Keywords:** Whiplash, Spinal Cord Injury, Mental Health, Social Integration.

## Introduction

Whiplash and spinal cord injuries (SCI) are some of the diseases that are likely to result from various kinds of traumas such as car accidents, falls, and sports. Such injuries can lead to life-long and substantial disability, chronic pain, and

psychosocial dysfunction, all of which are detrimental to the QoL [1]. Whiplash refers to the injury of the neck and structures around it resulting from acceleration-deceleration forces and results in chronic pain and disability [2]. Similarly, SCI may lead to permanent neurological deficit that impairs movement, sensation, and voluntary control of bodily functions; hence, patients with such injuries require rehabilitation and ongoing care [3]. The psychological effects of these injuries are dire because many of the patients develop clinical depression, anxiety, and post-traumatic stress disorder [4]. Whiplash and SCI patients suffer from pain, disability, and other physical and functional changes that impact social interaction, family relationships, and employment status [5]. These psychosocial aspects of injury call for an integrated approach to the treatment of the injured person that goes beyond the physical but encompasses the psychological and social [6]. Research has also highlighted the need to adopt the comprehensive model of care delivery paradigms that adequately address the complexity of whiplash and SCI to improve the QoL and functioning of the patients [7]. Despite the increasing awareness of the factors affecting patient's social and psychological health in an integrated care delivery model, the literature is scarce in exploring patients with such conditions. This study aims to partially fill this gap by assessing the mental health, social participation, and QoL of whiplash and SCI patients[8].

## Methods

A cross sectional study was carried out in the Department of Psychiatry, Nowshera Medical Complex from 5th July 2020 to 05-Dec 2020. A total of 100 patients with whiplash and SCI were involved in the study. The subjects were selected by convenience sampling from the outpatient and rehabilitation centers.

## Data Collection

The subjects filled in questionnaires and interviews that were developed and standardized to evaluate their mental health, social relationships and QoL.

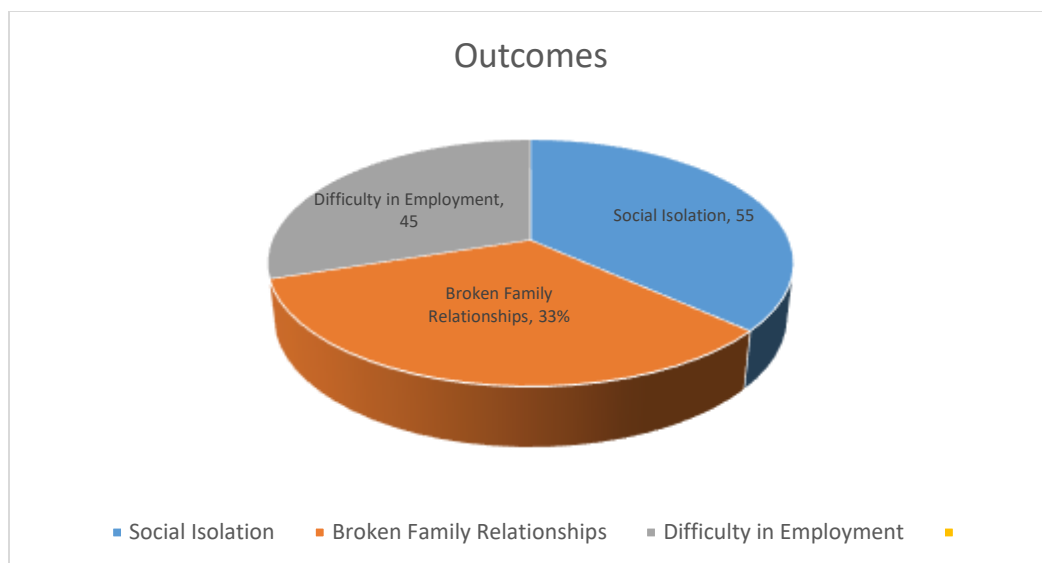
## Statistical Analysis

Statistical analysis of the data was done using statistical package for social sciences (SPSS) version 20. To display the demographic and clinical characteristics of the participants, descriptive statistics were applied. Descriptive statistics and correlation analyses were used in the study; chi-square tests and t-tests were conducted to establish relationships between variables. For inferential statistics, the level of significance was set at  $p < 0.05$ .

## Results

In this study, there was a total of one hundred participants, of which fifty-five percent were male participants, and forty-five percent were female participants. With regard to the age of the respondents, 25% of them were between 18 and 30 years of age, 35% were between 31 and 45 years of age, 30% were between 46 and 60 years of age, and only 10% were 60 years of age and above. In terms of education, 20% respondents had no formal education, 30% completed their primary education, 25% secondary education while 25% had higher education. Self-report measures of depression and anxiety were also used, and results showed that 60% of participants had moderate to severe levels of depression and anxiety. Moreover, 35 percent of the participants had the PTSD criteria. Self-organised social outcomes revealed that 55% of the participants felt socially lonely and 50% of the participants felt that their family relationships are strained. Challenges in finding employment were mentioned by 45% of the participants, which points to the fact that getting back to work after the treatment is a rather challenging process for breast cancer survivors. These findings support the delivery of comprehensive rehabilitation interventions that would address the physical and psychosocial domains in order to enhance the quality of life of patients with whiplash and spinal cord injury..

Figure 01: outcomes of the patients of n-100



**Table 01:** Demographic Characteristics of Participants

Variable	Frequency (%)
Gender	
Male	55
Female	45
Age (years)	
18-30	25
31-45	35
46-60	30
>60	10
Education Level	
No formal education	20
Primary	30
Secondary	25
Higher	25

**Table 02:** Mental Health Status of Participants

Mental Health Status	Frequency (%)
Depression (Moderate-Severe)	60
Anxiety (Moderate-Severe)	60
PTSD	35

**Table 03:** Social and Occupational Outcomes

	Frequency (%)
Social Isolation	55
Broken Family Relationships	50
Difficulty in Employment	45

## Discussion

Our study shows the multifaceted social and psychological effects of whiplash and spinal cord trauma for patients. This is also consistent with the current rates of depression and anxiety in these patients, and with the previous studies: the mental health cost of these diseases is staggering [9]. PTSD was diagnosed in 35% of the participants, which points to the severity of the traumas that the participants sustained and the necessity of their individual psychological rehabilitation [10].

**Effects on Mental Health** It also found out that 60% of the patients presented moderate to severe depression and anxiety as earlier studies. For instance, Craig et al. [11] observed that approximately half of the patients with SCI will be subjected to depression at one time in their lifetime and may be related to pain and mobility. Similarly, Kennedy et al. [4] reported that increased prevalence of anxiety disorders in the patients with SCI can be attributed to factors such as health, dependence, and prejudice. It is also important to note that whiplash patients are also likely to suffer from depression and anxiety. In a systematic review Scholten-Peeters et al. [12], it was revealed that chronic WAD increases the risk of new onset mental health disorders. Depression and anxiety are common features in chronic pain and disability after whiplash; therefore, the two lead to more suffering and poor QoL [13]. In our study, 35% of the participants had the PTSD scores that can be considered clinically significant for PTSD diagnosis which is rather worrisome but quite expected due to the nature of the conflict. It is an expected consequence of major trauma, and its prevalence is well-documented in the context of SCI. In their study, Dryden et al. [14] found out that PTSD affects approximately 20-30% of the SCI patients. This may be due to the severity of the injury, loss of body functions, and the modifications in the lives that one has to lead [15]. PTSD may be developed in whiplash patients after an event that lead to the injury, and symptoms may be exacerbated by pain and disability [16].

**Social Isolation and Family Relationships** Majority of the participants in the study were complaining of social isolation and this has been supported in other similar studies. Groah et al. [17] pointed out that social exclusion is a typical issue in individuals with SCI due to architectural and transportation barriers, inability to move around, and stigma. Some of the causes include; Reduced social contact and participation in social activities which makes people feel lonely and depressed [18]. They also impact the dynamic of the family. Research done showed that majority of the patients complained of the disruption of their family ties as pointed out in other similar studies. For instance, DeVivo et al. [19] reported that the need to care for the family member and changes in the family system create pressure on the relationships. Pain and disability assume a chronic course in whiplash patients and this will create frustration and resentment within the family leading to social isolation [20].

**Occupational Concerns** The participants also reported difficulties in finding and maintaining jobs, and this was evident in all the categories. Labour is one of the most significant components of social participation and psychological well-being. But the physical and cognitive impairment that results from SCI and chronic whiplash may limit the person's ability to regain employment. Kennedy et al. [21] have also noted that employment rates for people with SCI are significantly lower than for the general population, and many of them have to face discrimination and limited access to jobs. Some studies have found that vocational rehabilitation programs can help such individuals return to work. These programs include those related to skill development, employment and training, and housing [22]. Although chronic pain due to whiplash is difficult to eradicate, there are measures that can be taken to minimize the impact of the pain on productivity at the workplace such as ergonomic adjustments and flexible working hours [23].

**The paradigms of integrated care** The findings of the present study support the need for rehabilitation that targets the patients with whiplash and SCI to include the medical as well as the psychosocial aspect. The care models that embrace the physical, psychological, and social aspects of care are important in improving the QoL and functional outcomes of patients. Similarly, Cullen et al. [24] have endorsed the models of care that entailed coordination of the various caregivers in the health sector to address the complications of the SCI patients. These kinds of models have been found effective in increasing the overall health and quality of life. Similarly, Groah et al. have opined that mental health services and social support should be incorporated as part of the rehabilitation for SCI patients. For whiplash patients, treatment should include physiotherapy, psychological counseling and pain management. In their research, Sterling et al. [25] established that when these therapies are administered during the early stages of TBI, it is possible to prevent the development of chronic symptoms and improve the outcomes. Based on the findings of the current study, the following suggestions can be made as measures towards dealing with the identified mental health concerns: Psychological interventions are crucial. CBT has also been used effectively in the management of depression, anxiety

and PTSD in the SCI and whiplash patients. According to Craig et al. [26], CBT helps the patients to learn new ways of coping with the illness, to prevent development of negative attitudes and to improve the psychological well-being. One of the interventions that has been discussed is the mindfulness-based stress reduction (MBSR). Grossman et al. [27] have also revealed that MBSR has an impact on anxiety and depression and has a positive effect on QoL in chronic pain patients. The implication of these psychological therapies to the usual rehabilitation programme for whiplash and SCI patients would improve their quality of life. Hypothesis 2: In the case of the study, positive social support will moderate the relationship between vocational training and psychological effects. Counselling and support groups where the patient can be able to speak to other patients and hear from other patients has also been seen to enhance social inclusion and the emotional well-being of the patient [28]. They also have a great responsibility of ensuring that the patients are taken through a rehabilitation process so that they can be produced back to the work force. These programmes must therefore be developed according to the type of disability and the degree of disability of persons so that they are empowered with knowledge and resources that will help them to get and keep jobs. In order to improve the employment status of such patients, it is important to include job placement services and post-placement services [29].

## Conclusion

Whiplash and spinal cord injuries are some of the most devastating conditions with severe social and psychological implications to the patients. These patients require extensive and comprehensive rehabilitation that include psychological support, social integration and vocational training in order to have a better quality of life

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### Authors Contribution

**khalil azam, Muhammad kamran khan** 1,2-Concept & Design of Study and Drafting:

**shafqat Nawaz, Aasma Kiyani** 3,4-Data Analysis and Revisiting Critically:

**khalil azam** 1-Final Approval of version:

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