

**UNIVERSITI TEKNOLOGI MARA**

**OCCUPATIONAL PARTICIPATION  
AND QUALITY OF LIFE AMONG  
PERSONS WITH PARAPLEGIA  
SPINAL CORD INJURY IN  
PAKISTAN**

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## ABSTRACT

A high number of Spinal Cord Injury (SCI) incidents in young adults aged from 26 to 35 years were reported in Pakistan. Around 90% of these persons, after discharge from the hospital to the community, experience various challenges and find difficulty in occupational participation in the community which negatively affects their Quality of Life (QOL). Previous research on this topic in Western countries, there is a lack of information about this issue in Pakistan. Occupational participation is a significant occupational therapy outcome for persons with paraplegia SCI, improvement health, well-being, and overall QOL. Occupational participation means to involvement in daily life situations such as work, play, and learning and can be assessed by the daily living activities and social roles they undertake. In Pakistan, it was noticed that occupational therapists often do not prioritize occupational participation as a primary outcome in their interventions for persons with paraplegia SCI. Instead, they typically use a medical model managing SCI impairments, aiming to alleviate symptoms resulting in persons who are restricted in their occupation, have fewer chances of thriving, suffer social exclusion, and achieve less independence in the community. Therefore, this study aimed to investigate the occupational participation and QOL of persons with paraplegia SCI in Pakistan using a cross-sectional design. Data was collected using socio-demographic questionnaires, the American Spinal Injury Association Impairment Scale (ASIA scale), the World Health Organization Quality of Life BREF Scale (WHOQOL-BREF scale), the World Health Organization Disability Schedule 2.0 Scale (WHODAS-II scale), and Craig Hospital Inventory of Environmental Factors Scale (CHIEF scale). The results of this study found that participation, life activities, and mobility domains were the highest mean scores ( $M=25.95, 23.82, 15.76 \pm SD=7.008, 7.831, 4.661$ ) indicating severe to extreme difficulties in social interactions, daily tasks, and physical movements. QOL the physical ( $M=20.95 \pm SD=6.194$ ), environmental ( $M=20.1 \pm SD=7.648$ ), and psychological health domains ( $M=16.56 \pm SD=6.021$ ) were the highest mean scores indicating very low QOL, except the social domain ( $M=8.7 \pm SD=2.7$ ) was the lowest score indicating normal QOL in interaction. This study showed a moderately negative significant inverse correlation between occupational participation and QOL in persons with paraplegia SCI ( $r = -.586, p = .000$ ). Multiple regression analysis showed that certain personal factors such as age, marital status, level of education, level of injury had varied and relatively modest insignificant influence on occupational participation. Notably, personal factors like job status, body function, and structure (ASIA-A, and ASIA-C) environmental factors had a strong significant positive influence on the occupational participation of persons with paraplegia SCI ( $b_0= b_1= 0.234 + b_2= 0.332 + b_3= -0.062+ b_4= -0.238 + \epsilon$ ). Hierarchical multiple regression showed that occupational participation, body function, and structure, personal factors including level of education was the strongest significant predictor of QOL ( $\beta=-.586, p< .001, \beta=-.225, p=.001, \beta=.203 p = .016$ ). Conversely, environmental factors did not emerge as significant predictors within the model ( $\beta=.015, p = .824$ ). In conclusion, this study highlights the multifaceted challenges faced by persons with paraplegia SCI, impacting their occupational participation and overall QOL. It highlights the significance of adopting a holistic WHO-ICF approach for effective intervention and highlights the vital role of occupational participation in improving overall QOL.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

In this chapter the background about the spinal cord, the impact of paraplegia Spinal Cord Injury (SCI) on an individual's life, Quality of life (QOL), the prevalence and causes of SCI in Pakistan, participation, and comprehensive rehabilitation in Pakistan are covered. In addition, in this chapter, the need for research in Pakistan, problem statement, research aims and objectives, research questions, research hypothesis, the significance of the study, conceptual framework, the scope and delimitation of this study, and operational definitions are explained. Finally, a summary is given, to sum up, the whole chapter.

### 1.2 Research Background

### 1.3 Spinal Cord and the Impact of Paraplegia SCI

The spinal cord is a vital part of the human body that lies in the back and links the brain to the lower back. Its neural networking pathway starts from the brain stem and ends in the lower back of the human body. The spinal cord is concealed by the spinal canal, which is a hollow bone archway of the vertebrae. The main work of the spinal cord is to control the motor, sensory and automatic functions of the body. When the spinal cord is damaged it is referred to as SCI, which can be caused by traumatic or non-traumatic incidents (World Health Organization, 2013). SCI is a life-altering event that makes a tremendous drastic impact on a person's life. It can alter the overall upper and lower extremity motor function, muscle strength, and sensation either temporarily or permanently of a person with paraplegia SCI. Depending on the location of spinal cord injury, injuries can be classified as a Tetraplegia/Quadriplegia or Paraplegia.

Tetraplegia/Quadriplegia is defined as injury at the cervical segment (C1-C8) may result in both upper and lower limbs paralysis Tetraplegia is considered the more severe condition. The patient needs to use assistive breathing devices, like a respirator