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ORIGINAL ARTICLE

Community Awareness, Knowledge, and Perceptions Regarding the Role of Physiotherapy in Spinal Cord Injury Rehabilitation: A Cross-sectional Study

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Abstract

Background: Spinal cord injury can cause severe physical and psychological impairments. Physiotherapy is essential for promoting functional recovery, preventing complications, and improving independence and quality of life. This study aims to assess community awareness of the role of physiotherapy in spinal cord injury rehabilitation. **Methodology:** A cross-sectional study was conducted in a community setting at Dr. Vitthalrao Vikhe Patil Memorial Hospital. Using purposive sampling, 100 participants from the general population were recruited. A self-developed SCI awareness questionnaire was administered to assess awareness of the role of physiotherapy in SCI. The study included willing male and female participants aged 18–60 years. **Result:** Baseline assessment revealed that only 44% of participants were aware about the role of physiotherapy in Spinal cord injury. Following the awareness session, 35.6% participants were aware and known about spinal cord injury. Awareness of physiotherapy treatment was higher, with 57.4% of participants acknowledging its role in rehabilitation. However, only 32.8% demonstrated adequate knowledge about spinal cord injury. **Conclusion:** The study concludes that while more than half of the participants were aware of physiotherapy treatment, but overall knowledge about spinal cord injury remained low. The results indicate the need for structured health education and community-based awareness programs to improve understanding and promote early rehabilitation measures.

INTRODUCTION

Spinal Cord Injury (SCI) is a devastating neurological condition most commonly caused by a traumatic force damaging the spinal cord and resulting in paralysis. This loss of function and reduced mobility poses a serious risk to the health of people with SCI. The sudden and significant changes brought about by SCI therefore also present an individual with significant challenges to their well-being[1,2]. People with SCI have higher comparative risks of feeling helpless, poor quality of life and decreased life satisfaction[3]. Psychological Well-Being (PWB) on the other hand, refers to psychological growth and development. Furthermore, in terms of PWB, those with SCI report a loss of purpose in life and increased social isolation and exclusion[5,6].

Formal rehabilitation in an SCI center is the first move towards restoring the health and well-being of a patient with SCI. The role of rehabilitation goes beyond promoting functional independence and aims to return individuals to "the life they want as far as their disability will allow"[7]. Thus, a vital part of rehabilitation is to educate people How to take care of a dramatically altered body and teach people to live independently and maintain their health and well-being[8,9]. This includes improving muscle weakness and poor posture, as well as teaching patient essential skills of daily living (ADL), such as floor to chair transfers[7-9]. To continue to improve and maintain health and well-being upon discharge from rehabilitation to the community, and avoid the onset of secondary health conditions, it is vital people lead a physically active lifestyle.

Community awareness is a critical determinant of early referral, adherence to rehabilitation programs, and long-term outcomes in individuals with SCI. Gender-based differences in health awareness, access to healthcare services, and utilisation of rehabilitation facilities may further influence perceptions and understanding of physiotherapy interventions. Comparing awareness levels between males and females provides valuable insight into existing disparities and helps in designing targeted educational and community-based rehabilitation strategies.

Globally, awareness of physiotherapy in SCI management varies considerably across countries. High-income countries with structured rehabilitation systems and strong public health education programs report better awareness and utilization of physiotherapy services. In contrast, low- and middle-income countries often face challenges such as limited resources, lack of trained professionals, and inadequate community education, resulting in reduced awareness and delayed rehabilitation. Understanding these international differences highlights the need for culturally appropriate awareness programs and policy-driven initiatives.

Health-care professionals play a crucial role in improving quality of life and functional independence among individuals with disabling conditions. Physiotherapy is an integral component of the multidisciplinary health-care team and contributes significantly to prevention, treatment, and rehabilitation across various health conditions. In individuals with Spinal Cord Injury (SCI), physiotherapy plays a vital role in optimising residual function, preventing secondary complications, and promoting community reintegration. Early and continued physiotherapy intervention has been shown to improve physical function, reduce hospital stay, and enhance quality of life in individuals with SCI[12].

Despite the well-established benefits, awareness regarding the role of physiotherapy in SCI management remains limited among community dwellers. Lack of awareness may influence health-seeking behavior, delayed referral, and underutilisation of physiotherapy services. Studies in India have reported low-to-moderate awareness of physiotherapy as a health profession, with misconceptions regarding its scope and identity. Therefore, assessing community awareness about the role of physiotherapy in SCI is essential for improving patient condition, promoting early rehabilitation, and strengthening public health outcomes.

MATERIAL AND METHODOLOGY

A descriptive cross-sectional study was conducted in a community setting at Dr. Vitthalrao Vikhe Patil

Memorial Hospital to assess awareness regarding the role of physiotherapy in Spinal Cord Injury (SCI) and to compare awareness levels between male and female participants. Ethical approval was obtained from the Institutional Ethics Committee before the commencement of the study.

A sample of 100 participants was selected from the general population using purposive sampling. Data were collected using a structured and pre-validated SCI awareness questionnaire comprising sections on demographic characteristics and awareness of physiotherapy in SCI rehabilitation. The questionnaire evaluated participants' knowledge regarding rehabilitation goals, preventive strategies, physiotherapy interventions, and anticipated functional outcomes following SCI.

Following the provision of study-related information, written informed consent was obtained from all participants. The questionnaire was administered either through face-to-face interviews or as a self-administered instrument, depending on the participant's preference and literacy level. Confidentiality and privacy were maintained throughout the data-collection process.

RESULT

Table 1. Demographic data of participants

Variable	Category	Frequency (n)	Percentage (%)	Mean
Age (Years)	18-30	36	36.36	-
	30-45	33	33.32	-
	45-60	31	31.32	37.29
Gender	Male	56	56.32	-
	Female	44	44.68	1.45

The demographic details of the study participants revealed that the majority belonged to the age group of 18-30 years (36%), followed by 30-45 years (32%) and 45-60 years (31%). In terms of gender distribution, 52% of the participants were male, while 48% were female, indicating nearly equal participation from both genders. Regarding literacy status, a significant proportion of the participants were literate (92%), whereas only 8% were illiterate.

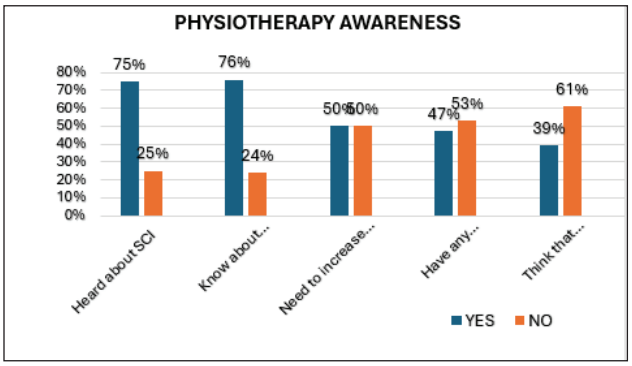

Figure 1. Shows physiotherapy awareness in people.

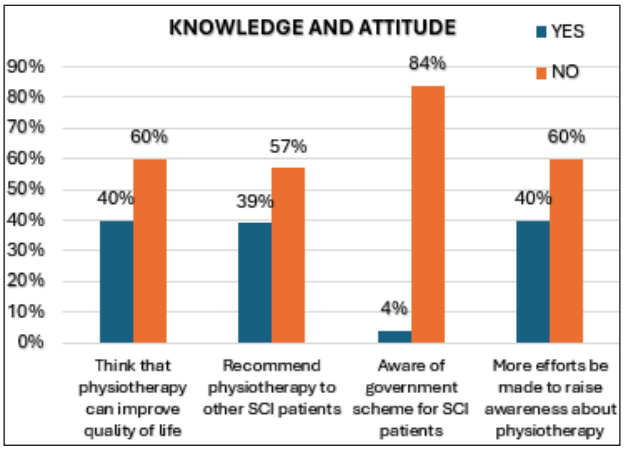

Figure 2. Shows level of knowledge and attitude about SCI.

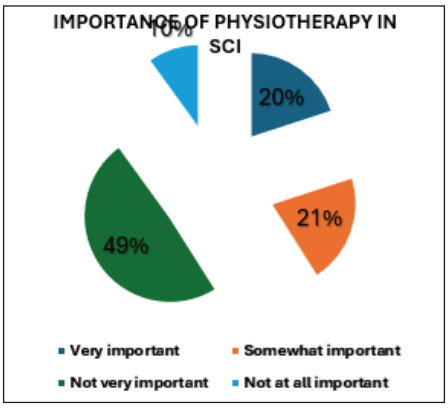

Figure 3. Shows how importance of physiotherapy.

Among the participants, 39% had heard about Spinal Cord Injury (SCI), while 61% had not. Only 37% had knowledge about SCI and 31% were aware of the physical changes associated with it, showing limited awareness overall. When asked about treatment options, 32% of participants mentioned physiotherapy as the main approach. A few participants suggested acupuncture (6%), ayurveda (1%), and medicine or neurological care. The study results show that 75% of participants had heard about Spinal Cord Injury (SCI), and 76% were aware of physiotherapy treatment, indicating a good level of basic awareness. However, 50% felt there is still a need to increase awareness about physiotherapy. Regarding knowledge and attitude, 49% of participants considered physiotherapy "somewhat important" in SCI, while only 20% found it "very important". 40% participant think that physiotherapy can help in improving quality of life of patients while 84% are unaware of government schemes for SCI patients.

Overall Result

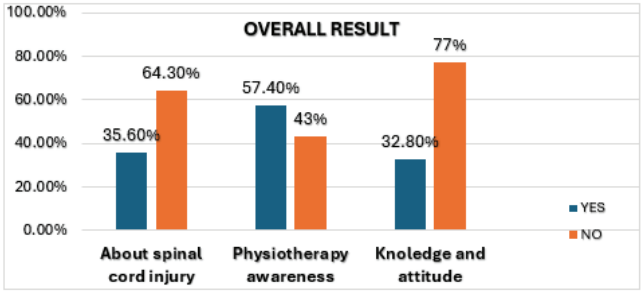

Figure 4. Shows combined result according to section.

The overall result of the study showed that only 35.6% of participants had knowledge about spinal cord injury, indicating limited understanding of the condition. Awareness regarding physiotherapy was comparatively higher at 57.4%, suggesting better recognition of its role in management. However, knowledge and attitude toward spinal cord injury and rehabilitation were still low at 32.8%. These findings highlight the need for greater educational initiatives to enhance awareness and understanding among the community.

DISCUSSION

The present cross-sectional study assessed community knowledge and awareness regarding Spinal Cord Injury (SCI) and the role of physiotherapy in its management. Although participants demonstrated relatively greater awareness of physiotherapy as a treatment modality, detailed knowledge of SCI was limited, with only 35.6% demonstrating adequate understanding. This finding indicates a discrepancy between general awareness of physiotherapy and comprehensive knowledge of SCI, its consequences, and the importance of rehabilitation. The observed knowledge gap may contribute to delayed referral, inappropriate beliefs regarding recovery, and increased dependence among individuals with SCI.

These findings are consistent with previous research reporting inadequate public awareness of neurological conditions and rehabilitation services. A review of studies from countries with varying Human Development Index (HDI) levels found that research on awareness and utilization of physiotherapy services was more frequently conducted in very-high-HDI countries. However, awareness of the scope of physiotherapy among the general public, students, and patients remained suboptimal across countries, irrespective of HDI status[1].

In a study conducted in Kansas City, United States, 54% of participants were aware of the scope of physiotherapy. Awareness was highest regarding musculoskeletal conditions (90%) and lowest regarding integumentary conditions (18%). Similarly, in Japan, 58% of 623 urban high-school students demonstrated awareness of physiotherapy. Comparisons among very-high-HDI countries indicated that awareness was highest in Japan, followed by the United States, the United Kingdom, and Australia[1]. However, these findings should be interpreted cautiously because the studies included predominantly urban participants and may not fully represent the general population.

Evidence from India and other developing countries further demonstrates the influence of educational status and access to healthcare services on physiotherapy awareness. A study conducted among the general public in major cities of Gujarat reported a high level of awareness, which may be attributed to the relatively higher educational attainment of the participants, most of whom had completed post-secondary education. Similar findings were reported by Olawale and Adjabeng among an urban community in Accra, Ghana, where awareness of physiotherapy was also high[13].

In contrast, Patel reported low awareness of physiotherapy among rural high-school students in Anand[14]. Likewise, Mbada *et al.,* observed that only 16.8% of rural community members in Nigeria were aware of physiotherapy, with most participants having less than a secondary-level education[15]. These findings suggest that educational attainment, urban or rural residence, and previous exposure to physiotherapy services may be important determinants of awareness regarding the scope and applications of physiotherapy. Comparable results were reported by Kacie and Yvonne, who found that participants with higher levels of education possessed greater knowledge of physiotherapy[11].

Overall, the findings highlight the need for structured health-education initiatives, community-based awareness programmes, and improved dissemination of information regarding SCI rehabilitation. Integrating physiotherapy-related education into primary healthcare services may promote early recognition and referral, facilitate timely rehabilitation, improve functional outcomes, and reduce the long-term disability burden associated with SCI.

Clinical Implications

The results suggest that awareness programmes should be designed according to the educational background and needs of the target population. These programmes may include health-education sessions, printed materials in the local language, village-level screening and referral activities, caregiver-training programmes, and collaboration with community health workers. Such initiatives may improve recognition of SCI-related problems and encourage individuals and families to seek physiotherapy at an earlier stage.

Strengths and Limitations

The study provides relevant information regarding community awareness of SCI and the role of physiotherapy, and it includes participants from both sexes. However, the use of purposive sampling and recruitment from a single setting may limit the generalizability of the findings. In addition, the cross-sectional design prevents the establishment of a cause-and-effect relationship between demographic characteristics and awareness levels. Since the questionnaire assessed self-reported knowledge, responses may also have been influenced by recall or social-desirability bias.

CONCLUSION

In conclusion, community awareness regarding the role of physiotherapy in spinal cord injury was variable, with significant gaps in overall knowledge. Males demonstrated higher awareness than females, while literacy was strongly associated with awareness. These findings highlight the need for targeted community-based education and awareness programs to promote early referral, rehabilitation participation, and improved quality of life among individuals with SCI. Further large-scale studies are recommended to support effective public health strategies.

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