



A CASE OF SPINAL CORD INJURY WITH PSYCHO-SOCIAL IMPLICATIONS FROM A TERTIARY CARE SUPER SPECIALITY HOSPITAL

Social Science

Pallerla Srikanth	Ph.D. Scholar, Department of Psychiatric social work, NIMHANS, Bengaluru, India.
Arun M	Psychiatric social worker, Department of Psychiatric social work, NIMHANS, Bengaluru, India.
Bergai Parthasarathy Nirmala*	Additional Professor, Department of Psychiatric social work, NIMHANS, Bengaluru, India. *Corresponding Author
Meeka Khanna	Additional Professor, Department of Neurological Rehabilitation, NIMHANS, Bengaluru, India.

ABSTRACT

A 47-year-old man who developed SCI (Spinal cord injury) as a result of the tumor, presented with a myriad of psychosocial (PS) issues. SCI patients will be referred to Rehabilitation services, which aimed to maximize clients' participation in their social setting, minimize the risk of medical complications, and address clients, caregiver's (CG's) needs and concerns. The uniqueness of this case is that there is a need to look at life beyond symptom reduction and illness. This case was mindful to enhance the recovery of the client and well-being of his family from a holistic perspective by incorporating the Biopsychosocial (BPS) model and Ecological model with the implication of psychosocial interventions.

KEYWORDS

Person with spinal cord injury, psychosocial issues, psychosocial interventions.

INTRODUCTION:

SCI is damage to the spinal cord that causes temporary or permanent changes in its function, which affects different domains like physical, psychological, social, sexual, and vocational aspects of the affected individual. SCI is a high-cost chronic disability ¹, and the long-term complications increase morbidity and decrease community participation and health-related quality of life ², which is a life-changing experience for family members and societies too ^{3,4}. For families, the unforeseen nature of the injury leads some of the members into an 'unexpected career' as family caregivers⁵, the CG's have to put enormous efforts, to provide continuous full-time caregiving for the recovery of Person with Spinal cord injury, which will affect the caregiver's physical and mental health.

In such cases PSI will play a vital role to address the PS issues for the PwSCI and their families to enhance their well-being and Quality of life which has explained with the support of a case here.

Case summary:

Mr.V was 47-year-old male, married for 20 years, educated up to 4th std, working as a mechanic, belongs to the low socioeconomic status from Urban Bengaluru. The client was a case of Operated Non-Traumatic SCI (Meningioma) who has presented with weakness in both lower limbs, bowel and bladder incontinence had referred to DNR (Department of Neurological Rehabilitation) for inpatient rehabilitation. Currently, the client is independent for the upper limb involved ADL's (Activities of daily living) but dependent for ADL on his wife. Bed mobility is presented and he is on the indwelling catheter for urinary drainage. Family dynamics have reported that index Client is the only breadwinner of the nuclear family comprised of five members including him; he is the nominal and functional leader, democratic decision-maker in the family. Healthy interaction patterns with each other and adequate emotional support were evident. His wife is the primary caregiver for the client in the ward.

Table No: 01 List of scales administered in the Hospital

S.no	Scales	Pre-admission score		Pre-discharge score	
1	FIM	73		95	
2	HADS	Anxiety	Depression	Anxiety	Depression
		A8	D3	A4	D2
3	Barthel	25		65	
4	PSQI	0		0	
5	SCIM	29		64	

FIM= Functional independence measure, HADS= Hospital anxiety

and depression scale, PSQI= Pittsburgh sleep quality index, SCIM= Spinal cord independence measure.

Findings from Psychosocial Assessment:

1. Poor knowledge about the illness
2. High amount of Psychological distress
3. High amount of caregiving burden
4. IDD in first degree relative (Intellectual disability disorder)
5. Economical constraints
6. Poor problem solving and coping skills
7. Inadequate secondary social support system
8. Failure to access welfare benefits

Summary of Psychosocial interventions and outcomes:

Psychoeducation: Information and supportive model of psychoeducation was used to educate about the nature, cause, and course of illness, management, prognosis, treatment process, which have enhanced the insight and realistic expectations from the treatment.

Supportive psychotherapy: The dynamic supportive psychotherapy model was incorporated with the client and his wife individually to ventilate and express their concerns; they have reported reduced distress levels after these sessions.

Problem-solving and coping skills: Conjoint sessions were taken to teach problem-solving skills and healthy coping mechanisms to handle the day to day stressful situations in their life, it can often help to improve their mental and emotional well-being.

Address the caregiver burden: The client's wife has expressed ample concerns related to the husband's illness and recovery, elder son's mental health condition, other two children's education, and also about the financial constraints of the family. These all were the triggering factors to enhance her stress levels; Caregiver tips were given as respite from the continuous caregiving.

Vocational guidance: The rehabilitation team has discussed the post-illness functionality of the client, do's and don'ts at the workplace, explained the concept of reasonable accommodation with the employer. The employer agreed to reemploy the client after his recovery by redesigning his job as a supervisor. By collaborating with the local NGO client's wife has provided a sewing machine to maintain the financial needs of the family.

Social welfare administration: The eligibility criteria and process of UDID (Unique Disability Identification) registration to get the

disability certificate, provisions for persons with disabilities were discussed.

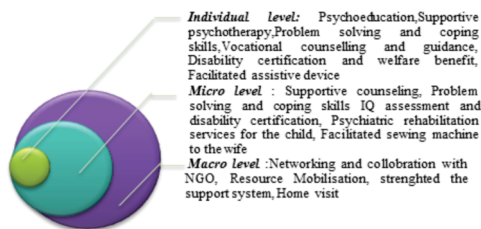
Networking for Resource mobilization: Pooled resources from the community with the help of philanthropists and other social activists. Also given another resource NGO and local political leader details to meet the medical and other treatment charges.

Referral services: The client had referred to the Palliative care services to provide medication and management of neuropathic pain and also to address their needs in the future. He has provided a wheelchair by collaborating with the local NGO to enhance his mobility and functionality.

After discussing with the client's wife, the team has identified that client son is having difficulties in his hygiene, day to day activities, socialization; so advised them to go to CAP (child and adolescent psychiatry) services for the assessment and behavioral intervention, following the consultation his son was diagnosed as Mild IDD (intellectual developmental disorder) and informed them to go for the psychological assessment to get the disability certificate. Also, the team had informed them about vocational training services at PRS (psychiatric rehabilitation services); the family agreed to send their son as a day boarder to the printing section in PRS. This will help him to adhere to the work culture, learn social skills, behavioral modification, performing the ADL's on time to time with regular supervision and monitoring.

Pre-discharge counseling: All the sessions were summarized and emphasis was on identifying recurrence signs and seeking help immediately. The client and his wife were reassured of the support in the form of the treating hospital and all the anxieties related to discharge were addressed.

Figure No: 01 Illustration of Psychosocial Interventions using Ecological model



Home visit: The team has visited the client home after two weeks of his discharge to identify the treatment adherence, performance, capacity in ADL's and participation of the client, encouraged him to continue the same.

Follow-ups: The client had visited the hospital for the first follow up after one month. It was reported that treatment adherence was good, performing all the ADL's.

Future plans:

1. Ensuring regular treatment follow up
2. Telephonic correspondence with family
3. Collaborating with the PRS about client son's Vocational rehabilitation
4. Ensuring the disability certification
5. Ensuring social welfare benefits and strengthening the support system

Discussion:

For clients with SCI the CG's have to perform a multiplicity of roles in the treatment process thereby she has ended up in physical, emotional, and social exhaustion, which will again have an impact on the process of caregiving and the status of the client's health condition. She didn't have a respite for herself in the entire process of caregiving.

Previous studies have also confirmed that the role of caregiving to the PwSCI will impact in various aspects like; the CG's in end up with negative mental health outcomes like lower well-being⁶, low QoL^{7,8}, higher burden^{6,7}. It was reported that the spouse's burden of caregiving to the PwSCI will impact their QoL, causes health problems⁹, and

impacted by psycho-social burden¹⁰. It is necessary to address needs of both the client and their caregivers by the mental health professionals, as unmet needs have a direct relationship with diminished quality of life¹¹. Biopsychosocial model and Ecological model were incorporated for this case to look at the interconnection between the BPS factors to determine the cause, manifestation, wellness, and outcome of the illness¹² and the dynamic interrelations within and across all levels of a health problem among personal and environmental factors¹³.

This case gives the notion that after a sudden onset of SCI what are the common psychosocial issues that will arise in the family from a low socioeconomic status. As the client is only the breadwinner of the family, have to manage the house, children's education and meet other family needs.

By considering his current functionality and future responsibilities he was anxious during the treatment process, which was the barrier for his recovery. Children were enquiring with the mother about the father's health condition and it has affected their academics.

Various studies across the globe demonstrated that implications of various psychosocial interventions are helpful for both the client and their CG's; caregiver training programs have contributed toward successful community integration¹⁴, benefits for CG's QoL¹⁵. Delivering the problem-solving interventions have been shown to have benefits for caregiver's quality of life of spinal cord injury, client's¹⁵ and it also has improved the care partner outcomes across the transition of care from hospital to home¹⁶. Psycho educational interventions will improve the general health¹⁷, positive effect on the quality of life¹⁸, will reduce the burden¹⁹ for CG's, better management of illness for the clients²⁰. Various PSI like enhancing the CG's coping skills, social support, skills training, and getting the access to avail the community services and continuity of care are the contributing factors for them to provide the caregiving services sustainably to PwSCI²¹.

Studies have suggested that implementing the Family-centred empowerment approaches among caregivers of persons with neurological conditions (Stroke, Parkinson disease) have shown effective outcomes as to reduce the burden of care^{22,23}, improving the role of caregiving of persons²³ and improve the QoL²² of the clients. A study from India has also indicated that health professionals should use the PS interventions in the process of rehabilitation of PwSCI to reduce the PS issues^{4,21}. The purpose of a home visit was to assess the client's current functionality and post-discharge caregiving needs and concerns of the family. The identification of the competencies, performance, and capacity in ADLs and participation were the significant impact factors toward successful community integration among PwSCI¹⁴. The PSW (Psychiatric social worker) interventions along with the other allied multidisciplinary team approach have helped both the client and his family to improve their functionality and well-being.

Conclusion:

There is a need to look beyond the symptomatology to address the needs and support the PwSCI and their CG's through in-depth psychosocial assessment. By reporting the particular case the authors have demonstrated that providing the systematic and comprehensive PSW interventions will help the PwSCI and their families. PSW interventions play a vital role to achieve the goals in the rehabilitation of persons with neurological conditions to enhance their well-being and quality of life.

Declaration of Consent

Consent was taken from the client and informed about the publication of the case. The confidentiality of the client has been ensured.

Financial support and sponsorship

Nil.

Conflicts of interest

None

REFERENCES:

1. Munce, S. E., Perrier, L., Tricco, A. C., Straus, S. E., Fehlings, M. G., Kastner, M., ... & Jaglal, S. B. (2013). Impact of quality improvement strategies on the quality of life and well-being of individuals with spinal cord injury: a systematic review protocol. *Systematic reviews*, 2(1), 14.
2. Sezer, N., Akkuş, S., & Uğurlu, F. G. (2015). Chronic complications of spinal cord injury. *World journal of orthopedics*, 6(1), 24.
3. Lude, P., Kennedy, P., Elfström, M., & Ballert, C. (2014). Quality of life in and after

- spinal cord injury rehabilitation: a longitudinal multicenter study. *Topics in spinal cord injury rehabilitation*, 20(3), 197-207.
4. Orthopedist, H. S. C. (2016). Spinal cord injury and its impact on the client, family, and the society. *International Journal of Recent Surgical and Medical Sciences*, 2(01), 001-004.
 5. Dickson, A., O'Brien, G., Ward, R., Allan, D., & O'Carroll, R. (2010). The impact of assuming the primary caregiver role following traumatic spinal cord injury: an interpretative phenomenological analysis of the spouse's experience. *Psychology and Health*, 25(9), 1101-1120.
 6. Scholten, E. W., Kieftenbelt, A., Hillebrecht, C. F., de Groot, S., Ketelaar, M., Visser-Meily, J. M., & Post, M. W. (2018). Provided support, caregiver burden and well-being in partners of persons with spinal cord injury 5 years after discharge from first incipient rehabilitation. *Spinal cord*, 56(5), 436-446.
 7. Rodriguez, L. J., Rios, M. P., Hermoso, M. C., Alonso, N. P., Costa, C. L., & Agea, J. L. D. (2020). Impact of simulation-based learning on family caregivers during the rehabilitation period of individuals with spinal cord injury. *Spinal Cord*, 58(1), 95-105.
 8. Nikbakht-Nasrabadi, A., Mohammadi, N., Yazdanshenas, M., & Shabany, M. (2019). Toward overcoming physical disability in spinal cord injury: a qualitative inquiry of the experiences of injured individuals and their families. *BMC neurology*, 19(1), 171.
 9. Ebrahimzadeh, M. H., Shojaei, B. S., Golhasani-Keshtan, F., Soltani-Moghaddas, S. H., Fattahi, A. S., & Mazloumi, S. M. (2013). Quality of life and the related factors in spouses of veterans with chronic spinal cord injury. *Health and quality of life outcomes*, 11(1), 48.
 10. Shahid, H., Ali, S., Muhammad, D., & Khan, A. (2020). The Impact of Psychosocial Burden of Spinal Cord Injury Survivors on the Family Caregivers. *Journal of the Dow University of Health Sciences (JDUHS)*, 14(1), 11-16.
 11. Sweet, S., Noreau, L., Leblond, J., & Dumont, F. (2014). Understanding quality of life in adults with spinal cord injury via SCI-related needs and secondary complications. *Topics in spinal cord injury rehabilitation*, 20(4), 321-328.
 12. George, E., & Engel, L. (1980). The clinical application of the biopsychosocial model. *American journal of Psychiatry*, 137(5), 535-544.
 13. Bronfenbrenner, U. (1994). Ecological models of human development. *Readings on the development of children*, 2(1), 37-43.
 14. Tyagi, N., Goel, S. A., & Alexander, M. (2019). Improving quality of life after spinal cord injury in India with telehealth. *Spinal cord series and cases*, 5(1), 1-5.
 15. Lynch, J., & Cahalan, R. (2017). The impact of spinal cord injury on the quality of life of primary family caregivers: a literature review. *Spinal cord*, 55(11), 964-978.
 16. Juengst, S. B., Osborne, C. L., Holavanahalli, R., Silva, V., Kew, C. L., Nabasny, A., & Bell, K. R. (2019). Feasibility Study of Problem-Solving Training for Care Partners of Adults With Traumatic Brain Injury, Spinal Cord Injury, Burn Injury, or Stroke During the Inpatient Hospital Stay. *Archives of Rehabilitation Research and Clinical Translation*, 1(3-4), 100009.
 17. Molazem, Z., Falahati, T., Jahanbin, I., Ghadakpour, S., & Jafari, P. (2013). The effect of psycho-educational interventions on general health of family caregivers of pts with spinal cord injury: A Randomized Controlled Trial. *Jundishapur Journal of Chronic Disease Care*, 2(4), 1-10.
 18. Molazem, Z., Falahati, T., Jahanbin, I., Jafari, P., & Ghadakpour, S. (2014). The effect of psycho-educational interventions on the quality of life of the family caregivers of the clients with spinal cord injury: a randomized controlled trial. *International journal of community based nursing and midwifery*, 2(1), 31.
 19. Conti, A., Clari, M., Nolan, M., Wallace, E., Tommasini, M., Mozzone, S., & Campagna, S. (2019). The Relationship Between Psychological and Physical Secondary Conditions and Family Caregiver Burden in Spinal Cord Injury: A Correlational Study. *Topics in Spinal Cord Injury Rehabilitation*, 25(4), 271-280.
 20. Yadav, S., & Kumar, S. (2014). Models of psychoeducation: an indian perspective. *Indian Journal of Applied Research*, 4(7).
 21. Jeyathevan, G., Catharine Craven, B., Cameron, J. I., & Jaglal, S. B. (2018). Facilitators and barriers to supporting individuals with spinal cord injury in the community: experiences of family caregivers and care recipients. *Disability and rehabilitation*, 1-11.
 22. Deyhoul, N., Vasli, P., Rohani, C., Shakeri, N., & Hosseini, M. (2019). The effect of family-centered empowerment program on the family caregiver burden and the activities of daily living of Iranian patients with stroke: a randomized controlled trial study. *Aging clinical and experimental research*, 1-10.
 23. Bagheri, S., ValizadehZare, N., Mazlom, S. R., Mohajer, S., & Soltani, M. (2019). Effect of Implementing Family-Centered Empowerment Model on Burden of Care in Caregivers of the Elderly with Parkinson's Disease. *Evidence Based Care*, 9(3), 41-48.
 24. Singh, R., Rohilla, R. K., Siwach, R., Dhankar, S. S., & Kaur, K. (2012). Understanding psycho-social issues in persons with spinal cord injury and impact of remedial measures. *International Journal of Psychosocial Rehabilitation*. Vol 16(1)95, 100.