
***EVALUATION OF PSYCHOLOGICAL EFFECTS AFTER OF REHABILITATION
TREATMENT IN PATIENTS WITH SPINAL CORD INJURY***

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Abstract: Aims: This paper aims to evaluate the psychological effects of rehabilitation treatment in patients with Spinal Cord Injury.

Material and method. 80 patients from the Medical Recovery Hospital Băile Felix that were diagnosed with spinal cord injury were included, and evaluated before and after 6 months of recovery treatment. To determine the effects of psychological recovery treatment we studied the evolution of self-esteem, depression and quality of life.

Results and conclusions. In our study, most patients were male (68.75%) had ages between 20-40 years (68.75%) and came from urban areas (52.50%). Rehabilitation treatment, especially psychotherapy, had a moderate effect on self-esteem (ES=0.62), depression (ES = 0.53) and quality of life (ES=0.52). Depressive disorder increases with motor deficit, with increased pain and decreased with increasing quality of life and length of the lesion.

Keywords: *spinal cord injury, psychological effects, self-esteem, quality of life, depression*

INTRODUCTION:

Spinal cord injury is a major event with devastating implications on all aspects of an individual's life (1,2,3).

It is estimated that there are at least 11,000 new cases of spinal cord trauma every year in the United States (NSCISC), having the most frequent age 19 years (3,4,5).

Average life of patients who have suffered a spinal cord injury is very low: 37.7 years. Dramatic debilitating effects and treatment involving high costs have led to increased interest worldwide in improving patients' recovery who have suffered a spinal cord injury in order to reduce negative effects.

Recovering after TVM requires both physical, mental and social adaptation with the aim of winning a grade as high functional independence, social and family reintegration and quality of life as high as possible.

Spinal Cord Injury trauma exposes the subject to an increased risk of developing psychological disorders (1,2,3,4).

The psychological effects may be occurring: personality changes, affective disorders (depression, decreased motivation and self-esteem, emotional lability), anxiety disorders (anxiety, panic attacks, post traumatic stress), somatoform disorders, and sometimes even damage at the level cognitive system (6).

Occurrence of depression may be a consequence of the negative psychological impact felt by changes in the physiological, social and affective preceded by TVM.

Depression can lead to decreased compliance with the treatment, lower self-esteem and motivation, the appearance of emotional stress etc. (7). Depression is an obstacle to physical and mental recovery after SCI (8).

This paper aims to evaluate the psychological effects of recovery treatment in patients with spinal cord injury.

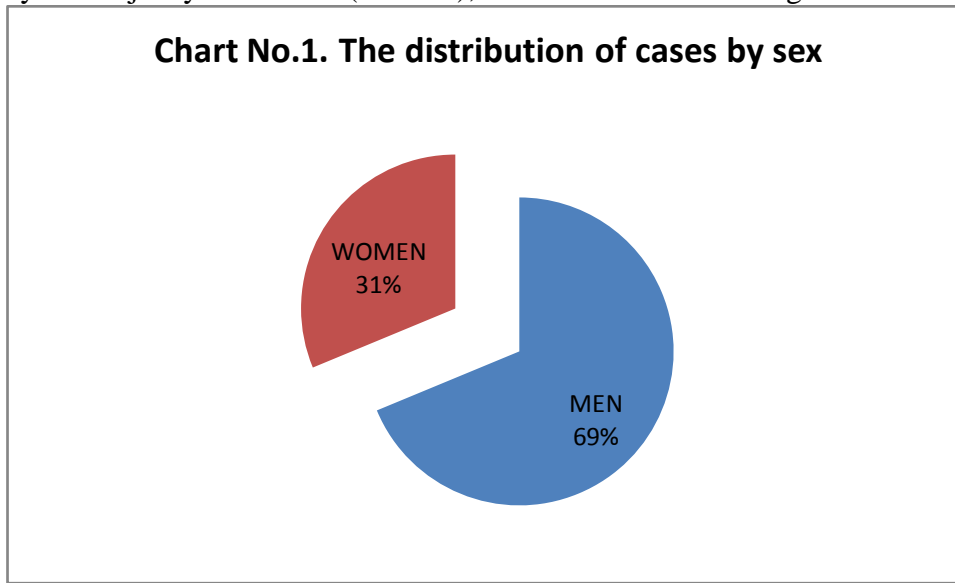
MATERIAL AND METHOD.

80 patients from the Medical Recovery Hospital Băile Felix that were diagnosed with spinal cord injury were included, and evaluated before and after 6 months of recovery treatment.

To determine the effects of the psychological rehabilitation we have studied the evolution of self-esteem, depression and quality of life. Self-esteem was assessed using the Morris Rosenberg scale, depression by the Beck questionnaire and the quality of life using the questionnaire QOLSF 36.

RESULTS:

In our study the majority were male (68.75%), male / female ratio being 2.2: 1.

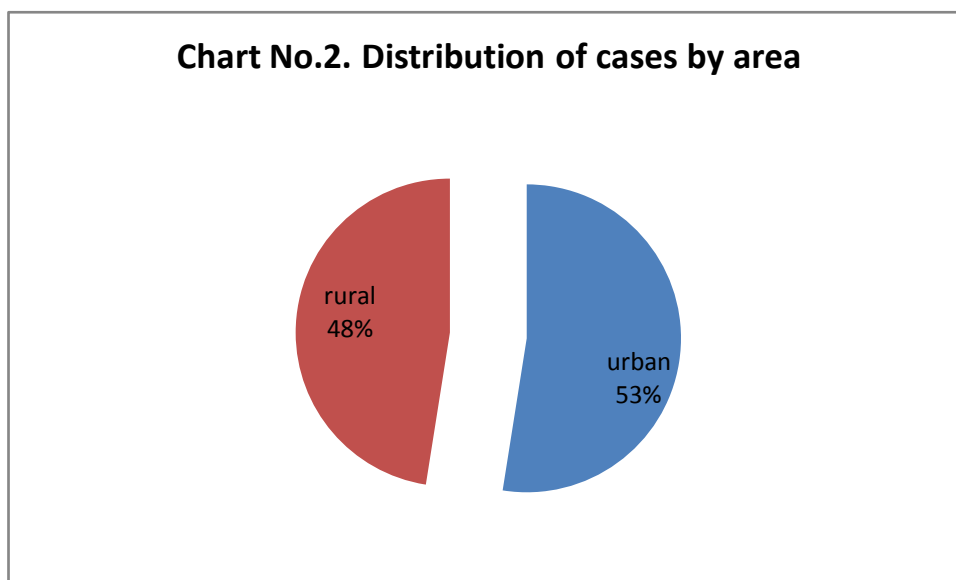


Most cases were aged between 21-40 years (41.25%), the average age being 32,26 years.

Table 1. Distribution of cases by age

Age	No.	%
<20 years	7	8,75
21-30 years	33	41,25
31-40 years	22	27,50
41-50 years	13	16,25
>50 years	5	6,25
Average age	32,26±7,68	

Most cases were from urban areas (52.50%), urban / rural ratio is 1.1: 1.



Almost 60% of the patients are alone, 46.25% being unmarried, 11.25% divorced and 1.25% widowed.

Table 2. The distribution of cases depending on the marital status

Relationship status	No.	%
married	33	41,25
divorced	9	11,25
single	37	46,25
widow	1	1,25

Over 65% of patients were diagnosed with paraplegia (66.25%) and 33.75% with quadriplegia.

Table 3. The distribution of cases by diagnosis

Diagnosis	No.	%
paraplegia	53	66,25
quadriplegia	27	33,75

Complete lesion was present in 22.50% of patients, most of them incomplete lesion (77.50%).

Table 4. The distribution of cases by type of lesion

Type lesion	Nr.	%
complete	18	22,50
incomplete	62	77,50

Over 50% of patients had a length of the lesion of between 2-4 years (52.50%). The average duration was 2.75 years.

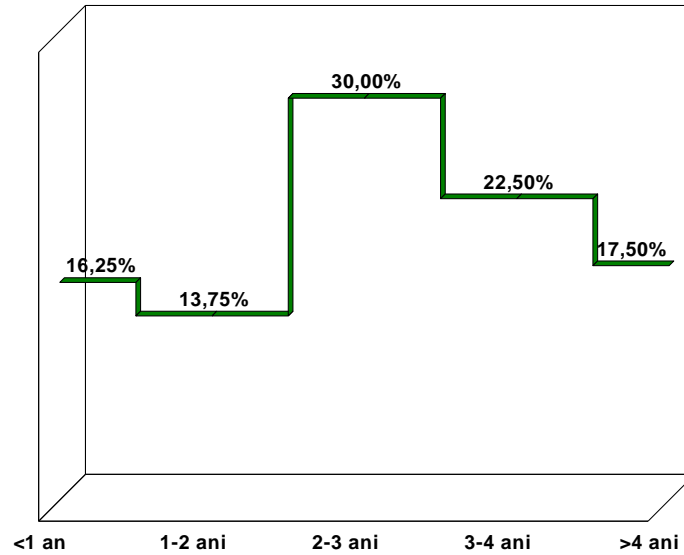
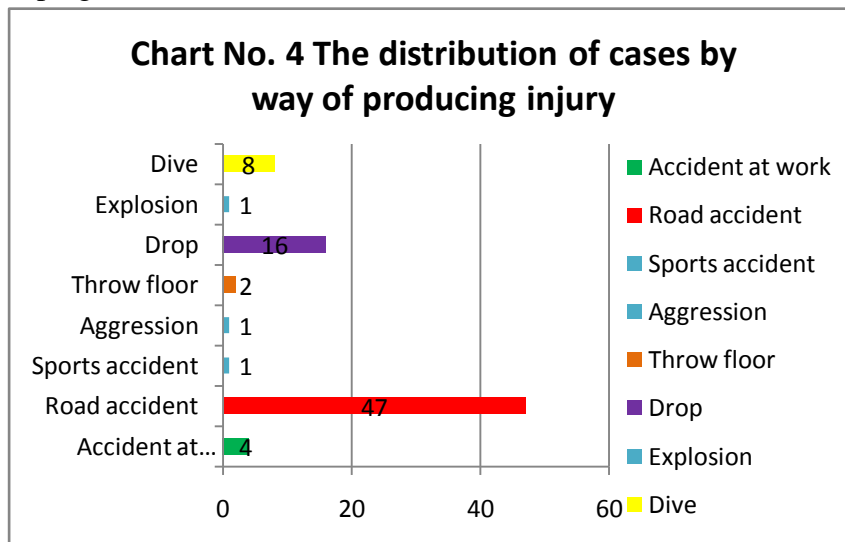


Chart no. 3 Case distribution depending of lesion length

Almost 60% of patients suffered a traffic accident (58.75%), falls accounted for 20.00% and jumping into the water, 10.0%.



At the initial assessment, self-esteem was low and very low in 67.50% of patients, and at the second review at 48,75% (p = 0.001).

Table 5. The evolution of self-esteem

Self-esteem	Evaluare I		Evaluare II	
	Nr.	%	Nr.	%
Very low	13	16,25	8	10,00
Low	41	51,25	31	38,75
Average	14	17,50	20	25,00
High	10	12,50	17	21,25
Very high	2	2,50	4	5,00
Scor SS	29,48±3,31		31,52±3,39	
ES	0,62			

Self-esteem score increased marginally from the second evaluation compared to the first (29.48 vs 31.52) ($p = 0.655$). The effect size indicates a moderate change to the second evaluation ($ES = 0.62$).

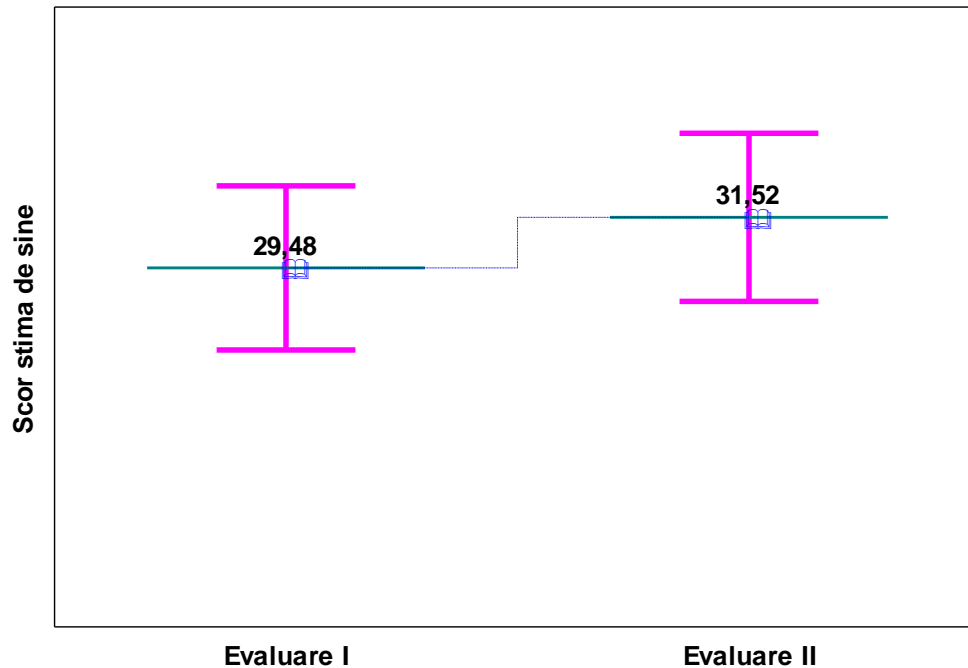


Chart. 5. The evolution of self-esteem score

The absence of depression was recorded at 55.00% in the first assessment and 63.75% ($p = 0.058$) at the second evaluation. At the second assessment, 5 cases have gone from moderate to mild depression and in 7 cases from mild in the absence of depression.

Tabel 48. The evolution of depression (Beck Scale)

Depression	Assessment I		Assessment II	
	Nr.	%	Nr.	%
Absent	44	55,00	51	63,75
Light	19	23,75	17	21,25
Moderate	15	18,75	10	12,50
Severe	2	2,50	2	2,50
Score Beck	11,08±3,86		9,05±2,32	
ES			0,52	

Score depression decreases significant in the second to the first evaluation (11.08 vs 9.05) ($p = 0.479$), revealing a new moderate effect size ($ES = 0.52$).

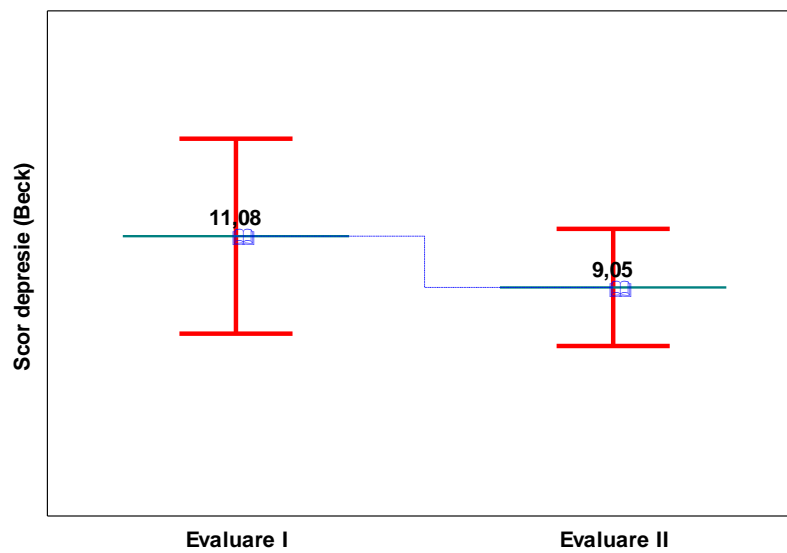


Chart no.6. Evolution Beck depression score

The evolution of quality of life (QOL scale - SF36). Perception of the quality of patients after treatment was moderate recovery (ES = 0.52).

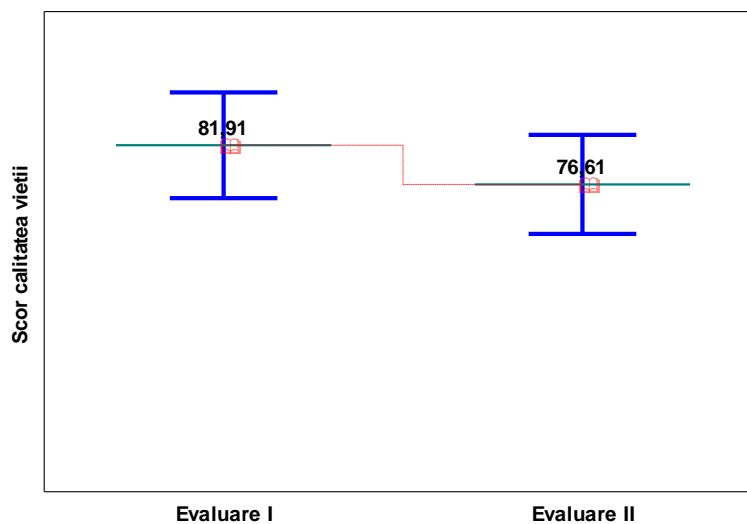


Chart no.7. The evolution of quality of life (QOL scale - SF36)

CONCLUSIONS:

In our study, most patients were male (68.75%) were aged 20-40 years (68.75%) and from urban areas (52.50%).

Due to the young age, 46.25% were unmarried, 36.25% had high school education and 32.50% higher education.

Paraplegia was diagnosed at 66.25% of patients, and the incomplete injury was present at a percentage of 77.50%, with the average lesion length of 2.75 years.

Rehabilitation treatment, psychotherapy in particular, had a moderate effect on self esteem (ES = 0.62), depression (ES = 0.53), but also the quality of life (ES = 0.52).

Depressive disorder emphasizing motor deficit, with increasing pain and decreases with the increase in quality of life and the length of the lesion.

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