

Original Paper

**Evaluation of the disease in subjects belonging
to different culture****Analysis of a research in spinal cord-injured
post-traumatic patients**

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Abstract. *The scope of this study is to evaluate how much the belonging culture can influence the psychic and emotional background in subjects affected by total post-traumatic spinal cord injury.*

The study was carried out in Structure Complex Spinal Unit (S.C. USU) of Santa Corona Hospital in Pietra Ligure (SV), Italy, using a sample consisting of 10 Italian people and 10 non European citizens. The whole sample has had a complete diagnosis of post-traumatic spinal cord lesion (ASIA impairment scale A) and a psychiatric diagnosis in conformity with the standards of DSM-IV TR. All the people have been treated with a pharmacological and psychological treatment.

The sample has been evaluated using Hospital Anxiety and Depression Scale (HAD), Beck Depression Inventory (BDI), Clinical Global Impressions (CGI), SF-36 Health Survey (SF-36) and Brief Cope, both at the visit of recruitment and after 4 months from the introduction in the study.

The comparison among the data obtained by these scales points out a significant reduction of the state of anxiety and depression in the two examined groups, particularly, in that belonging to Italian culture, suggesting that this group could have had a more effective chance to adapt to and face the “new” condition of life. The study, then, emphasizes how much the belonging culture can influence both the adaptability to the new state and the expressivity of the symptoms.

Key words: spinal cord injury, culture, depression, anxiety.

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INTRODUCTION The spinal cord injury (SCI) represents one of the most complicated and disabling organic disease. It's a dramatic condition that causes serious disability, changing the “somato/psychic/social” equilibrium of the patient and his/her whole family. The approach to such a pathology requires that the medical facilities involved in the treatment of the SCI provide the most qualified assistance, including the study of new methodologies of clinical and previous treatment (Piperno, 2004; Pilati *et al.*, 2004; Giunta & Manuguerra, 1996; AA.VV., 1998). At the present time the epidemiology claims for about 75000 people affected by paraplegia or tetraplegia in the national territory, and every year about 1200 new cases are recorded. This means that only in Italy at least three people a day become spinal cord injured. Regarding the organization, USU are located inside the hospitals, which are main offices of Emergency-Acceptance-Departments (DEA), and provide the subsequent specialized activities: urology, physical and rehabilitative

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medicine, neurology and neurophysiology, clinical nutrition and clinical psychology. They are complex and independent structures, which use professional and environmental resources available in the place in which they are included, through a departmental organization that meet the clinical (*in acuzie*), rehabilitative (*post acuzie*) and psychological (both the moments) needs of the spinal cord injured subject. These elements, through their work, bring out the emotional backgrounds linked with the disease, in relation to the cultural dimension that can nourish a psychic trouble, or make a real psychopathology subsequent to such a trauma.

Historically Alfred Adler (Ansbacher & Ansbacher, 1997), founder of the Individual Psychology, identified in social and cultural elements some possible aetiological factors of exacerbations in the pathogenesis of the psychic distress and, beginning since 1898, published interesting monographs on social medicine, pointing out that the illness may also be influenced, if not determined, by the society and the cultural level of belonging. According to this theoretic course, in the '30s, multidisciplinary groups of scholars were formed in USA which have linked up different doctrines (psychiatry, psychology, anthropology, history and so on) joined by a unique tendency of thought which says that the men's personality and belonging culture, in relation with the organic disease as in the case of spinal cord lesion, encompasses the theoretic and methodological knowledge of every people employed in the rehabilitation project of the patient with handicap (Rovera *et al.*, 1978; Rossi, 2000). Between 1957 and 1964, E.D. Wittkower (Division of Social and Transcultural Psychiatry, McGill University, Montréal) gave rise to the term "Transcultural psychiatry" giving a significant contribution to psychiatry and stressing out the cultural aspects and implications of mental human health, psychopathology and connected therapy (Tseng, 2003a; Rovera & Gatti, 1986).

TARGETS To evaluate the differences in the course of adaptation to pathology in patients suffering of post-traumatic spinal cord injury with anxiety and depression, on the grounds of the belonging culture.

MATERIALS AND METHODS The sample of our study has been recruited in S.C.U.S.U. of Santa Corona Hospital, Pietra Ligure (SV), Italy, and consisted in twenty subjects: 10 non Europeans and 10 Italians. Both groups had a diagnosis of total post-traumatic spinal cord injury, along with a psychiatric one, according to DSM-IV TR. The group followed a pharmacological and a psychological treatment for 4 months.

The diagnosis of spinal cord traumatic injury has been made in accordance with the medical protocol actually used in Spinal Unipolar Italian Unities and confirmed through the following clinical and instrumental examinations: Neurological Exam, X-Rays, CT Scan, NMR, ASIA exam (a specific test for the determination of the level and grade of completeness of the lesion). All the subjects have a level of lesion between the 5th and 12th dorsal vertebra (D5-D12 ASIA A; Ferrari, 2004).

Concerning the psychiatric diagnosis, we have applied the diagnostic and nosographic methods according to DSM-IV TR, and analyzed the colloquies during the beginning of the treatment beside the evaluation of the given test. (Bucca & Fele, 1996).

At the visit of recruitment (T_0), the examined subject has been administered the following tests:

- Hospital Anxiety and Depression Scale (HAD; Zigmond & Snaith, 1983)
- Beck Depression Inventory (BDI; Beck *et al.*, 1962)
- Clinical Global Impressions (CGI; Bell *et al.*, 1986; Clark & Friedman, 1983)

- SF-36 Health Survey (SF-36; McHorney *et al.* 1993; Apolone *et al.*, 1997)
- Brief Cope (Carver *et al.*, 1989)

The scales have been administered to the patients again at the end of the rehabilitative treatment (T₁), while the rationale to use this methodology has been found, besides the acquired experience in these years, in the available scientific literature (Saikkonen *et al.*, 1004; Kennedy & Rogers, 2000; Craig *et al.*, 1994). All the data obtained from the cited measures have been analysed through SPSS 10.0.

RESULTS The entire sample consisted in 95% males and 5% females, with an average **age** of 40 years and a standard deviation of 10.17; their **civil status** specified the 60% were married people, 30% unmarried and 10% separated or divorced people. The **occupation** revealed that 35% were unemployed, 35% subordinate, 25% self-employed workers and 5% pensioners.

The analysis of the **education** pointed out that 45% had a middle school-leaving certificate, 30% advance certificate, 27% qualified and 15% graduated; the **belonging religion** was 60% Catholic, 25% Islam and 15% Orthodox Christian.

70% of the foreigner subgroup had problems with the residence permit and, at the beginning of the treatment, did not need interpreters since they understand the language very well; in relation of the **geographical origin**, 15% were from Albania, 10% from Morocco, 10% from Romania, 5% from Moldavia, and the remaining 5% were respectively Brazilians and Greeks.

The **causes** of the spinal cord injury were 15% car accidents, 25% motorcycle accidents, 15% industrial injuries, 15% fire arm assaults, 10% physical assaults, 10% accidental falls, a remaining 5% heavy means of transport accidents and 5% on foot.

The majority (40%) of individuals psychologically followed met criteria for a **diagnosis** of Adjustment Disorder With Mixed Anxiety and Depressed Mood; other diagnosis have been Generalized Anxiety Disorder (25%), Dysthymia (10%), Major Depression (5%) and Depression NOS (20%).

The use of the **medications** at the beginning of the treatment was 45% a combination of alprazolam and paroxetine, 5% paroxetine alone, 30% alprazolam alone, 10% diazepam alone and the remaining 5% something else.

Data from analysis of HAD, BDI, SF-36, CGI and Brief Cope are summarized in Table 1: values reported in brackets refer to foreigners' subgroup. Table 2 provides also significance of statistic correlations.

Table 1- Data analysis for HAD, BDI, SF-36, CGI and Brief Cope

<i>Hospital Anxiety and Depression Scale (HAD)</i>				
	T0		T1	
	Mean	Std. Deviation	Mean	Std. Deviation
Anxiety	3.00 (3.60)	0.67 (0.52)	2.00 (2.6)	0.47 (0.84)
Depression	2.60 (2.50)	0.84 (0.97)	1.80 (2.10)	0.63 (0.99)
<i>Beck Depression Inventory (BDI)</i>				
	T0		T1	
	Mean	Std. Deviation	Mean	Std. Deviation
Global Score	1.90 (16.0)	1.10 (9.5)	0.70 (1.20)	0.82 (1.4)
<i>Short Form 36 (SF-36)</i>				
	T0		T1	
	Mean	Std. Deviation	Mean	Std. Deviation
Physics activity	15.0 (5.00)	18.5 (0.0)	18.0 (7.5)	28.8 (2.6)
Roll and healthy	25.0 (25.0)	0.0 (0.0)	25.0 (25.0)	0.0 (0.0)
Pain physical	30.0 (36.00)	17.6 (14.2)	20.0 (36.0)	4.7 (14.2)
Health on general	48.5 (54.0)	8.1 (11.6)	52.5 (55.0)	22.0 (12.4)
Vitality	64.0 (65.0)	3.9 (7.6)	63.0 (65.5)	3.4 (5.9)
Social activity	50.0 (44.9)	20.4 (14.5)	53.0 (42.3)	5.7 (13.5)
Roll and emotion state	4.6 (5.3)	0.8 (0.6)	4.0 (4.3)	0.8 (0.8)
Mental health	78.8 (78.2)	9.6 (6.8)	80.0 (79.6)	11.2 (5.4)
<i>Clinical Global Impressions (CGI)</i>				
Gravity of illness	4.20 (4.10)	0.42 (0.70)	2.70 (3.20)	0.67 (1.2)
Global improvement	--	--	2.0 (1.9)	1.56 (0.80)
Index of efficacy (result therapeutic)	--	--	2.10 (2.0)	0.57 (0.60)
<i>Brief Cope</i>				
Positive reorganization	4.6 (4.3)	2.2 (1.3)	5.9 (5.0)	1.4 (1.3)
Distract attention	4.1 (4.6)	1.5 (0.6)	5.6 (5.2)	1.3 (0.7)
Expression	4.6 (5.1)	1.6 (1.2)	5.7 (4.7)	1.1 (1.0)
Making use of emotional support	5.9 (6.4)	1.2 (1.0)	6.6 (5.6)	0.6 (0.5)
Facing in an affective way	7.0 (6.5)	1.8 (0.8)	7.5 (7.4)	0.9 (0.6)
Negation	4.0 (5.0)	2.0 (0.9)	3.5 (3.9)	1.5 (0.3)
Religion	5.3 (5.4)	1.2 (1.6)	5.0 (6.3)	1.1 (1.6)
Humour	2.5 (2.3)	0.9 (0.9)	2.6 (2.7)	0.8 (1.2)
Behavioral disengagement	3.9 (4.4)	1.8 (0.9)	4.5 (4.4)	2.0 (0.6)
Making use of emotional support	4.7 (6.1)	0.9 (1.0)	5.9 (6.4)	0.8 (0.5)
Making use of substances	2.0 (2.2)	0.0 (0.6)	3.00 (2.0)	1.6 (0.0)
Acceptance	4.8 (4.4)	2.2 (0.8)	5.8 (6.1)	1.5 (0.5)
Planning	6.6 (6.0)	1.5 (0.8)	7.3 (6.5)	1.0 (0.8)
Self-accuse	4.9 (4.5)	0.9 (1.0)	4.8 (3.5)	1.2 (0.7)

Table 2 – Significance of statistic correlation (T-test)

	<i>Italians</i>	<i>Foreigners</i>
Life events - Making use of emotional support	.020	.268
Title of Study- Positive re-organization	.045	.260
Roll and emotion state - Planning	.007	.248
Profession – Making use of emotional support	.023	.871
Acceptance – Planning	.014	.656
Religion – Positive re-organization	.070	.025
Religion – Making use of emotional support	.050	.008
Religion – Making use of instrumental support	.025	.000
Religion – Acceptance	.057	.033

DISCUSSION Not only does a traumatic event as spinal cord injury require a period of medical and rehabilitative treatment addressed to the body, but it's extremely important to protect one's wellbeing and to consider the psychic distress, evaluating particularly the variable culture of origin (Taramelli, 1998; Tseng, 2003b). The first scientist pointing out that the psyche too may be injured has been probably S. Freud, giving a psychological meaning to the word "trauma". More recently, research investigated the role of physical traumas on the psychological consequences and the function or the mental equilibrium of people. Traumatized subject appear to more or less consciously use a defensive organization towards psychic suffering, which usually permits to face and get over several states: this organization consists in more or less involuntary feelings, behaviours and thoughts, put in action as automatic answer at the perception of a danger, with the purpose to hide or relieve stressful situations that can originate anxiety-anguish and clinically depressed tone of mood. (Rossetti, 2004; Garland, 1996; Bonavita, 2004).

In the case of spinal cord injury, whose more evident characteristic is the lost of mobility, the block of the movement risks to go along with a paralysis of the mind, with the result of a difficult recovery of the several parts of the Ego (individuality) that can activate and utilize the physical resources necessary for a change. Numerous researches point out that also the grown-up people can fight against loss and mourning, according to a basic psychodynamic scheme that, in case of spinal cord, may be summed up in three points:

- ♦ **Phase of torpor:** it generally lasts from few hours to 6-7 days (not always in normal clinical and physiological conditions);
- ♦ **Phase of torment and search of the lost figure:** it usually starts after the communication of the diagnosis and the prognosis. It lasts months or years, especially if a proper global beginning of the treatment (medical and psychological) doesn't start immediately after the communication. It has been noticed that the early approach in acute phase makes easier the relation between the psychologist and the active and dynamic couple patient/family. If the conditions of the patient allows his/her acquaintance and early admission to the spinal surgery or neurosurgery wards, the beginning of the treatment will be easier;
- ♦ **Phase of major or minor reorganization:** the length of time of the various phases, the intensity of the emotional manifestations, including psychiatric disorders or the possibility of relapses, depend obviously from different factors, among which:
 - * **Age of the subject:** the ability of elaboration of the experiences is strictly correlated to the psychic organization, to the degree of maturity and learning, i.e. the cognitive competences and the integration of the experiences in relation to the life period (youth, adult, elder);

- * **Psychological conditions** of the subject at the moment of the traumatic event. We know that the experiences of life can give to the traumatic event a connotation of a cause/effect or an end of something, as a result of a sequence of events that can influence the way of living. For example, in the auto-damaging behaviours, the features of personality can become an obstacle to the use of the resources (Arescaldino, 2004);
- * **Environmental and cultural conditions:** they can favour or nullify a reaction conformed to the spinal cord injury.

This last point has been investigated in our research, pointing out that both the Italian sample and the foreigners' one, have considerably reduced their levels of anxiety and depression in the phase of elaboration, even though for different reasons.

On the one hand, in the Italian sample this improvement is determined by a better use of emotional and instrumental support offered by medical facilities; the better planning and the acceptance of the new condition is determined by the presence of a valid system of psychosocial support (family, partner, friends and colleagues) which produces a better adaptation, compared with foreigner subjects. Moreover, the Italian subgroup had better education or professions, which determine minor behavioural obligation in the rehabilitative project, during the stay in hospital, besides a better acceptance of the disability in general due to the belonging place.

On the other hand, the foreigners' subgroup uses, besides the services of the medical facilities, the belonging religion as instrument of emotional support; this attitude seem to help these subjects in a major acceptance of their condition, but they do not appear to reach the same level as the Italian sample, concerning the planning of the future. Moreover, in the non-European subjects, the minor acceptance of the new condition seem to be also influenced by the lack of domestic affects, determining a marginal compensation with minor self-reassurance. The major risk, in this case, is the possibility to generate and make symptomatic a possible psychological distress, worsening in the long run the anxious-depressive symptomatology and so proving how the place and the culture can influence the mental processes (Tseng, 2003c; see Table 1).

Finally, an important difference that has been found concerns the capability of restructuring of his own life: the Italian subgroup, indeed, seems to accept better the beginning of the psychological and psychopharmacological treatment and to show more efficacious and strategic conditions of adaptability (coping) in facing the new and harder course of life (see Table 2).

CONCLUSIONS It has been noticed that the best or worse adaptability to the spinal cord injury does not depend only on the beginning of the psychological and psychopharmacological treatment, on the methods and times, but it is also influenced by a significant variable represented by the belonging culture. The cultural element does not necessarily determine the psychopathology, but it contributes to modulate the clinical expression of the symptoms (Rossi, 2000). Often, the encounter among different cultures generates incomprehension that can flow in phenomenons of social alienation, racism and also wrong psychiatric diagnosis, due to the lack of knowledge or the deficient recognition of the cultural elements that affect clinical expressiveness. (Tseng, 2003d). Then it is fundamental to remember that the spectre of the syndromes previously mentioned includes a variety of clinical forms, whose various distribution among the "non western people" suffers the religious climate of the native land. This aspect may not only influence the psychopathology, but also encourage possible elements of psychological support, giving continuity of the cultural tie. Therefore, organizing the non European spinal cord patient's rehabilitation means a structural overcoming of established models, directing one's attention on the real psychic suffering of the people inside their specific context, without being entrapped in culturally one-way

schemata (Mazzone & Saggio, 1999). By experience, we know how important are the protocols in spinal cord rehabilitation but we must never forget the uniqueness of the human being and the importance for the worker to open the new ways of treatment, that has to be modelled to measure but also respectful of the multidisciplinary and network system. Now it appears to be useful pointing out, even if shortly, a possible guideline for the intervention from a multicultural psychiatry point of view:

- a. The insertion in nursing schools and in medical jobs of a study scheme that includes this branch of learning;
- b. The institution of training courses of multicultural mental hygiene as teaching and consulting point of reference;
- c. The definition of the possible limits of the specific psychotherapeutic approach of the western cultures;
- d. The possibility of having a ready availability of clinical advice to optimize the therapeutic practice case by case. (Presidenza del Consiglio dei Ministri, 1992; Tseng, 2003e). This elements find immediate an echo in the problematic issue of the “immigrant people”, a problem not yet resolved in Italy, especially for those patients of the spinal units who present great difficulties to find an accommodation after being discharged from the hospital. (Arescaldino, 2005)

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