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## The trajectory of the life of artisan fishermen victims of spinal cord injuries caused by diving: experiences, social representations and stress

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### ABSTRACT

**Aim:** To analyze the social representations, stress levels and experience of fishermen who are victims of spinal cord injury as a result of diving accidents. **Method:** This is an exploratory and descriptive study that uses quantitative, qualitative and representational data. It was developed in the fishing colonies located on nine beaches in the northern coast of Rio Grande do Norte, Brazil, involving 44 fishermen. Data was gathered from October 2013 to August 2014, and semi-structured interviews, with closed and semi-open questions, were used. Data were analyzed using descriptive and analytical statistics using ALCESTE software in the light of the analysis of social representation theory and content analysis. **Results:** The participants were male, aged 49.6 years on average, of elementary school level (68.2%), married (77.3%) and suffering from paraplegia sequelae (50%). The analysis of the qualitative data led to the identification of seven categories. **Conclusion:** The social representations of the cases of spinal cord injury are concerned with the moment of transition between before and after the accident, and they involve the prevention of fishing activity, facing the situation with the remaining potential sequelae, and the consequent impact of stress.

**Descriptors:** Spinal Injuries; Psychological Stress; Fishing Industry; Mental Health; Nursing.

## INTRODUCTION

A spinal cord injury is one of the worst lesions that can affect human beings, with enormous physical, psychological and social impact<sup>(1)</sup>. Damage to the spinal cord as a result of decompression sickness (DCS) caused by a diving accident is a risk that the fishermen of the maritime communities of Rio Grande do Norte are exposed to.

DCS occurs when the diver returns quickly to sea level. As the diver descends, the amount of gases dissolved in the blood, mainly oxygen and nitrogen, increases. When depressurization occurs abruptly, there may be the formation of nitrogen bubbles that affect vital organs of the body, causing symptoms that range from mild to severe, including numbness, weakness and paralysis (American College of Surgeons, 2011)<sup>(2)</sup>. A survey conducted by the Regional Labor Precinct of Rio Grande do Norte showed that 86.4% of divers have already suffered at least one accident as a result of pressure changes as a result of diving. Data show that in two of the 32 state lobster communities, 12 fishermen's deaths resulting from decompression sickness were recorded in a two-year period<sup>(3)</sup>.

The chance of survival after a spinal cord injury has increased with advances in healthcare. However, there is no effective therapy to prevent possible complications. A person affected in this way can live with physical, sensory and autonomic changes, as well as psychosocial and spiritual changes that may diminish their quality of life. Therefore, their rehabilitation should begin as soon as the diagnosis of spinal cord injury is made<sup>(4)</sup>.

For the construction of this study, we asked the following questions:

- What was the life of the fisherman like before the spinal cord injury?

- How does he feel at the present time after the accident?

The questions addressed by this research referred to the psychosocial changes after the accident in those fishermen who are victims of spinal cord injury, and the visibility and importance of nursing care at the heart of this problem.

## OBJECTIVE

Analyze the social representations, stress levels and experience of the fishermen who are victims of spinal cord injury as a result of diving accidents in the north coast beaches/RN.

## METHOD

This is an exploratory-descriptive study that uses quantitative, qualitative and representational data, developed in colonies of fishermen from nine beaches on the northern coast of Rio Grande do Norte, Brazil, from October 2013 to August 2014, after approval by the Research Ethics Committee of the Federal University of Rio Grande do Norte, opinion No. 431,891/2013. The sample consisted of 44 fishermen affected by spinal cord injury, based on the criteria for the inclusion and exclusion of participants. We used the semi-structured interview as a data collection instrument. The quantitative data were analyzed using descriptive statistics and were presented in tables, charts and graphs by means of Microsoft Excel. We submitted the data from interviews to the software *Analyse lexicale par Contexte d'um Segments of Texte Ensemble* (ALCESTE) and, in the light of the analysis of the Theory of Social Representations and Central Nucleus Theory, to Bardin content analysis<sup>(4)</sup>. The results of the research were clarified and

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presented based on four articles by following the normative recommendations of the journals concerned.

## RESULTS

The participants were male, aged 49.6 years on average, of elementary school level (68.2%), married (77.3%) and suffering from paraplegia sequelae (50%). Most of them were stressed (75%) were at the stage of near exhaustion (33.3%), with prevalent symptoms of insomnia (95.5%) in the last few hours; hypertension (97.7%) in the last week; and sexual difficulties (95.5%) in the last month.

The decompression illness was the cause of the spinal cord injury (57.1%); it occurred predominantly during early summer (75.0%) on the North Coast (96.4%). The main outcomes were paresthesia and pain in the upper and lower limbs (67.9%), followed by death (25.0%).

The data analysis from the perspective of understanding the social representations of spinal cord injuries allowed the identification of seven categories:

- Treatment: limitations and expectations;
- Spinal cord injury: before and after;
- Retirement: still far from reality;
- Disability: dependency, incapacity vulnerability;
- Resilience and autonomy;
- Feelings of the self: physical losses and restart;
- Life and work: impediments, plans and changes.

The core of the representation is in the first category due to the expectations and limitations in the treatment, while the peripheral elements are in the seventh and third categories. The physical limitation in terms of fishing activities

and with regard to expected retirement are the most prominent elements of the structure.

The social representations of the spinal cord injury are concerned with the moment of transition between before and after the accident. They involve the prevention of fishing activity, coping with the situation with the remaining potential sequelae. Anchoring is established in the desire for change related to the improvements in living conditions and health experienced in everyday life through faith.

## CONCLUSION

We conclude this study, whose theme is relevant to the public healthcare of fishermen, with the achievement of our goals. We suggest measures for prevention, promotion and recovery of the health of fishermen, in addition to safe, healthy and decent working conditions as a commitment of social and health policies.

## REFERENCES

1. Ministério da Saúde (Brasil). Diretrizes de Atenção à Pessoa com Lesão Medular. Brasília: Ministério da Saúde; 2013.
2. American College of Surgeons. Atendimento pré-hospitalar ao traumatismo. PHTLS/NAEMT: 7ed. Rio de Janeiro: Elsevier; 2011.
3. Brand CI, Fontana RT, Santos AV. A saúde do trabalhador em radiologia: algumas considerações. *Texto & Contexto Enferm.* 2011; 20(1):68-75.
4. Andrade, L.T, Araújo, EG, Andrade, KRP, Souza, DRP, Garcia, TR, Chianca, TCM. Disreflexia autonômica e intervenções de enfermagem para pacientes com lesão medular. *Rev. Esc. Enferm. USP.* [internet] 2013 Feb [cited 2015 Jan07]; 47 (1). Available from: [http://www.scielo.br/scielo.php?pid=S0080-62342013000100012&script=sci\\_arttext](http://www.scielo.br/scielo.php?pid=S0080-62342013000100012&script=sci_arttext)
5. Bardin L. Análise de conteúdo. 3. ed. Lisboa: Edições 70; 2004

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**Reference:** Cavalcante ES. Life story of fishermen who are victims of spinal cord injury as a result of diving: experiences, social representations and stress. [thesis]. Natal: Federal University of Rio Grande do Norte, Natal; 2014. 171 p.

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