

## Elite Sport: Values and Goals for Athletes with Spinal Cord Injury

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### Abstract

**Introduction:** Sport's ability to challenge social paradigm and boost self-esteem has made it an important tool to empower people in disability world. An elite athlete is defined who has reached the highest level of performance in a particular sport.

**Material and Method:** 19 elite athletes, eleven males, eight females, were recruited. A semi structured interview guide was employed with the goal of gaining specific information and making better comparison.

**Results:** Through the evaluation of the questionnaires four themes emerged: challenge, rebirth, empowerment and icon.

**Conclusion:** According to literature this paper indicates that sports can have significant physical and psychosocial health benefits for people with disability. Sports provide a great social environment and can be a tool to overcome social barriers.

**Keywords:** Spinal cord injury, Elite sport, Empowerment.

### Introduction

Elite athlete is defined who has reached the highest level of performance in a particular sport [1]. The 1996 Atlanta Paralympics were the first Paralympics to get mass media sponsorship [2]. It was the first event where International Sports Federation for Persons with an Intellectual Disability athletes were given full medal status [3]. One of the most relevant disabilities is caused by spinal cord injury (SCI). People living with

SCI face many barriers to physical activity participation [4,5]. Functional autonomy and quality of life are related to subjective perception, physical and mental health, independence in daily activities, Systematic efforts to increase exercise and sports participation could have substantial benefits on the physical well-being and psychosocial well-being of people with SCI [6,7]. Exercise is planned, structured, and repetitive physical activity intended to improve or maintain fitness [8], whereas sport is typically a

competitive form of physical activity governed by rules [9]. The aim of this study was to analyze the values, and goals to sports participation of elite athletes with a physical disability.

## Material and Methods

Participants (N=19, eleven males, eight females, mean age: 42,5 years,) were recruited. All subjects were Elite Athletes: 13 SCI (2 tetraplegic and 11 paraplegic), 2 upper limb amputation post injury, 3 lower limb amputation post injury and 1 right cerebral stroke hemiplegia. Their ages ranged between 23 and 56. We considered five

adapted sports: wheelchair hand bike (10 SCI and 1 right cerebral stroke hemiplegia), bicycle (5 amputations), 1 tennis (paraplegic), 1 wheelchair archery (paraplegic), 1 canoe (paraplegic). Hand bike is a bicycle propelled by power from the arms. It is an instrument of cycling mobility on three wheels. People with and without disabilities or malformations of the lower limbs can choose to use this device for commuting, recreation and sports. When the level of spinal cord injury is over D5 vertebra, athlete can adopt the riding position in semi-recumbent (Figure 1) in order to reduce the energy expenditure and obtain the better aerodynamic position.



**Figure 1:** Hand bike with “recumbent” position.

Hand bike elite athletes are able to reach speeds of up to 40-45 km per hour in competition. Wheelchair archery is one of the few sports where normal and para people competing together. An important aspect of this sport is that there is no difference between disabilities or non-disabled athlete’s performance.

Wheelchair tennis follows the same rules as able-bodied tennis. The only difference is wheelchair tennis players are allowed two bounces of the ball; provided the first bounce occurs within the bounds of the court.

Paracanoe is the paddling discipline for athletes with an impairment and are contested in two boat types, kayak (K) and va’a (V).

A semi structured interview guide was employed with the goal of gaining specific information and making better comparison. Questions concerning: individual medical history, sport, athletic individual results and final considerations.

## Results

Through the evaluation of the questionnaires four themes emerged: challenge, rebirth,

empowerment and icon. More recurring themes were: rebirth and challenge.

Themes indicated that athletes attributed motivation to construct of self-determination theory [10]. Motivation represents an activated internal state that arouses, directs and leads to a purchasing decision [11]. Facilitators of sport participation can be different: health benefits, purposes of enjoyment and social aspects [12]. In this paper all elite athletes decided to start the sporting activity through word of mouth communication with their friends.

## Discussion

Challenge is the situation of being faced with something that needs great mental or physical effort in order to be done successfully and therefore tests a person's ability. There is no challenge with oneself: the figure of the challenger and the challenged cannot coincide because it would not be possible to recognize the winner and the loser. People with disability may mistake a struggle, a confrontation, a rebellion, the survival with a challenge.

Indecision or suffering can crew in a person with disability. The challenge is an appropriate and rigorous knowledge of oneself, through which man never loses the exact notion of the time and space in which he finds himself and never loses the precise and exact mastery of being.

Active living is an important goal for individuals with disabilities and participating in sports represents one way to remain active. Research supports the need, benefits, and importance of active living for individuals with disabilities [13]. The participation to competitive games is viewed as the ability to do something effectively, sufficiently, or successfully. [14]. According to Achievement Goal Theory competence is viewed as the ability to do something effectively, sufficiently, or successfully [15].

Rebirthing means literally rebirth, like a change and a new discover of oneself. Rebirthing uses two techniques, a physical one and a mental one, People with disability need to rediscover the link between mental representation and physical abilities. Self-consciousness and good communication skills are necessary to problem solving. Self-esteem doesn't necessarily lead to self-empowerment but it sure does help. To be self-empowerment means that you have the strength to do something that you believe to be in your best interests. Self-empowerment means having knowledge about your own skills and abilities and confidence in them so you are able to set appropriate goals and trach your potential.

Empowerment is a process that gives people more control over the decisions and actions that impact their lives. The conception of empowerment is strongly influenced by Martha Nussbaum. [10].

When disability is present, people changes his own body image and person must reconstruct his identity Body image is important as it can be linked to feelings of self-worth. Disable person tend to wish for less than they can be because he internalized self-believes of inferiority and dependence.

Sport Icons defines any person admired for given qualities or achievements and regarded as ideal or model. An important and enduring symbol. to follow in the most diverse areas of a society: culture, entertainment, fashion, politics, economy, sport. In the disability world an icon represents the victory over the individual inhibitions and the overcoming of the concept of diversity. The study sample may not be representative of the national elite athletes' group. Further research is needed to identify the most effective goals overcoming the concept of diversity.

## Conclusion

According to literature this paper indicates that sports can have significant physical and psychosocial health benefits for people with SCI. The themes emerged from the results highlight the progressive personal growth of elite athlete who experiences the highest levels of autonomy. Sports provide a great social environment and can be a tool to overcome disability.

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## References

1. Kent M. Oxford dictionary of sports science and medicine. OUP Oxford; 2006.
2. International Paralympic Committee. 2022.
3. Steadward RD, Watkinson EJ, Wheeler GD. Adapted physical activity. University of Alberta; 2003.
4. Scelza WM, Kalpakjian CZ, Zemper ED, Tate DG. Perceived barriers to exercise in people with spinal cord injury. *Am J Phys Med Rehabil.* 2005;84(8):576-83.
5. Ginis KA, Latimer-Cheung A, Corkum S, Ginis S, Anathasopoulos P, Arbour-Nicitopoulos K, et al. A case study of a community-university multidisciplinary partnership approach to increasing physical activity participation among people with spinal cord injury. *Transl Behav Med.* 2012;2(4):516-22.
6. Rimmer JH, Braddock DA, Pitetti KH. Research on physical activity and disability: an emerging national priority. *Med Sci Sports Exerc.* 1996;28(11):1366-72.
7. Caspersen CJ, Powell KE, Christenson GM. Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. *Public Health Rep.* 1985;100(2):126.
8. Gargaro J, Warren C, Boschen K. Perceived barriers and facilitators to community reintegration after spinal cord injury: A critical review of the literature. *Crit Rev Phys Rehabil Med.* 2013;25(1-2).
9. Martin Ginis KA, Hicks AL. Considerations for the development of a physical activity guide for Canadians with physical disabilities. *Appl Physiol Nutr Metab.* 2007;32(S2E):S135-47.
10. Martin JJ. *Handbook of Disability Sport and Exercise Psychology.* Oxford University Press Oxford. 2017
11. Funk DC, Filo K, Beaton AA, Pritchard M. Measuring the motives of sport event attendance: Bridging the academic-practitioner divide to understanding behavior. *Sport Marketing Quarterly.* 2009;18(3):126.
12. Hutzler Y, Bergman U. Facilitators and barriers to participation while pursuing an athletic career. *Ther recreat J.* 2011;45(1):1-6.
13. Wilhite B, Shank J. In praise of sport: Promoting sport participation as a mechanism of health among persons with a disability. *Disabil Health J.* 2009;2(3):116-27.
14. Maehr ML, Zusho A. Achievement goal theory. *Handbook of motivation at school.* 2009.
15. Nussbaum MC. Capabilities, Entitlements, Rights: Supplementation and Critique. *J Human Dev Capabil.* 2011;12:23-37.

## Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research authorship and/or publication of this article.

## Patient Consent

Obtained.

## Ethical Approval

The study was approved by the Ethics Committee of our Centre and all patients provided written informed consent before study treatment.