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DIFFERENCES IN SELF-CONCEPT AMONG PERSONS WITH DISABILITIES DUE TO PRACTICING ADAPTIVE ALPINE SKIING

RAZLIKE V SAMOPODBI OSEB PO POŠKODBI ZARADI UKVARJANJA S PRILAGOJENIM ALPSKIM SMUČANJEM

ABSTRACT

An acute injury that leads to a disability severely disturbs the established balance of person's self-concept and socialization. Once the mourning phases are completed, one's self-concept is slowly restored. The main aim of the study was to determine whether adaptive sports activities and adaptive alpine skiing in particular play an important role in self-perceptions of persons with disabilities caused by injuries. The study examined whether practicing adaptive alpine skiing can be linked to the higher physical and social self-concept. The survey was carried out among two groups of adult respondents who have experienced an acute injury – recreational skiers and a control group. To ascertain the respondents' self-concept, the Tennessee Self-Concept Scale was used. Results showed that significant differences appeared with regard to some indicators of self-concept: physical and personal self, identity, self-satisfaction, and self-evaluation. The results support the hypothesis that sport positively influences certain aspects of the self-concept and better self-perception of persons with disabilities. To build a higher self-concept and increase the percentage of the persons with disabilities who do sports, we suggest involvement in sport activities already in the final stages of the rehabilitation process.

Key words: self-concept, acute injury, disability, adaptive alpine skiing, social integration

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POVZETEK

Akutna poškodba, ki vodi do invalidnosti hudo moti uveljavljeno ravnotežje v samopodobi in socializaciji posameznika. Ko so faze žalovanja zaključene, se samopodoba začne počasi obnovljati. Glavni cilj raziskave je bil ugotoviti ali prilagojene športne aktivnosti, alpsko smučanje igrajo pomembno vlogo pri vzpostavljanju in vzdrževanju pozitivne samopodobe invalidov. Študija je preučila ali je vadbo prilagojenega alpskega smučanja mogoče povezati z boljšo telesno in socialno samopodobo. Raziskava je bila izvedena med dvema skupinama odraslih anketirancev, invalidov, ki se redno ukvarjajo s športom in kontrolno skupino, ki se s športom ne ukvarja. Za ugotavljanje samopodobe je bila uporabljena Tennessee lestvica samopodobe. Rezultati so pokazali pomembne razlike v zvezi z nekaterimi kazalniki samopodobe: telesni in osebni jaz, identiteta, samo-zadovoljstvo ter samo-vrednotenje. Rezultati podpirajo hipoteze, da šport pozitivno vpliva na določene aspekte samopodobe ter lastno percepcijo. Za izgradnjo pozitivne samopodobe zato predlagamo vključevanje v športne aktivnosti že v pozni fazi rehabilitacije.

Ključne besede: samopodoba, akutna poškodba, invalidnost, prilagojeno alpsko smučanje, socialna integracija

INTRODUCTION

People are complex human beings, capable of absorbing various aspects of ourselves and our own perceptions, making ourselves aware of them and reporting to others about them. One can link self-perception to compliance with social norms and the social environment (Sheldon, Renwick, & Yoshida, 2011). At the same time, self-awareness allows us to picture what does and does not pertain to us, what we expect of ourselves and what place we occupy in our society (Horvat, 2013). Self-perception is a long-lasting process of growth of our mental apparatus, which includes identification processes along with other people, and may – during our lives – change, evolve, and adjust to the new life situations each individual deals with. Therefore, self-perception in interaction with others eventually turns into the individual's self-concept (Drench, 1994). Self-concept is an individual's perception of himself/herself. It is a compound of sensations, thoughts, and notions about ourselves, about who and what we are. It is what we think of ourselves and of our capabilities, characteristics, our bodies, the chances, successes, and failures in our lives (Ellemers, Kortekaas, & Ouwerkerk, 1999).

During different time periods, a sense of continuity is of key importance when maintaining one's self-concept. A sense of continuity is reinforced by an environment that experiences an individual as the same one in different life periods and situations (Lamovec, 1994). Life does not always go according to our expectations, it can take its own path. Unexpected events and situations require adjustments to physical and mental processes and the process of experiencing oneself. When an acute injury or a sudden illness arises, the continuity of one's self-concept is interrupted (Horvat, 2013). Various authors state that self-concept changes significantly after an acute injury (Symister & Friend, 2003). An injury in its first phase most significantly influences one's physical self-concept, however we must not neglect the emotional and interpersonal aspects of self-concept. We need to strive towards self-acceptance of one's "new" image already in the early stages of the rehabilitation process; self-concept in relation to social integration is of even greater importance (Benedik, 2001).

We should not neglect the fact that one's physical self-concept and physical schema must be restored after being destroyed as a result of an injury. An individual must come to terms with the "loss" and rebuild new foundations for his/her body acceptance. He/she needs to get to know the new functional capabilities of his or her body, deal with gaining different body conditioning and adopting new manouvres to regain balance and physical abilities (Musek, 2010). While it holds true that we strive to satisfy basic health needs and the need to perform everyday life functions in the first phase of rehabilitation, once achieved after an injury, people strive towards higher goals and towards fulfilling higher needs, all the way to self-actualisation (Misener, 2014). Sports activities can be of major importance in reaching goals and restoring one's social network (Burger, 2010).

The results of studies dealing with self-concept regarding persons with disabilities are usually different and contradictory. An acute injury represents a traumatic experience for an individual. Such requires adjustment to a suddenly changed and reduced body functionality (Geyh et al, 2012). Some studies have ascertained a significantly lower evaluation of self-concept by persons with disabilities as a consequence of an injury, while others do not ascertain changes in the experienced physical self-concept (McCabe, 2006). Numerous persons with disabilities fail to accept their new physical appearance, which is less functional in comparison to the pre-injury

state. Authors state that a new physical self-concept arises two years after an injury. Sports activities would seem to help with such improvement (Omolayo, 2009).

Several studies have assessed that people positively link adaptive sports activities with dealing with an injury, appreciation of life after an injury, integration into an adaptive sports activity, social inclusion, overall health, and welfare. It has been observed that sports play an important role in increasing one's physical abilities, independence, and autonomy, which is of key importance to one's self-concept, the assessment of one's own value, self-concept, life perception, priorities, and especially regarding one's inclusion in social interactions (Crawford, Gayman, & Tracy, 2014). Most studies anticipate a lower self-concept with regard to persons with disabilities in comparison to the overall population; however, it turns out that the self-concept of persons with disabilities who practice sports does not differ much from the overall population, whereas those who do not practice sports have a lower self-concept, especially their physical self-concept. Some surveys even suggest that disabled sportspeople take better care of their bodies and are not affected by minor body changes. Sport is often used as a means of motivation by which a person can gain physical skills, quality friendships, and social acceptance, which importantly influence one's social and emotional self-concept (Middelton, Tran, & Craig 2007).

The aim of the survey was to determine whether regular sports activity – alpine skiing – influences one's self-concept after an injury. We wanted to ascertain whether those persons with disabilities who regularly practice sports possess a better self-concept – physical as well as other aspects of self-concept – in comparison to persons with disabilities who do not practice sports regularly.

METHOD

Participants

The respondents who took part in the survey fall into two groups of people who have experienced an injury. The first group of respondents (age 39.8 ± 7.6 years) actively practice alpine skiing and possibly some other disabled sports, whereas the other group (age 36.7 ± 7.2 years) are not regularly physically active. They have, however, had contact with adaptive sports.

The majority of respondents from both groups live in an urban environment (75%) and are located between 50 and 100 km from the closest ski resort (73%). The respondents from both groups are, in relation to the general population, relatively highly educated; 60% of those in the active group and 40% of those from the control group have a university degree, while all other respondents have finished a shorter higher education study programme. Due to their education, 73% of the skiers are employed full time with a monthly net income from €1000 to €2000. Within the control group, 50% of the respondents are employed and have monthly income similar to that of the skiers.

For both groups, paraplegia was stated as the most frequent type of an injury – 86.7% among the skiers and 66.7% among the control group. Other injuries mentioned were tetraplegia and lower extremities amputation. The degree of paraplegia injuries was from TH4 to L3. The most frequent cause of injury in both groups was a traffic accident – 60% and 66.7% respectively. The average age of respondents when the injury occurred was 28.3 (skiers) and 27.9 (control group). 60% of the respondents from both groups attended rehabilitation programmes from 3 to 6 months, the

rest attended one for less than 3 months; none of the respondents practiced a disability sport during the process of rehabilitation.

Instruments

To ascertain the degree of self-concept, the Tennessee Self-Concept Scale (Lamovec, 1994; TSCS) was used. It is one of the most frequently used multidimensional instruments of self-concept. The TSCS is a numerically-descriptive scale, comprising of a 100 statements describing the »self«. The subject decides on how much he/she agrees with each of the 100 statements by circling a number on a scale from 1 to 5, according to which one best describes his/her concept of »self«; the statement can be completely true or completely false. Completing the test usually takes 10 to 20 minutes.

The scale consists of two parts: self-criticism and total positive. Self-criticism scale consists of 10 items describing moderately undesirable characteristics recognised by the majority of the population. Test - retest of reliability over a period of two weeks is 0.92 for positive scale and 0.75 for selfcriticism (Lamovec, 1994). Total positive scale includes 90 items (divided into negative and positive items) and measures the general level of self-respect, which is further divided into these components: Physical self (S2), moral-ethical self (S3), personal self (S4), family self (S5), social self (S6), identity (S7), self satisfaction (S8), behaviour (S9), general level of self-concept and self-respect (S10). For each of these components, there are 10 statements in the scale.

From the scale, we can also measure: total conflict (S11, S12), variability (S13, S14, S15), defensive positive (S16), general maladjustment (S17), psychosis (S18), personality disorder (S19), neurosis (S20), personality integration (S21), distribution (S22). (Lamovec, 1994).

Procedure

The method used for the purpose of the survey was a specially designed questionnaire. A part of the questionnaire included the Tennessee Self-Concept Scale. It consists of the following sections: general information, disability information, sports activity information, personal attitude towards sport, equipment availability and ski slope accessibility, and the self-concept scale.

At the same time, the questionnaire also provided insight into the stratification characteristics of the respondents (gender, age, education, income, status, place of residence), the frequency of their sports activities before and after their injury, the level of disability, equipment availability, and the accessibility of ski slopes adapted for persons with disabilities.

The questioning process was carried out individually and personally, based on agreement with the respondents. Filling out the survey took approximately 30 minutes and all respondents answered all the questions. The conditions for participation in an active group were impairment after an acute injury and being involved in regular recreational skiing. With the control group the conditions were an acquired disability and irregular skiing (or other disabled sports) activity.

The data was processed with SPSS, to perform comparisons between both groups a t-test was used; where data was not-normally distributed, we used a non-parametric Mann-Whitney U test. The Mann-Whitney U test is used to compare differences between two independent groups when the dependent variable is either ordinal or continuous, but not normally distributed.

RESULTS

Table 1 shows the results of the Tennessee Self-Concept Scale completed by the respondents. Statistically significant differences appeared regarding nine components of the scale.

Table 1: Differences in the results of the Tennessee Self-Concept Scale

	Skiers		Non-skiers		t/U*	p
	M/Mr*	SD	M/Mr*	SD		
S1 Self-criticism	29.53	4.91	29.30	5.64	-0.07	0.945
S2 Physical self	78.34	9.14	70.92	8.63	-2.28	0.030
S3 Moral-ethical self	78.52	5.77	73.94	7.26	-1.92	0.065
S4 Personal self	75.71	6.42	70.58	5.67	-2.40	0.023
S5 Family self	* 17.22	5.38	* 13.83	7.62	* 87.50	0.298
S6 Social self	76.34	7.05	72.12	6.21	-1.76	0.089
S7 Identity	* 19.55	8.63	* 11.53	10.65	* 53.00	0.013
S8 Self-satisfaction	* 18.96	10.88	* 12.16	14.12	* 61.00	0.033
S9 Behaviour	125.27	10.62	118.00	8.74	-1.89	0.070
S10 Self-evaluation	* 19.31	47.04	* 11.75	30.91	* 55.50	0.018
S11 Conflict 1	-13.10	7.51	-17.00	8.00	-1.47	0.154
S12 Conflict 2	25.83	3.33	29.75	5.92	2.21	0.038
S13 Variability 1	* 14.42	4.37	* 16.63	5.00	* 96.00	0.491
S14 Variability 2	* 13.85	4.43	* 17.25	6.54	* 87.00	0.288
S15 Variability 3	* 13.46	8.18	* 17.67	10.88	* 81.00	0.190
S16 Defensive positive	68.87	9.39	61.00	10.23	-2.13	0.042
S17 General maladjustment	* 18.55	8.45	* 12.52	9.00	* 67.50	0.061
S18 Psychosis	47.11	3.62	47.43	6.50	0.14	0.890
S19 Personality disorder	* 19.08	9.54	* 12.00	10.33	* 60.50	0.031
S20 Neurosis	94.83	8.93	87.68	9.25	-2.17	0.038
S21 Personality integration	9.91	3.06	11.00	3.91	0.84	0.408
S22 Distribution	142.43	26.43	124.12	29.25	-1.80	0.083

¹Indicators marked with * were factors that were not normally distributed, Mann-Whitney test was used to calculate Mean rank and U value.

Statistically significant differences appeared regarding nine components of the scale:

An analysis of the physical self component showed, that on average, the skiers evaluated their own body, health condition, body appearance, ability and sexuality more positively than the non-skiers. Regarding personal self i.e. feelings of self-worth, self-adequacy, and personality assessment in relation to others, on average, the skiers evaluated themselves more positively than the non-skiers. On average, the skiers take better care of themselves than the non-skiers (identity component). The analysis showed that the level of self-satisfaction and self evaluation is higher in skiers than in non-skiers. The results show conflicting answers based on negative statements from the fields of self-concept. Regarding self-perception, the skiers gave fewer conflicting

answers than non-skiers (total conflict component). The skiers describe their own self and defend their self-respect better than the non-skiers (defensive positive), are on average more adjusted or integrated as a personality than the non-skiers (personality disorders) and are less neurotic than the group of non-skiers (Table 1).

According to the Tennessee Self-Concept Scale, we determined that the skiers, on average, evaluate their own body, health condition, body appearance, abilities, and sexuality to be better, they feel better about their self-worth, self-adequacy, and personality assessment in relation to others, they take better care of themselves, are more satisfied with themselves and accept themselves better, show a higher level of self-respect, describe their own self as being better, are more adjusted and less neurotic, and gave fewer conflicting answers about self-concept (with negative statements) than the respondents of the control group.

DISCUSSION

With respect to the small sample size, a statistically significant difference appears only with certain indicators, however the results of the active group report a positive self-concept, assess their self-concept positively despite their acquired injury, have high but attainable self-expectations, satisfactory interpersonal relationships, are independent, and deal with mental stress constructively.

The main focus of the survey was a comparison of the self-concept of people who have experienced an acute injury and now recreationally practice an adaptive sports activity – skiing – with the self-concept of a group of people who have experienced an acute injury but do not practice any adaptive sports activity on a regular basis. Significant differences were expected between the groups in various fields of self-concept. Major differences between the groups were expected in certain self-concept dimensions, such as physical self-concept, social self-concept, and self-evaluation. Sports activity has a significant influence on all three anticipated deviations also with regard to individuals who do not suffer from an acute injury (Brejc & Stante, 1983).

As expected, statistically significant differences were found, with regard to statements that describe one's physical self. Persons with disabilities who regularly practice sports possess a more positive self-concept, experience their body as functional on a larger scale, take better care of it, and are consequently more independent despite their disability. Research studies have shown that a positive perception of one's own physical competence has an impact on regular sports activity and the acquisition of healthy lifestyle habits (Dolenc, 2010). The statement "I take good physical care of myself" presented a statistically significant difference. Taking care of one's body and body condition has proven to be an even more important factor regarding persons with disabilities having a positive self-concept, because it influences their independence and mobility (Esanola & Zulaika, 2009). The same thing occurs with the general population – people who participate in sports activities at least three times a week report a more positive self-concept (Martin & Whalen, 2012). People who have suffered an injury often perceive their bodies to be dysfunctional and useless in several aspects. Through sport one regains not only one's body condition and strength, but also trust in one's own body and its functionality; one becomes more independent and loses the sense of dependency on others (Nosek, Hughes, Swedlund, Taylor, & Swank, 2003).

Differences were shown to be important with regard to the identity aspect, which entails that the identity of a sportsperson matches and partially even exceeds the identity of a disabled

person (Perrier, Sweet, Strachan, & Latimer-Cheung, 2012). Both identities are connected and supplement each other – along with other roles each individual plays in his/her daily life. They are positively manifested in a sportsperson's role in the overall construct of self-concept. In some cases of sports activity, such as alpine skiing, a disabled person can completely compare to other non-disabled individuals.

Self-evaluation, self-satisfaction, and experiencing a more positive sense of personal self appear to be consequences of one's general condition and social contacts gained through sport (Voigt, 2014). The majority of respondents from the active group answered that they have met important others, which indicates an improvement in social contacts as a consequence of practicing sports. Humans are social beings, relationships with others influence our self-evaluation and success in society influences our self-satisfaction (Shapiro & Martin, 2014).

We also found that persons with disabilities who do sports are less neurotic, have fewer personality disorders, and answered the questions in a less conflicting manner. Persons with disabilities who practice sports are emotionally more stable, relieve stress (like the general population) through sports, experience greater satisfaction with themselves, and deal with everyday strains more constructively (Scarpa, 2011). Many research studies have focused on studying the connection between neuroticism and the negative effects of unpleasant life events, such as spinal cord injuries. A feeling of mental well-being and health is linked to other psychological variables, such as the most important personality factors, like self-concept. Neurotic people are less happy with their lives (Martin, 2007).

With the remaining thirteen indicators differences were evident but were not statistically important. The cause might partially lie in the small size of the sample. The results for both groups differ in certain aspects in favour of the group of recreational sportspersons, however we also observed a relatively high (positive) self-concept among the control group. The reasons behind this lie in the good living conditions of the control group as well. Most of them are well-educated with a regular monthly income and good housing conditions and family relationships. All respondents have also been disabled for more than two years and have rebuilt their damaged self-concept after an injury (Ben-Tovim & Walker, 1995).

CONCLUSION

Forming a positive and negative self-concept is influenced by all previous life experiences. Both pleasant and unpleasant experiences, and all the feelings that one has ever felt influence one's personality and body. We see how much we value if others notice us, pay attention, spend time together and talk to us, trust, accept, and love us, or not. (Family) relationships influence our self-concept the most, along with other socialisation factors (Wu & Williams, 2001).

After an injury, people often feel inferior due to the inability to do things on their own. An acute injury undermines the physical self-concept, which in effect reflects on our social self-concept and inclusion into society. Each individual must focus on his/her positive characteristics and abilities and compensate for or surmount the negative ones (Arbour, Latimer, & Jung, 2007).

We determined that sport positively influences the overall self-perception of persons with disabilities due to an injury. Further research could include a larger sample. A comparison could be made between the self-concept of people who have experienced an acute injury, people with

congenital disorder, and/or with people who are not disabled. A more complex and longer-lasting research study could encompass the permanence or changes in life satisfaction from the initial stage right after injury until reintegration in society and practicing sport.

The present study encourages all disabled to participate in sport and rehabilitation therapists to encourage them, which importantly influences various aspects of one's self-concept, physical self, social self, self-satisfaction, etc. Adaptive sports activities should be incorporated into later phases of rehabilitation; by doing so, persons with disabilities would be encouraged to be physically active, which rebuilds a positive self-concept after experiencing an acute injury.

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