

Original Article

Life satisfaction of people with disabilities: a comparison between active and sedentary individuals

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Abstract

The objective of this study was to compare life satisfaction (LS) scores of active individuals (n=200) with individuals living a sedentary life style (n=280) who have three different kinds of disabilities (n=480). The Satisfaction With Life Scale (SWLS) was used as the primary research method. Quantitative variables were presented as the mean of the standard deviation and range. The Pearson chi-square test was used to determine the differences between active and sedentary people with disabilities (PwD). We found significant differences between active individuals with disabilities and individuals leading sedentary lifestyles for all evaluated LS statements as well as in overall LS score. In the overall LS score the range for active PwD was 22.1 points for the average LS scores, and for the sedentary group with disabilities there was only 20.3 points that represents only the neutral point on the LS scale. This evaluation of the psychometric properties of the SWLS shows that it is a suitable tool to assess the LS in a population that has different types of disabilities. The results of our study confirmed that regular participation in sports significantly increases the level of LS in PwD.

Key words: people with disabilities, Satisfaction With Life Scale, active and sedentary individuals, quality of life.

Introduction

Postmodern culture is reflected by its effort to lead a quality life, the subtext of which is a health care, fear of illness, awareness of self, your inner desire for liberation from the common way of life, finding fulfillment and life satisfaction (LS). The optimal LS is the balance between life goals and objective conditions, their impact, prospects of experience (Bendíková, Jančoková & Paugschová, 2015). What is needed is confidence as belief in own abilities to organize, and solve the tasks necessary to cope with the situation, control of one's lives and overcome the pitfalls of the environment, as well as expectations of own efficiency and consequences of the actions, and conviction that the action leads to the satisfaction (Nemček, Labudová & Oršulová, 2014).

LS is a generic term commonly referred to as a person's subjective content with life. It is emphasized in modern management and rehabilitation and in outcome research of lifelong disabilities. LS is often defined as a cognitive evaluation upon one's current life situation compared to one's own unique set of criteria and is dependent on a person's adaptation process. In other words, LS reflects the degree to which individuals perceive that their own aspirations and achievements in life are met (Pavot & Diener, 1993). As LS is used as an overall goal in the management and rehabilitation of lifelong disabilities, it is important to determine aspects of LS and factors that may influence it. One commonly used LS rating scale is the Satisfaction With Life Scale (SWLS). The SWLS offers a global measure of satisfaction with life and provides an overall summation of a person's life situation (Pavot & Diener, 1993).

LS of growing age is strongly influenced by life experience and relationships, especially family relationships and health status (Nemček et al., 2014). Many people with noncommunicable diseases (Nemček, Wittmannová, 2013; Onagbiye, Moss & Cameron, 2016) and disabilities (Rimmer et al., 2004; Kisvetrová et al., 2013; Kurková, 2010) have poor general health, limited community participation, and low quality of their life. However, few investigations have shown that participation in adapted sports has a positive effect on overall health (Nemček & Kručanica, 2014; Labudová, Nemček & Kraček, 2015), quality of life (Kurková & Maartin, 2014; Bendíková, 2014), quality of family life (Dobay & Bendíková, 2014) and quality of social life (Kurková, Válková & Scheetz, 2011) among people with disabilities. The SWLS has shown adequate psychometric properties in several patient groups, such as multiple sclerosis (Blauwet, 2005), systemic lupus, erythematosus (Sherrill, 1986) and spinal cord injury (Wetterhahn, Hanson & Levy, 2002).

Tasiemski et al. (2005) investigated LS domains in patients with spinal cord injury, and whether or not participation in sports and physical recreation was associated with LS. They reported a higher level of satisfaction with life in general in the spinal cord injury patients who were involved in sports and physical

recreation. High SWLS scores indicate high-level LS. The study of Yazicioglu et al. (2012) showed that people with physical disabilities who participated in adapted sports had significantly higher quality of life and LS scores compared to people with physical disabilities not involved in any adapted sports. More concrete was LS assessment (n=452) done by Nemček, Labudová & Kraček (2012) that showed higher SWLS in the four statements of active population and only one statement speaks in favour of sedentary living population. Significantly higher LS (extremely satisfied and very satisfied) in the same study was observed in actively living population compared to low SWLS (dissatisfied, extremely dissatisfied) in sedentary living population.

Considering the previous research findings, the aim of our research was to compare LS scores of active individuals with individuals living a sedentary life style who have three different kinds of disabilities. We hypothesized that LS in people with disabilities who participated in sport activities (active) in leisure time will be significantly higher than in people with disabilities who are not involved in any sports (sedentary).

Material & methods

Participants and procedure

Group of people with three different kinds of disabilities (PwD; n=480) were recruited for the study. The group of PwD was divided into active participants who regularly participating in physical activity and sport at least two time per week and sedentary who not participating in any sport in their leisure time. Participants were contacted through representatives of national organisations and schools all around Slovakia unifying people with special needs. Some questionnaires were sent electronically by representatives of the organisations and some were passed out at the different meetings organised by national organisations. Pupils of special schools filled out the questionnaires during their classes with school principal permission. Visually impaired people used their assistant to complete the data. All data were collected during two years period (2013 – 2014). All participants with disabilities agreed participate in the study and gave their written informed consent.

The Satisfaction With Life Scale (SWLS)

The SWLS offers a global measure of satisfaction with life, as an overall summation of a person's LS (Pavot & Diener, 1993). The SWLS consists of five items (statements) all tapping into global LS: (1) In most ways my life is close to my ideal; (2) The conditions of my life are excellent; (3) I am satisfied with my life; (4) So far I have gotten the important things I want in life; and (5) If I could live my life over, I would change almost nothing. The statements are rated on a 7-point Likert scale, and the scores summate to a total score ranging from 5 to 35 points. A score of 20 points represents the midpoint between satisfied and dissatisfied with life. Total scores can be categorized as follows: very high scores/highly satisfied (30-35 points), high scores (25-29 points), average scores (21-24 points), a score of 20 represents the neutral point on the scale, slightly below average in LS (15-19 points), dissatisfied (10-14 points), and extremely dissatisfied (5-9 points) (Diener et al., 1985). The scale has shown good convergent validity with other LS scales (Post et al., 2012) and other types of assessment of subjective well-being. In this study a Slovak version of the SWLS was used (Nemček, 2013).

Statistical analyses

Statistical analysis was performed using SPSS v. 15.0. Qualitative variables are presented as proportion and percentage. Quantitative variables are presented as mean of standard deviation and range. Pearson chi-square test was used to determine the differences between the two groups (active and sedentary) in PwD. In current study, only one measurement has been made and one group formed the study. The level of statistical significance was set at $p < .05$.

Results

Participants

In the research participated 59.7 % people with physical disabilities (PPD) (27.6 % of actively living and 32.1 % sedentary individuals), 4.9 % blind individuals (3.2 % active and 1.7 % sedentary) and 35.4 % of people who are deaf or hard of hearing (PD/HH) (11.2 % active and 24.2 % sedentary). Group of people with physical disabilities included number of following disabilities: 28.5 % cerebral palsy, 28.2 % amputees, 18.8 % progressive muscular dystrophy, 17.9 % spine cord injury (quadriplegia and paraplegia), 5.3 % sclerosis multiplex and 1.3 % spina bifida. Group of PD/HH included 50.3 % hard of hearing individuals (55.8 % active and 47.8 % sedentary) and 49.7 % deaf individuals (44.2 % active and 52.2 % sedentary).

Experimental group showing higher number of sedentary individuals (58.3 %) mostly included women (57.9 %) over the 30 years of age (64.3 %). On the other hand the highest number of active PwD is represented by men (61.0 %) up to 30 years of age (51.5 %). The highest numbers of participants of both evaluated groups achieved the high school education level and mostly of them are single. Active PwD including mostly students (39.0 %) comparing sedentary PwD, who are mostly employed (41.4 %). Basic participant's characteristics are presented in Table 1.

Table 1. Data of the 480 participants

Baseline characteristics of participants		active; n (%)	sedentary; n (%)
		200 (41.7)	280 (58.3)
Gender	Men	122 (61.0)	118 (42.1)
	Women	78 (39.0)	162 (57.9)
Age	Range 15-29 years	103 (51.5)	100 (35.7)
	Range 30+ years	97 (48.5)	180 (64.3)
Education level	Primary	61 (30.5)	74 (26.4)
	High school	106 (53.0)	169 (60.4)
	University	33 (16.5)	37 (13.2)
Marital status	Single	125 (62.5)	131 (46.8)
	Married	53 (26.5)	99 (35.4)
	Divorced	15 (7.5)	27 (9.6)
	Widow	7 (3.5)	23 (8.2)
Employment status	Employed	58 (29.0)	116 (41.4)
	Unemployed	18 (9.0)	34 (12.2)
	Student	78 (39.0)	62 (22.1)
	Pensioner	46 (23.0)	68 (24.3)

SWLS

The results of the study demonstrate highly significant differences between active individuals with disabilities and individuals leading sedentary lifestyle in all evaluated LS statements either in overall LS score (table 2). Also the mean score of assessed LS statements pointing to the higher LS of active PwD, when they declare higher LS by all five statements as well as mean of total LS score (22.1 ± 7.9 vs 20.3 ± 7.7). In total LS score ranging occur active PwD with 22.1 points in average LS scores (21-24 points) and sedentary group with disabilities with 20.3 points are representing only neutral SWLS.

Table 2. Differences in LS between active and sedentary PwD (n=480)

Statement	Mean $\pm$ SD		χ^2	<i>p</i>
	Active	Sedentary		
1	4.40 $\pm$ 1.8	3.97 $\pm$ 1.6	26.86	1.54 E-4**
2	4.73 $\pm$ 2.1	4.26 $\pm$ 1.8	17.81	6.73 E-3**
3	4.65 $\pm$ 1.8	4.20 $\pm$ 1.7	19.06	4.07 E-3**
4	4.65 $\pm$ 1.9	4.33 $\pm$ 1.8	20.43	2.32 E-3**
5	3.70 $\pm$ 1.9	3.53 $\pm$ 1.9	19.62	3.24 E-3**
Total score	22.1 $\pm$ 7.9	20.3 $\pm$ 7.7	21.13	1.74 E-3**

Note. Possible statement score range is 1–7 and possible total score range is 5–35; higher scores indicate better LS; ** level of statistical significance $p < .01$

The results of the present study confirmed the hypothesis, where we assumed that LS scores represented by all five LS statements as well as by overall LS score will be significantly higher in active PwD comparing sedentary individuals with disabilities.

Discussion

The correlation between physical activity and quality of life is well known and has been documented for many years. It has a significant impact on LS because of the participant's feeling of their own physical fitness in physical activities, which is considered to be synonymous with good health (Jennen & Uhlenbruck, 2004). Physical activity influences the level of LS, but it happens the other way around. From a social point of view, achieving LS seems to be an important value (Kurková, 2015). A person who has a high degree of feeling happy is more daring in setting his goals and characterized as being highly involved in the activities of daily living (Veenhoven, 1988). Physical activity practised regularly is essential for mental health and quality of life related to health (Bize, Johnson & Plotnikoff, 2007; Kim et al., 2012). It is a component of the treatment of many diseases and disorders, not only musculoskeletal, but also internal systems (Labudová & Tóthová, 2006; Labudová & Tóthová, 2007), depression or anxiety (Salmon, 2001; Carta et al., 2008; Carek et al., 2011) as well as disabilities (Kurková, Scheetz & Stelzer, 2010).

In the current study the comparison of SWLS scores between active and sedentary individuals with three kinds of disabilities have been evaluated. Some studies were found to compare the results of the present study.

Yazicioglu et al. (2012) compared LS between people with physical disabilities involved in adapted sports and people who are not participated in any sports and found significantly higher SWLS score in people with physical disabilities who participated in adapted sports (20.5 ± 7.8). Comparing our results, active PwD

achieved higher SWLS score (22.1 ± 7.9) than in the mentioned research study. The group of PwD of the present study involved also PD/HH. In the research of Nemček (2014) declared PD/HH significantly higher quality of life than people with physical disabilities that could increase SWLS score of the current study.

The study of Bendíková & Nemček (2016) presented the comparison of SWLS scores between active and inactive healthy participants (HP; $n=313$) and active and inactive people with noncommunicable diseases (NCDs; $n=351$). The results of the study demonstrate no significant differences in LS score between active and inactive HP none in one evaluated LS statement neither in overall LS score but the mean scores of all assessed LS statements as well as overall means score pointing to the higher LS of active HP (24.4 ± 7.4) comparing inactive HP (23.9 ± 7.7). On the other hand, the LS of active people with NCDs was significantly higher presented by all five statements scores as well as by the overall LS score (23.4 ± 7.9 vs 20.8 ± 7.8 ; $p < .01$). By results comparison of the present investigation we can declare, that active HP presenting the highest LS and sedentary PwD showing the lowest LS (20.3 ± 7.7). It means that active HP with the total SWLS score of 24.4 points is closest to high score, what means that they are the most satisfied with life and on the other side, inactive PwD with the total SWLS score of 20.3 points represents only neutral point on the SWLS.

Nemček (2016) compared the satisfaction with 23 quality of life indicators (QoLI) between active and inactive PPD and between active and inactive PD/HH. In the study were not found significant differences in satisfaction with QoLI in the group of PPD but the group of PD/HH who regularly participated in sports showed significantly higher satisfaction with more than half QoLI as well as in overall quality of life (QoL) score.

Conclusion

The present study's results showed highly significant differences between active individuals with disabilities and individuals with disabilities leading sedentary lifestyle in all evaluated LS statements either in overall LS score. Generally we can say, that LS evaluation by SWLS shows that it is a suitable tool to assess LS in the population with different kinds of disabilities. The results of our study confirmed that regular participation in sport (recreational or competitive) increases QoL as well as satisfaction with their life.

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