GENDER DIFFERENCES IN SUBJECTIVE WELL-BEING OF HIGH SCHOOL STUDENTS WITH HEALTH DISORDERS PREFERRING SEDENTARY LEISURE ACTIVITIES

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Abstract: The aim of this study was to analyse and compare the subjective wellbeing (SWB) between male and female high school students with self-reported health disorders preferring sedentary types of leisure activities. The sample comprised of 63 high school male students (17.13±1.41 years) and 112 high school female students (16.47±1.51 years). The standardized Bern Subjective Well-Being Questionnaire for Adolescents was used as a primary research method. The male high school students with self-reported health disorders declare significantly higher SWB compare female peers, that was shown in Life satisfaction, Physical health and in positive SWB domains.

Keywords: self-reported health disorders, male and female high school students, subjective well-being domains, sedentary leisure activities.

1 Introduction

Subjective well-being (SWB) involves the various ways that people evaluate and experience their lives. In many ways, the term is synonymous with the everyday notion of happiness – positive feelings are an important aspect of well-being (Tov & Diener, 2013). The "bottom-up" theory of SWB argues that global SWB is based on a person's weighting of well-being across key life domains (e.g., leisure, work, health) (Headey, Veenhoven & Wearing, 1991). Leisure can fulfil needs and desires that are thwarted in other areas of one's life, such as work, which can protect one's overall well-being (Kuykendall, Boemerman & Zhu, 2018). Leisure may provide certain unique well-being benefits that cannot be obtained through other domains in life, as leisure is typically characterized by autonomy or greater freedom of choice than other life domains (Graef, Csikszentmihalyi & Gianinno, 1983). Social leisure activities strongly positively contribute to SWB (Parsons et al., 2019), but on the other hand too much sedentary leisure activities in particular when accumulated in long uninterrupted bouts is associated with detrimental effects on health and wellbeing, a large number of chronic diseases (Wilmot et al., 2012; Chastin et al., 2015). There is a very close connection between sedentary leisure activities and health problems already in young age category people (Bendíková, Marko & Rozim, 2019). It has been suggested that young people spend too much time in sedentary activities, which further increases their risk of future health problems (Van Sluijs et al., 2008). The aim of this study was to analyse and compare the SWB between male and female high school students with self-reported health disorders preferring sedentary types of leisure activities.

2 Methods

2.1 Participants and data collection

The research sample comprised of 63 high school male students (mean age 17.13±1.41 years of age) and 112 high school female students (mean age 16.47±1.51 years of age) who self-reported some kind of health disorder (HD) and preferred sedentary types of activities in their leisure time. The most preferred sedentary leisure activities in male high school students were TV watching and playing on the electronic devises and the most preferred sedentary leisure activities in female high school students were meeting/chatting with friends/socializing, listen to the music and just doing nothing. Both genders of high school students self-reported the mostly musculoskeletal disorders (32 %), allergies (24 %), cardiovascular and metabolic disorders (16 %) and combination of musculoskeletal and internal human systems disorders (28 %). The data were collected from September to December 2019 at six different high schools and vocational schools in Slovak cities Bratislava, Nitra, Liptovský Hrádok, Ružomberok, Spišská Nová Ves and Humenné. The questionnaires were distributed in paper form and respondents were instructed on how to complete it and informed of survey questions related to health status and preferred leisure time activities. For this study, we selected only students with self-reported health disorder and who had preferred sedentary leisure time activities. Each participant voluntarily provided written informed consent before participation in the research and the Ethics Committee of the Faculty of Physical Education and Sports, Comenius University in Bratislava (ref. no. 10/2019) had approved this research.

2.2 The Bern Subjective Well-Being Questionnaire for Adolescents (BFW)

A standardized, The Bern Subjective Well-Being Questionnaire for Adolescents (BFW) (Grob et al., 1991) was used as a primary research method. The BFW questionnaire consists of 28 items scale that measure both positive and negative feelings about the self, covering five main SWB domains (SWB-Ds): (1) Overall life satisfaction" (OLS) supported by 6 items, (2) "Current psychological problems" (CPP) supported by 7 items, (3) "Current physical difficulties" (CPD) supported by 8 items, (4) "Self-esteem" (SE) supported by 3 items and (5) "Depressive mood" (DM) supported by 4 items. Items of four domains (1, 2, 4, and 5) are answered using a 6-point Likert scale format ranging from strongly disagree (point 1) to strongly agree (point 6) and domain 3 Current physical difficulties are answered using a 4-point Likert scale format ranging from not at all (point 1) to very often (point 4). Two SWB-Ds (1 and 4) evaluate a positive attitude of SWB and higher scores indicate higher SWB and three domains (2, 3 and 5) evaluate a negative attitude of SWB and higher scores indicate a lower SWB. In this study, a Slovak version of the BFW was used (Džuka, 1995).

2.3 Data analyses

The program IBM SPSS Statistics version 23.0 was used for data processing. The data were describe using absolute and relative frequencies, including the mean ($\bar{x}$) and standard deviation (±SD). The Kolmogorov-Smirnov test was used to evaluate data normality and non-parametric Mann Whitney *U*-test was used to assess differences between two independent groups of male and female high school students with HDs. The significance level was set at $\alpha \leq 0.05$ (*) and $\alpha \leq 0.01$ (**). The rate of dependence (effect size) between the two samples of features was conveyed by means of the coefficient *r* (r>0.90 - very large effect size, r=0.70-0.90 - large effect size, r = 0.50-0.70 - medium effect size, r=0.30-0.50 - small effect size, r<0.29 - very small effect size) proposed by Pett (1997).

3 Results

SWB-Ds analyses show significantly higher Overall Life Satisfaction in the group of male students with HDs (4.45±0.94 points of the mean score) compare female students (4.08±1.03 points of the mean score) (U=2768, p=0.018, r=0.184) (Table 1). Results further revealed significantly higher occurrence of Current Physical Difficulties in the group of female students with HDs (2.18±0.64 points of the mean score) compare their male peers (1.97±0.51 points of the mean score) (U=2872, p=0.041, r=0.178). The higher score of Overall Life satisfaction and lower score of Current Physical Difficulties indicate a higher SWB in the group of male students with HDs preferring sedentary leisure activities compare female peers. Observed data generally presented significantly higher SWB in the group of

male students comparing female students with HDs showing significantly higher level of positive SWB-Ds (U=2793, p=0.022, r=0.158) (Figure 1).

The results of the present study further revealed no significant differences in Current Psychological Problems, Self-Esteem and Depressive Mood between male and female high school students with HDs (Table 1) neither in negative SWB-Ds (Figure 1).

Table 1. Differences in SWB between male and female students with HDs

SWB-Ds	Male students (n=63)	Female students (n=112)	*U*	*p*
	$\bar{x}$/±SD (point score)			
OLS	4.45±0.94	4.08±1.03	2768*	0.018
CPP	2.46±0.95	2.61±0.98	3234	0.360
CPD	1.97±0.51	2.18±0.64	2872*	0.041
SE	4.44±1.28	4.23±1.20	3065	0.149
DM	2.68±1.09	2.71±0.99	3349	0.577

Note. *U* = Mann-Whitney U-test statistics; *p* = statistical significance (*p*-values *≤.05)

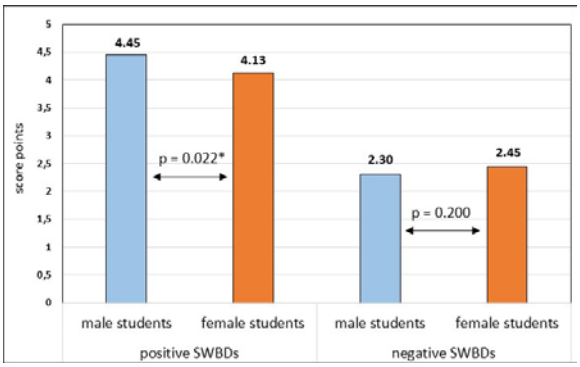

Figure 1. Differences in positive and negative SWB-Ds between male and female students with HDs

Analysing different items of the Overall Life Satisfaction domain we found that male students with HDs presented significantly higher SWB than female peers by reporting:

- "My future looks good";
- "I enjoy life more than most people";
- "I can deal well with the implementation of my life plans".

In the SWB-D of Current Physical Difficulties presented female students with HDs significantly higher occurrence of:

- stomach ache;
- dizziness;
- unable to fall asleep;
- headache.

Even in the SWB-D Self-Esteem were not found significant differences between male and female students with HDs, male students presented significantly higher positive attitude towards themselves comparing female students with HDs preferring sedentary leisure activities.

4 Discussion

SWB represents a general tendency to hold a positive, or not so positive, life view, which also influences the perception of different aspects of life such as health (Røysamb et al., 2003). Research studies has reported relatively strong relations between SWB and perceived health, the associations seem weaker and less stable when external or "objective" measures of specific disorders are used (Diener et al., 1999; Watten et al., 1997). The objective of the present study was to analyse and compare the SWB between male and female high school students with self-reported health disorders preferring sedentary types of leisure activities. The present study declared significantly higher SWB in the group of male high school students with self-reported health disorders compare female peers by reporting significantly higher level of Overall Life Satisfaction and significantly lower occurrence of Current Physical Difficulties. Already some investigators were measure the SWB among adolescent's population according to the gender differences (Nemček, 2020). Similar finding was revealed by Ladecká, Nemček & Harčaríková (2019) who analysed the SWB in the group of students with physical disabilities and compare it between genders. Female students of their study also declared significantly higher occurrence of Current Physical Difficulties compare males, but they also presented significantly higher occurrence of Current Psychological Problems compare male peers (Ladecká, Nemček & Harčaríková, 2019). The authors of another research (Nemček, Kurková & Wittmannová, 2019) analysed and compare the SWB among healthy high school population preferring sedentary leisure activities. They found significantly higher level of positive SWBDs and significantly lower of negative SWB-Ds in the group of healthy male high school students compared female peers preferring sedentary leisure activities (Nemček, Kurková & Wittmannová, 2019). Compare the results of the present study, there was also found significantly higher level of positive SWB-Ds in the group of male students compare female peer, but not in negative SWB-Ds.

There is a growing public health concern over the effects that sedentary lifestyles are having on the physical and psychological health of children and adolescents (Bendíková, 2016; Marko & Bendíková, 2019). The SWB in the group of adolescents preferring sedentary leisure activities were investigated by collective of authors Nemček et al. (2020). In the group of male high school students, they found significant differences in all three negative SWB-Ds of BFW questionnaire between healthy adolescents and those with self-reported HDs. The male young people with HDs of their study showed significantly higher occurrence of Current Psychological Problems, Current Physical Difficulties as well as Depressive Mood compare healthy male peers. No significant differences were found in the group of female adolescents according to their self-reported health status (Nemček et al., 2020). In a meta-analysis, Linton (2000) concluded that there was a clear link between distress, anxiety, mood, emotions, and the onset of both acute and chronic pain. Common genetic factors contributing to the relationship between back/neck pain and anxiety/depression have been reported (Reichborn-Kjennerud et al., 2002), and the serotonin and noradrenaline systems of the brain appear to be involved in both psychological distress and pain sensitivity (Atkinson et al., 1999; Besson, 1999; Nemeroff, 1998).

The present study further refers about significantly higher level of positive feelings in the male group of students with HDs when they reported, that their future looks good, enjoy life more than most people, can deal well with the implementation of their life plans as well as showing positive attitude towards themselves compare female peers. The present study further refers about significantly higher level of negative feelings in the group of female students with HDs when they revealed significantly higher occurrence of stomachache, headache, dizziness and problems with sleep compare male students with HDs. Røysamb et al. (2003) found, that SWB is substantially related to perceived health, moderately and negatively related to musculoskeletal pain, and virtually unrelated to allergic disorders. Authors Nemček, Kurková & Wittmannová (2019) also found significantly higher level of positive feelings in the group of healthy male high school students comparing healthy female high school students preferring sedentary leisure activities. Male adolescent of mentioned study displayed, that they can deal well with the implementation of their life plans, do things as well as most people, feel as valuable as the others and have a positive attitude towards themselves. In the same investigation, published by Nemček, Kurková & Wittmannová (2019), healthy female students presented significantly higher occurrence of the same physical problems than female students of the present study but healthy female adolescents of study Nemček, Kurková & Wittmannová (2019) also reported many significant problems in psychological domain, like worries about

other people, relationships, study, health, partner and finances, and females of the present study did not.

5 Conclusion

We conclude that male high school students with self-reported HDs preferring sedentary leisure activities declare significantly higher SWB compare female peers. It has been shown mostly in Life satisfaction and Physical health domains as well as in positive SWB domains.

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