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Differential and Correlational Aspects of (Un)Healthy Habits in Students' Lives and their Relatedness to Life Satisfaction

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Abstract: *The purpose of this study was to analyze gender differences in healthy habits, unhealthy habits, and sports among students, as well as the relationships between these factors and life satisfaction. A total of 217 students participated in the study, aged between 18 and 32 years, M = 20.66, SD = 2.87, of whom 126 were males and 91 were females. The instruments used were the Healthy and Unhealthy Habits Questionnaire, the Sports Activities Checklist, and the Satisfaction with Life Scale. The results showed that, compared to females, males report a higher level of healthy habits and sports activities. At the same time, healthy habits and sports, but not unhealthy habits, are significant predictors of life satisfaction. These findings highlight the importance of implementing awareness programs for adolescents and young adults to encourage healthy habits such as a balanced diet and sports activities.*

Keywords: *healthy habits, unhealthy habits, sport, life satisfaction, students.*

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Introduction

Healthy habits and sports and the interaction between these factors and life satisfaction have been intensively studied recently, in comparison to the importance of these predictors of life satisfaction for each gender, which has not been studied so much, so far. The reasons for participating in sports differ for each gender, thus for boys they are health, strength and endurance, physical appearance, pleasure, fun and agility, and for girls: health, physical appearance, strength and endurance, fun and weight management.

A study conducted by Ferreira et al. (2021) highlights the significant impact of nutrition and sleep quality on students' mood and academic performance. The findings indicate that life satisfaction is more strongly correlated with sleep quality and lower levels of over-indebtedness. Consequently, individuals experiencing excessive debt tend to report lower overall life quality, poorer health conditions, and more disrupted sleep patterns. The study's results emphasize the mediating role of financial well-being as a crucial determinant of life satisfaction, underscoring its broader influence on overall well-being (Ferreira et al., 2021). A healthy lifestyle doesn't imply only the diet part, which in some cultures aim much more than the eating part but a whole set of choices for a better life. An example in this sense is given in a study that defines the mediterranean diet as part of culture of the countries from the south of Europe. This definition included more indicators of the wellbeing, as regards the health, happiness and life satisfaction. The study was made on a representative sample of the Spanish adult population, and the results also implied the practice of the physical exercises and the body mass index, as predictors of life satisfaction (Cabiedes-Miragaya et al., 2021).

Another study answers the same question and such the identification of the factors that raise life satisfaction at an older age. At the research participated 397 persons, aged between 61 and 93 years. The results showed that between the factors that contribute to the improvises of life satisfaction at these ages can be mentioned functional ages, environment quality and health. Physical activity and income did not predict life satisfaction but some life components such as independent life and physical mobility (Zapata-Lamana et al., 2022).

Other predictors of life satisfaction were the participation at different forms of art and culture such as the visit of museums, regular health controls and the presence of quality international relationships. The practice of such a lifestyle favorizes life quality of women more, having older age (Lee et al., 2021).

Life satisfaction is also associated with other factors, as well as with different ways of spending their free time. The results of a research that implied 586 adults showed that the persons who didn't spend free time watching tv and spend that time with the family reported an increased level of satisfaction, noting that in the case of men it is very important the time spent in nature, while for women it is very important the time spent with the family and those allocated for socialization. These ways of spending free time are also influenced by the participants' age, the old persons have the risk of spending more time alone (Dirzyte et al., 2022).

Gender differences for practicing sports and healthy habits

Boys, in comparison to girls, most of the time manage to reach the levels of physical activity recommended by the World Health Organization (2002), because they have fewer deposit barriers, barriers that are considered as predictors of Body Mass Index (BMI), thus new strategies are needed to allow girls to overcome these obstacles and practice much more physical activity (Chen et al., 2014).

Thus, starting from the premise of the specialized literature, which draws attention to the fact that girls are less involved in physical activities, compared to boys, a study analyzed these perceived barriers for practicing physical activities by girls and boys. 368 students from Florence participated in the study. Thus, physical education instructors and teachers should be aware of these aspects and propose personalized training for girls (Rosselli et al., 2020).

A study that set out to realize this aspect, investigated healthy habits and sports preferences according to gender differences. The study took place in Spain and involved 2198 participants, of which 1314 were female and 884 were male. The differences in the eating habits proved significant, men choosing products such as red meat, and women choosing tofu and vegetables, with a greater frequency of meals and snacks compared to men, who eat faster, according to the recorded data. Depending on the preferences to do sports activities or not, a lower number of female persons declare that they do sports compared to men, who prefer strength and endurance training. Thus, the study draws attention to gender differences, so that, if women have much healthier eating habits than men, they have stronger physical activity preferences than females, all of which are culturally and socially conditioned (Feraco et al., 2024).

However, another study reached different conclusions, which involved a sample of 605 young people aged between 20 and 35 and investigated gender disparities in the perception of body satisfaction, taking into account the influence of healthy habits (women choose healthier foods

and hydrate more than men), the personality profile of the participants (men are more extroverted, while women are more anxious), (Jimenez-Morcillo & Clemente-Suárez, 2023).

A study that objectively measured the differences in physical activity, through the data obtained by wearing an accelerometer by 185 boys and 190 girls, came to the conclusion that boys are more active than girls, but the general physical activity did not show significant differences between the sexes (Trost et al., 2002).

The results of a meta-analysis carried out on gender differences on self-esteem highlighted the fact that men have a better image of their physical appearance, athleticism and self-esteem, while women have higher scores on behavioral conduct and moral self-esteem -ethics (Gentile et al., 2009).

A study carried out during the pandemic, on university students in Spain (N=166), investigated their QoL, self-reported physical and mental health. Men had significantly fewer limitations in performing activities of daily living than women, who scored better in the direction of coping ability (García-Campanario et al., 2024).

Relationships between healthy and unhealthy habits, sport and life satisfaction

The study of health habits and physical activity during their free time involved 1132 young people, aged between 17 and 25 years. The results showed low rates of physical activity regarding both genders (Gil-Madrona et al., 2019).

The relationship between the motivational climate, the practice of sports and healthy habits were the subject of a study in Spain, conducted on students, future teachers of physical education and sports. Students' task-oriented goals are positively associated with choosing healthy lifestyle habits and practicing sports (Chacón-Cuberos et al., 2018).

The most frequent leisure activities of young people during the week are the use of new technologies and the consumption of harmful substances (Wu et al., 2006) and a lot of time spent on digital devices, alcohol consumption and smoking (Baceviciene et al., 2019).

The aim of a similar study was to analyze lifestyle differences related to the health of adolescents enrolled in the first and fourth year of high school education in a region of northern Spain (N=761). The conclusions drew attention to the fact that interventions on adolescents should be carried out according to their age and gender (Boraita et al., 2023).

The study aimed to examine gender differences in healthy habits, unhealthy habits, and sports participation among students, as well as explore the connections between these factors and life satisfaction.

This study was conducted based on the following hypotheses: (H1) females exhibit healthy habits to a lesser extent than males; (H2) females engage in unhealthy habits to a lesser extent than males; (H3) males participate in sports activities more frequently than females; (H4) healthy habits serve as significant positive predictors of life satisfaction; (H5) unhealthy habits act as significant negative predictors of life satisfaction; (H6) engagement in sports activities constitutes a significant positive predictor of life satisfaction.

Methods

Participants and procedure

A total of 217 students participated in the study, aged between 18 and 32 years, M = 20.66, SD = 2.87, of whom 126 were males and 91 were females. Of these participants, 135 are in their first year of studies (62%), 60 are in their second year (28%), five are in their third year (2%), and 17 are in the master's program (8%). Regarding marital status, 132 are single (61%) and 85 are in a relationship (39%). Out of the total participants, 112 are enrolled at one university (52%), and 105 are enrolled at another university, both of them from the southern region of Romania. The sampling was one of convenience. Participants were contacted by email and invited to participate in the study. They were given a detailed presentation of the research, including information that they could withdraw at any time, and assurances of anonymity and data confidentiality. Those who agreed to participate signed the informed consent form, the study participation agreement, and the GDPR consent form. The participants were also informed of the withdrawing possibility, with no other consequences on their status. The questionnaires were sent and completed via Google Forms. Completion time was about 15 minutes. Data were analyzed using the IBM SPSS 24 statistical analysis program (IBM Corp, 2016).

The study has a cross-sectional, exploratory design. The study was approved by the Ethics Commission from Faculty of Physical Education and Sport (6/2023) and was conducted in accordance with the institutional requirements.

Instruments

Sociodemographic data was collected through a list of questions regarding gender, age, year of study, university, and marital status.

Healthy and unhealthy habits were measured with Healthy and Unhealthy Habits Questionnaire, an instrument designed for this study, but also for a series of previous studies (Ferriz et al., 2016). The questionnaire includes 20 items, 10 for healthy habits and 10 for unhealthy habits. Answers are given on a five-point Likert scale, where 1 – to a very small extent and 5 – to a very large extent. Examples of items: "I drink enough water (at least 1.5 l per day)", "I consume fatty and processed foods such as margarine, butter, mayonnaise, sausages, etc.". Scores can range from 10 to 50, with high scores indicating a high level of the respective habits.

Sports activities were measured with Sports Activities Checklist, a list that includes a series of 10 sports activities. This Sports Activities Checklist was created by us, for the purpose of using it in this research. Answers are given on a five-point Likert scale, where 1 – to a very small extent and 5 – to a very large extent. Examples of items: "I play football", „I ride a bicycle". Scores can range from 10 to 50, with high scores indicating a high level of sports activities.

Life satisfaction was measured with Satisfaction with Life Scale (Diener et al., 1985). The instrument includes five items, and the answers are provided on a seven-step Likert scale, where 1 – strongly disagree and 7 – strongly agree. Examples of items: "I am satisfied with my life", "So far I have gotten the important things I want in life". Scores can range from 5 to 35, with higher scores indicating an increased level of life satisfaction.

To test the first three hypotheses an independent samples t test was performed. To test hypotheses 4, 5 and 6, a multiple linear regression analysis was performed.

Results

Descriptive statistics

Means, standard deviations, Cronbach Alpha coefficients and correlations among variables are presented in Table 1.

Table 1. Means, standard deviations, Cronbach Alpha coefficients and correlations among variables

	M	SD	α	HEHA	UNHA	SP	LS
HEHA	36.51	6.49	.77	1			
UNHA	18.95	5.08	.70	-.19**	1		
SP	22.40	7.29	.77	.46**	-.19**	1	
LS	23.56	6.84	.89	.29**	-.19**	.31**	1

Note: **. $p < .01$, *. $p < .05$.
HEHA – heathy habits, UNHA – unhealthy habits, SP – sports activities, LS – life satisfaction

Participants reported high scores for healthy habits, M = 36.51, SD = 6.49, lower scores for unhealthy habits, M = 18.95, SD = 5.08, and moderate scores for sports activities, M = 22.40, SD = 7.29. Regarding life satisfaction, the scores are moderate, M = 23.56, SD = 6.84. At the same time, there are significant correlations among the analyzed variables. Healthy habits are positively associated to sports activities, $r = .46$, $p < .01$ and to life satisfaction, $r = .29$, $p < .01$, and negatively to unhealthy habits, $r = -.19$, $p < .01$. Unhealthy habits are negatively associated to sports activities, $r = -.19$, $p < .01$ and to life satisfaction, $r = -.19$, $p < .01$. Sports activities are positively associated to life satisfaction, $r = .31$, $p < .01$.

Skewness ranged between (-.43, .66) and kurtosis ranged between (-.56, .18), reflecting a normal data distribution.

Table 2. Means for healthy habits, unhealthy habits, and sports activities according to gender

	Gender	N	M	SD	ESM
HEHA	Male	126	37.42	6.36	.57
	Female	91	35.25	6.51	.68
UNHA	Male	126	19.32	4.94	.44
	Female	91	18.44	5.25	.55
SP	Male	126	23.85	7.28	.65
	Female	91	20.38	6.86	.72

Note: HEHA – heathy habits, UNHA – unhealthy habits, SP – sports activities

Table 3. Independent samples t test for healthy habits, unhealthy habits, and sports activities according to gender

						95%CI		
	t	**df**	**p**	**MD**	**SE**	**Lower**	**Upper**	**d**
HEHA	2.45	215.00	.02	2.17	.88	.43	3.91	.34
UNHA	1.26	215.00	.21	.88	.70	-.50	2.25	.17
SP	3.55	215.00	.00	3.46	.98	1.54	5.39	.49

Note: HEHA – heathy habits, UNHA – unhealthy habits, SP – sports activities

The results have shown that there are significant differences between males and females regarding healthy habits and sports activities, but not unhealthy habits (Table 2 and Table 3). Thus, for healthy habits males reported higher scores M = 37.42, SD = 6.36 compared to females, M = 35.25, SD = 6.51, the difference being statistically significant, t(215) = 2.45, CI95%(.43, 3.91), p < .05, the effect size being d = .34, and for sports activities males also reported higher scores M = 23.85, SD = 7.28 compared to females, M = 20.38, SD = 6.86, the difference being statistically significant, t(215) = 3.55, CI95%(1.54, 5.39), p < .01, the effect size being d = .49. Regarding unhealthy habits, there are no significant gender differences, males reporting M = 19.32, SD = 4.94 compared to females M = 18.44, SD = 5.25, t(215) = 1.26, CI95%(-.50, 2.25), p = .21, d = .17.

Considering these results, we can say that hypotheses H1 and H3 are supported by the analyzed data and hypothesis H2 is not supported by the analyzed data.

Table 4. Multiple linear regression for the relationships among healthy habits, unhealthy habits, sports activities, and life satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	SE	β		
HEHA	.18	.08	.17	2.42	.02
UNHA	-.15	.09	-.11	-1.70	.09
SP	.20	.07	.21	2.96	.00

Note: $R^2 = .14$
HEHA – heathy habits, UNHA – unhealthy habits, SP – sports activities

Results have shown that healthy habits, unhealthy habits, and sports activities are responsible for 14% of life satisfaction variation, the regression equation being statistically significant, F(3, 212) = 11.37, p < .01. Of the

three variables, only two are significant predictors for life satisfaction. Thus, as the Table 4 shows, healthy habits are positively associated to life satisfaction, $\beta = .17$, $t(217) = 2.42$, $p < .05$, and sports activities are also positively associated to life satisfaction, $\beta = .21$, $t(217) = 2.96$, $p < .01$, but unhealthy habits are not significantly associated to life satisfaction, $\beta = -.11$, $t(217) = -1.70$, $p = .09$.

Considering these results, we can say that hypotheses H4 and H6 are supported by the analyzed data and hypothesis H5 is not supported by the analyzed data.

Discussions

Similar to our study is the research of two Slovak researchers who used a test to determine a possible eating disorder (Test - EAT-26) and an inventory to assess motivation for sports (EMI-2). The sample was made up of 320 respondents of both gens, teenagers, active and inactive regarding the practice of sports. The obtained results showed that, although all teenagers are dissatisfied with their own bodies, there are differences between them depending on whether or not they practice a sport, as well as depending on gender. Thus, boys practicing sports feel much better about themselves compared to girls who did not practice sports (Peráčková & Peráček, 2020).

The results of another study showed that girls are less involved in sports activities than boys, and are much more worried about their body image, which, in fact, prevents them from participating to physical activities (Slater & Tiggemann, 2011).

Other similar results with our study were obtained in a research, thus, only girls associate dissatisfaction related to physical shape with self-esteem, and related to body weight, boys state that they want to take as much weight as possible, while no girl affirmed this aspect (Furnham et al., 2002).

Another study investigated the way of making the decision to practice sports by teenagers aged between 13 and 23 years (34 males and 26 females). Own experiences related to practicing physical education at school, as well as gender, mediated the current decision to practice or not practice sports (Coakley & White, 1992).

A total of 3540 subjects between the ages of 9 and 19 answered an anonymous self-report questionnaire to assess lifestyle, physical and sports activity, and healthy habits. More boys than girls reported engaging in regular sports activities. Athletic teenagers show healthier eating habits than teenagers who don't do any physical activity (Cavadini et al., 2000).

The relationship between the level of fitness and the well-being, motivation and perceived pleasure in doing physical activities emphasized significant gender differences observed in terms of fitness level, BMI, vital capacity, 50m sprint, muscle strength and flexibility in teenagers (Zheng et al., 2023).

The testing of a model that issues links between personal theories of school performance, indices of the quality of academic engagement, satisfaction with life and health was applied to 967 adolescents. School satisfaction corresponded with greater life satisfaction, while boredom was negatively related. Higher life satisfaction was associated with lower tobacco, alcohol, and marijuana use, healthier food intake, and higher levels of physical activity. The results revealed a partial invariance of the model by gender. The quality of adolescent engagement in the classroom has important implications for adolescent well-being and health-related behaviors (Balaguer et al., 2017).

Prolonged Internet use is emerging as a serious problem among teenagers. Negative feelings, unhappiness and poor emotion regulation have an association with Internet addiction. Also, the female gender may be more associated with a possible internet addiction (Lesinskienė et al., 2024).

These results are important for health promotion and education programs aimed at improving healthy lifestyles and psychosocial well-being in adolescents (Ferriz et al., 2016).

Interventions are proposed regarding the creation of a motivational climate involving tasks in the academic environment to promote a healthy lifestyle among young people.

Overall, the article's contributions can enhance the understanding of the interplay between student's (un)healthy habits and their life satisfaction, leading to improved educational practices and policies across diverse international contexts.

Among the limitations of this study, one can find the size and characteristics of the sample and the cultural context. Thus, the research results should be interpreted according to these characteristics.

Conclusions

The analysis indicates notable differences between males and females in healthy habits and sports participation, while no differences were observed in unhealthy habits. Furthermore, healthy habits and sports are strong predictors of life satisfaction, unlike unhealthy habits. These findings emphasize the need for awareness programs targeted at adolescents and young adults to promote practices like maintaining a balanced diet and

engaging in sports activities. Universities play a critical role in shaping not only the intellectual development of students but also their overall well-being. The transition to university life often brings significant challenges, including increased academic pressures, social adjustments, and the need for greater self-management. These stressors can negatively impact students' mental and physical health, underscoring the necessity for universities to actively support their well-being. Promoting practices such as maintaining a balanced diet and engaging in sports activities can have profound and long-lasting effects on students' health, academic performance, and overall quality of life. Students are particularly vulnerable to poor lifestyle habits during their university years. Studies have shown that many students experience a decline in dietary quality, opting for high-calorie, low-nutrient foods due to time constraints, financial pressures, or lack of knowledge about healthy eating (Sogari et al., 2018). Simultaneously, physical inactivity is prevalent among university students, with sedentary behavior increasing due to the demands of studying and screen-based activities (Keating et al., 2005).

Likewise, the review by Huang et al. (2024), highlights the potential of physical activity interventions in improving the mental health of university students. Universities have a unique opportunity to address these challenges by fostering environments that support healthy habits, thereby promoting both immediate and long-term well-being.

By prioritizing practices such as balanced diets and physical activity, universities can foster a culture of well-being that benefits students far beyond their academic years. Habits established during university often persist into adulthood, influencing lifelong health outcomes. Moreover, healthier students are more likely to excel academically, contribute positively to campus life, and transition successfully into their professional careers.

Among future research directions in exploring the aspects of (un)healthy habits in students' lives, universities bear a significant responsibility in supporting the holistic development of their students. Implementing initiatives that promote balanced diets, and physical activity is not merely an investment in students' health but also in their academic success and overall quality of life. By creating environments that prioritize well-being, universities can ensure that their students thrive both during their studies and in the years to come.

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