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Investigation of Physical Activity and Barriers of High School Students

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Abstract

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Aim: Physical activity is one of the most important factors for humans. Children and youth people of physical exercise have effect healthy behaviours and encourages students to participate in physical exercise. **Method**: This study used the Exercise Benefits/Barriers Scale (EBBS) for High School students. It was used for the validity and reliability study of the EBBS for use in a Turkish text. İn the survey there are 7 sub-dimensions and 29 questions in scala but we used 4 sub-dimensions and 23 questions to regulate a study according to the level of high school students. This practice sample consists of female 228 males 270 sum of participants 498 volunteers. The analysis of data was used to license the SPSS 22 program and to determine the sample size in the study used to G* Power (3.1.9.4.Version). Because of data did didn't show normal distribution It was used in pairwise comparisons Man-Whitney U test; more than two variable comparisons were used Kruskall Wallis test. **Findings:** According to the findings, the comparison of gender to variable it was found to have a significant difference ($p<0,05$) in sub-dimension social interaction, variable participation of exercise (Yes or No) it was found to mean full difference ($p<0,05$) all sub-dimension (Fun, Barriers, Life enhancement, Social İnteraction). According to the variable sports branches were found to have crucial different sub-dimensions of fun, life enhancement, and social interaction. **Conclusion:** It was concluded that gender was an important factor in social communication and that exercise had a positive effect on parameters such as social communication in high school students.

Lise Öğrencilerinin Fiziksel Aktiviteye Katılım ve Engel Olan Faktörlerinin Araştırılması

Özet

Yayın Bilgisi
Gönderi Tarihi: 18.11.2024
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Anahtar Kelimeler:
Fiziksel Aktivite
Engel ve Yararları
Lise Öğrencileri

Amaç: Fiziksel aktivite insanlar için en önemli faktörlerden biridir. Çocuk ve gençlerin fiziksel egzersiz yapmaları sağlıklı davranışları etkilemekte ve öğrencileri fiziksel egzersize katılmaya teşvik etmektedir. Bu çalışmada amacı lise öğrencilerinin fiziksel aktiviteye faydaları ve engellerin tespiti için yapılmıştır. **Yöntem:** Bu çalışmada lise öğrencileri için Egzersizin Faydaları/Engelleri Ölçeği (EBÖ) kullanılmıştır. EBÖ'nün Türkçe bir metinde kullanılmak üzere geçerlilik ve güvenilirlik çalışması için kullanılmıştır. Ankette 7 alt boyut ve 29 soru bulunmaktadır ancak lise öğrencilerinin seviyesine göre bir çalışma düzenlemek için 4 alt boyut ve 23 soru kullandık. Bu uygulama örneklemi 228'i kadın 270'i erkek toplam 498 gönüllü katılımcıdan oluşmaktadır. Verilerin analizinde SPSS 22 programı kullanılmış ve çalışmada örneklem büyüklüğünü belirlemek için G* Power (3.1.9.4.Version) kullanılmıştır. Verilerin normal dağılım göstermemesi nedeniyle ikili karşılaştırmalarda Man-Whitney U testi; ikiden fazla değişkenli karşılaştırmalarda Kruskall Wallis testi kullanılmıştır. **Bulgular:** Elde edilen bulgulara göre, cinsiyet değişkenine göre sosyal etkileşim alt boyutunda anlamlı farklılık ($p<0,05$), egzersize katılım (evet ya da hayır) değişkenine göre tüm alt boyutlarda (Eğlence, Engeller, Yaşamı güzelleştirme, Sosyal etkileşim) anlamlı farklılık ($p<0,05$) bulunmuştur. Değişkene göre spor branşlarının eğlence, yaşamı geliştirme ve sosyal etkileşim alt boyutlarında önemli farklılıklar olduğu tespit edilmiştir. **Sonuç:** Cinsiyet değişkeni sosyal iletişimde önemli bir faktör olduğu ayrıca egzersizin lise öğrencilerin sosyal iletişim gibi parametrelerde olumlu etki yaptığı sonucuna ulaşılmıştır.

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Introduction

High School health education is conducted through planned, systematic educational activities to bravery students to voluntarily change nonexistent healthy behaviours associated with factors that affect healthy behaviors, to eliminate or reduce risk factors that affect health, to prevent diseases, to promote health and to improve the quality of learning and life (Zou,2008, Zhong et al.2022). Exercise and physical activity immunology as a discipline since the twentieth century. All cross-sectional and metaphor studies in the world have shown the profound effect that exercise can have on the physical and cognitive (Simpson et al.2020).

Popular belief is regular exercise impacts a healthy life and some diseases not only barrier but also process treatment (Thyfault, and Bergouignan,2020). According to recent studies, increases mental stress in the young population. This situation can be a risk factor for the government of the country in the future (Pascoe et al. 2020). In these days widely the using social media, and technological advancements in the adolescent's young people., This situation affects obesity and affects related diseases (Lee et al. 2013). Exercise is an important factor in preventing such disorders. Health ministries of health governments also promote health-related concepts such as physical activity and exercise for both treatment and preventive factors (WHO,2017).

Adolescent students tend to do physical activity, and preventing individuals in this age group may be effective in developing chronic diseases in the future (Chung et al.2002). According to a statement exercise habits in young people will reduce the risk of premature death among adults (Winters et al.2003). Depending on this situation adolescents avoid aggressive behaviour in school, at home, on the sport field …etc (Hein et al.2015). Specialists on physical activity offer the most suitable time 13years-old for a start activity to get into the habit of exercise (Neissar and Raudsepp,2011). Young people should participate in physical activity for at least 60 min of daily moderate-to-vigorous and children, adolescents are not active enough to benefit their health life (Martins et al.2015).

It is thought that physical activity is not fixed over time and that strong physical activity habits are acquired at a adolesance age, both to obtain health benefits and to develop positive behaviors that can be maintained over a lifelong period (Allison ve ark.1999). Aim of this study, investigate the levels of physical activity among high school students, identify the barriers to physical activity, and evaluate the potential health benefits of overcoming these barriers.

Method

Sample Group

The sample of group this practice consists of female (n=228), and male (n=270) sum of participants (n=498) high school students. Before the practice necessary both explanations and permissions were made to the participants before the study and the practice started voluntarily.

Data Collection Instruments

This study was used to attach a descriptive form 'The Validity and Reliability of The Exercise Benefits/Barriers Scale'. There are 7 sub-dimensions and 29 questions in Scala, but we used 4 sub-dimensions and 23 questions to regulate a survey according to the level of high school students. We used

sub-dimension 'Fun Barriers Life Enhancement, Social İnteraction'. This survey was developed by Sechrist et al., (1987) and the obtained data used some scholarly practice. Data is obtained by the Niğde Ömer Halisdemir University Sport Faculty 4th grade students.

Statistic Analysis

The analysis of data used to license SPSS program version 22. To determine the sample size used to G*Power (3.1.9.4Germany). It was found that the data did not show normal dispersion and it was used in pairwise comparisons Man-Whitney U test; more than two variable comparisons were used Kruskall Wallis test. The significance value is constructed between p<0,00-0,05. To the determine way of meaningful use the Tukey method.

Findings

In this practice the results were analyzed and presented in tables according to demographic variables. Percentage, significance value, pairwise and multiple comparisons were made and discussed in this section.

Table 1. Reliability Coefficients (Cronbach Alpha)

Sub-Dimension	Item	Alpha
Fun	9	,886
Barriers	6	,628
Life Enhancement	3	,775
Social Interaction	5	,776
Total	23	,836

In this table, it was found all of the survey sub-dimension scores are adequate reliability coefficients according to (Alpar,2018). In the scale that found sub-dimension fun is the score,889; barriers,628; life enhancement,775; social interaction,776 and the sum of finding this scale is,836.

Table 2. Validity and Reliability Findings

Sub-Dimension	Skewness	Kurtosis	Statistic
Fun	-1,591±,109	3,298±,218	4,120
Barriers	1,128±,109	8,792±,218	2,824
Life Enhancement	1,127±,109	1,233±,218	4,042
Social Interaction	1,302±,109	2,240±,218	4,117

According to this table, all of the sub-dimensions in Scala did not show normal disposition and we have decided that analysis data was used ton the on-parametric test.

Table 3. Descriptive Information of Participants

Factor	Variable	n	Mean+std
Gender	Female	228	
	Male	270	
	Total	498	
Age^{year}	Female	228	16,42±1,31
	Male	270	16,44±1,27
	Total	498	16,43±1,28
Heıght^{cm}	Female	228	165,23±17
	Male	270	174,32±19,41
	Total	498	164,74±95,28
Weight ^{kg}	Female	228	55,51±8,97
	Male	270	68,91±14,55
	Total	498	62,79±13,99
BMI$^{kg/m2}$	Female	228	20,80±2,63
	Male	270	22,41±4,64
	Total	498	21,68±3,93

BMI: Body Mass Index

According to this figure founded mean age of participants (female: 16,42^{year}, male:16,44^{year}); mean height of Participants (female:165,23^{cm}, male:174,32^{cm}); mean weight of participants (female: 55,51^{year}, male: 22,41^{year}) mean of participants Body Mass İndex (female: 20,80$^{kg/m2}$, male: 22,4$^{kg/m2}$).

Table 4. According to Gender Variable of Participants Sub-dimension Analysis (Man-Whitney U)

Sub-Dimension	Factor	n	Mean Rank	Z	p
Fun	Female	228	242,23	-1,038	,299
	Male	270	255,64		
Barriers	Female	228	260,46	-1,565	,118
	Male	270	249,25		
Life Enhancement	Female	228	239,37	-1,466	,143
	Male	270	258,06		
Social Interaction	Female	228	234,63	-2,136	,033*
	Male	270	262,41		

(Meaningfull Value p<0,00-0,005*)

In this table there is no significant sub-dimension (fun, barriers, life enhancement) and there is a significant difference in social interaction (p<0,05).

Table 5. According to Exercise Situation Sub-dimension Analysis (Man-Whitney U)

Sub-Dimension	Factor(exercise)	n	Mean Rank	Z	p
Fun	Yes	230	285,73	-5,480	,000*
	No	265	215,25		
Barriers	Yes	230	220,14	-4,046	,000*
	No	265	272,18		
Life Enhancement	Yes	230	285,24	-5,478	,000*
	No	265	215,68		
Social Interaction	Yes	230	281,11	-4,837	,000*
	No	265	219,26		

(Meaningful of Value p<0,00-0,005*)

In this table according to data of sub-dimension (participant exercise) there are significant (p<0,05) differences in Fun, Barriers, Life Enhancement, Social Interaction.

Table 5. According to Branches of Sports Compare Sub-dimension to Scala

Sub-dimension	Factor	n	df	p	Tukey
Fun	Football	55	277,43	,000*	A-D D-C
	Basketball[B]	25	302,88		
	Voleyball[C]	29	342,86		
	Others[D]	174	234,48		
	None	114	268,83		
Barriers	Football	55	247,49	,993	
	Basketball[B]	25	244,40		
	Voleyball[C]	29	243,57		
	Others[D]	174	249,92		
	None	114	359,58		
Life Enhancement	Football[A]	55	287,49	,001*	D-A D-B
	Basketball[B]	25	332,04		
	Voleyball[C]	29	262,66		
	Others[D]	174	237,24		
	None	114	296,54		
Social Interaction	Football[A]	55	257,89	,012*	D-A D-B
	Basketball[B]	25	328,60		
	Voleyball[C]	29	281,47		
	Others[D]	174	240,18		
	None	114	361,81		

(Meaningful of Value p<0,00-0,005*)

In this table, there is no significant mean (p>0,05) on sub-dimension barriers and there are significant differences in sub-dimension ‘fun, social interaction, life enhancement’.

Discussion and Conclusion

This study examined high school students to determine İn terms of demographic variables physical activity level, participation barriers, benefits, factors of fun, life enhancement, and social interaction. Obtained data from this study were compared with the similar exams in the sub-section.

Preventable risk factors, such as physical inactivity, unhealthy diet consumption the hazardous use of alcohol and tobacco consumption, have long been recognized as health risks. A few well-known is that environmental factors are also the main causes of noncommunicable diseases outdoor and household air pollution together caused more than 6 million deaths from cardiovascular diseases, chronic respiratory diseases and lung cancer in 2012 (Who,2017).

According to the TUIK (2022) report; the young population in Turkey was determined 15 to 24 age years old 15,3%. Also known as in the report identified 15-17 years old 29%,18-19 years old 19%, 20-22 years old 31,1%, and 23-24 years old 20,9%. This information shows that Turkey has a young population. Physical activity is so important in this age range. The government has to support activity life in all of the age ranges and should be to build physical activity areas.

Descriptive these results; in Table 3 according to the factor of gender there is a meaningful difference in variable social interaction. In Table 4, the factor of participating exercise program (Yes or No) all of the sub-dimensions (Fun, Barriers, Life Enhancement, Social interaction) to detect meaningful differences Hopepa Et al. (2006) Physical Activity: What Do High School Students Think? In the study title found it

physical activity contributes based on social interaction. Studies showed males as more active than females despite the type of activities that the respective sexes took part in (Fairclough and Stratton, 2005). Silva et al. (2015) 'Physical activity in high school during 'free-time' periods' in the study titled ıt was found a meaningful difference variable of gender. Vega et al. (2018) Does school physical education contribute to accelerometer-measured daily physical activity and non-sedentary behaviour in high school students? the study title explained physical activity attributes social interactivity to on high school students. There are the same statements for the benefit of physical activity on high school students. academic studies show that participation in physical activity has a positive effect on high school students. Gümüş et al. (2014) thas determined that leisure time physical activity constraints of students studying in secondary education institutions.

According to Table 5, there is a meaningful difference for sub-dimension fun, life enhancement, and social interaction ($p<0,05$). Physical activity is contributing to physical, mental health and academic achievement (Zhou and Wank,2019). Cornejo et al. 'Physical activity and cognition in adolescents: A systematic review' in the study titled Expressed physical activity attribute to skills, including reading, mathematics, reasoning, science and social studies etc.). The results indicating the positive impact of physical activity on social interaction are consistent with the findings of Michael et al. (2016), who emphasized the role of enjoyment and variety in promoting physical activity habits among high school students. Jaakkola et al. (2015) expressed 'The associations among fundamental movement skills, self-reported physical activity and academic performance during junior high school in Finland' in the study that physical activity does not contribute to academic achievement in junior high school.

The results of this study determined that there were significant differences in the sub-dimensions of the scale used in physical activity according to demographic variables. There is a significant difference in the social communication parameter according to the gender variable, there is a significant difference in all sub-dimensions (Fun, Barriers, Life Enhancement and Social Interaction) according to the exercise status, and there is a significant difference (Fun, Life Enhancement and Social Interaction in the branch variable. As a result, as in all age groups, physical activity helps high school students maintain a healthy life in their daily lives. Also, these habits can be attributed to academic achievement on exams, decision-making, judgment, memory, spatial orientation, thinking, and verbal interaction.

Recommendation

The current study can be applied by increasing the sample size. The results obtained can be shared with the relevant institutions and should be evaluated in academic fields.

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