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THE BARRIERS TO ADOLESCENTS' PHYSICAL ACTIVITY

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Abstract

The habit of engaging in physical activity is one of the many life habits that are developed during adolescence. Due to a variety of barriers, many adolescents do not meet the daily physical activity recommendations. This study aimed to determine the barriers to engaging in physical activity among adolescents, i.e. whether there are differences in the barriers to physical activity between male and female adolescents, and whether these barriers differ depending on age. The sample of subjects included 1350 adolescents between the ages of 15 and 18 (672 boys, and 678 girls). The research utilised a customised questionnaire that was adapted from similar pre-existing questionnaires, and it contained a total of nine questions. All questions were of the close-ended type, and each question was rated on a four-point Likert scale. The Chi-square test was used to determine the differences according to gender and age. Based on the obtained results, it was determined that girls reported a higher number of barriers in comparison to boys, although there is no statistically significant difference, and that the highest number of barriers was reported at the age of 15 ($p < .05$).

Key words: adolescence, physical activity, health, sedentary behaviour, barriers.

БАРИЈЕРЕ КОЈЕ УТИЧУ НА ФИЗИЧКУ АКТИВНОСТ АДОЛЕСЦЕНАТА

Апстракт

Навика бављења физичком активношћу једна је од многих животних навика које се развијају током адолесценције. Велики број адолесцената не испуњава дневне норме физичке активности јер томе постоје разне баријере. Циљ ове студије био је да се утврде баријере које утичу на бављење физичком активношћу код адолесцената, односно да се утврди да ли постоје разлике у овим баријерама између адолесцената и адолесценткиња, као и да ли постоје разлике у претходно споменутим баријерама у зависности од година старости. Узорак испитаника чинило је укупно 1350 адолесцената узраста између 15 и 18 година, од чега је било 672 адолесцената и 678 адолесценткиња. За потребе истраживања примењен је анкетни упитник који је прилагођен

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из постојећих упитника, а који садржи укупно девет питања. Сва питања су затвореног селективног типа, а свако питање оцењено је на Ликертовој четворостепеној скали. Хи-квадрат тест је примењен за утврђивање полних и узрасних разлика. На основу добијених резултата утврђено је да су процентуално адолесценткиње пријавиле већи број баријера у односу на адолесценте, иако статистички значајне разлике изостају, као и да је највећи број баријера пријављен код испитаника узраста 15 година ($p< ,05$).

Кључне речи: адолесценција, физичка активност, здравље, седентарно понашање, баријере.

INTRODUCTION

Adolescence is the period between childhood (the beginning of puberty) and adulthood. This period begins between the ages of 11 and 13, and ends between the ages of 18 and 20 (Hugo, 2003), and is accompanied by the emergence of secondary sexual traits and dynamic physical development. Adolescence is characterised by significant changes in emotional, cognitive and social development. It is a very important phase of life during which different life habits are formed (Pandolfo, Minuzzi, Machado, Lopes, Azambuja, & Santos, 2016; Petrović, Momčilović & Pelemiš, 2023), and during which physical activity patterns are also established (Kalac, Gontarev, & Velickovska, 2014; Kumar, Robinson, & Till, 2015). Any skeletal muscle-produced motion that involves the expenditure of energy is referred to as physical activity (PA), and this includes motions made when working, playing, doing housework, travelling, and engaging in recreational activities (World Health Organization, 2018). Participating in physical activities and avoiding a sedentary lifestyle during this period has significant benefits in terms of physical and mental health, social relationships, and cognitive and other abilities of adolescents (Janssen & Leblanc, 2010), and forms the basis for their pattern of activity in adulthood (Padehban, Negarandeh, & Nikpeyma, 2018).

The World Health Organization (WHO) recommends that children and adolescents participate in moderate to vigorous physical activity for at least 60 minutes a day (WHO, 2010). However, the level of physical activity decreases with age, and the percentage of active individuals decreases particularly in the period of adolescence (Kumar et al., 2015; Vanhelst, Béghin, Duhamel, De Henauw, Ruiz, Kafatos et al., 2018). Namely, the recommendations of the WHO on daily physical activity in 2016, at the global level, were not met by 80% of adolescents ages 11 through 17. In other words, four out of five adolescents are not physically active (Guthold, Stevens, Riley, & Bull, 2020), whereby adolescent girls are less physically active than boys in every age range (Rosselli, Ermini, Tosi, Boddi, Stefani, Toncelli, & Modesti, 2020). Such findings are concerning given that physical activity levels tend to decrease in adulthood, as compared to adolescence (Wall, Carlson, Stein, Lee, & Fulton, 2011), which threatens the cur-

rent and future health of this population. Regular exercise helps maintain or improve physical health, reduces stress, anxiety, and depression (Bland, Melton, Bigham, & Velle, 2014), and enhances the mental health of the adolescent population (Rodriguez-Ayllon, Cadenas-Sánchez, Estévez-López, Muñoz, Mora-Gonzalez, Migueles et al., 2019). It also has a preventive effect on most chronic diseases, such as obesity, type 2 diabetes, cardiovascular diseases and certain types of cancer (Janssen & Leblanc, 2010).

But in contrast to the advantages of physical activity for adolescents' health, sedentary behaviour is becoming more prevalent among this population (Kracht, Beyl, Maher, Katzmarzyk, & Staiano, 2021). The decline in the level of physical activity at this age represents one of the biggest public health problems in many countries (Padehban et al., 2018), primarily because it is closely related to chronic diseases, high blood pressure, obesity, levels of lipoproteins in the blood, as well as an increased level of high-risk behaviour, which includes the consumption of tobacco and alcohol in this period of life (Kumar et al., 2015). Additionally, adolescents' inactivity is linked to a higher risk of premature death (Lee, Shiroma, Lobelo, Puska, Blair, & Katzmarzyk, 2012).

Although multiple studies have demonstrated the benefits of physical activity on adolescents' health (Janssen & Leblanc, 2010; Padehban et al., 2018; Rodriguez-Ayllon et al., 2019), there are numerous barriers to meeting the recommended daily levels of physical activity (Guthold et al., 2020; Prochnow, van Woudenberg, & Patterson, 2020; Manić, Zelenović, Stamenković, Čaprić, & Božić, 2021).

There are a large number of factors that influence participation in physical activities, and understanding these factors can help in creating a strategy to overcome them, so that physical activity becomes a part of people's lives, especially in adolescence. Factors that prevent people from engaging in physical activity can be personal, physiological, behavioural and psychological (Hardman, 2003). The aforementioned factors may have an impact on a person's decision to become physically active or inactive. Also, a population's level of activity is significantly affected by the influence of society. A sedentary lifestyle is gradually being promoted by many societal trends. According to data from a European study, the continuous decline in physical activity and exercise in the family, and then the wider social community, along with decreased opportunities for daily physical activity for children in schools are highlighted as some of the main reasons why a significant number of young people today are not physically active enough (Hardman, 2003).

According to studies that have examined barriers from a sociological perspective, these obstacles are built at the intra- and inter-personal levels of personality (Moore, Jilcott, Shores, Evenson, Brownson & Novick, 2010; Bauman, Reis, Sallis, Wells, Loos & Martin, 2012), and they represent predictors of physical activities (Fox, Mann, Ramos, Kleiman & Horowitz, 2012).

The results of previous studies have shown that barriers can be individual, i.e., internal, such as lack of self-confidence, motivation, and fear of injury during physical activity, and external, or related to environmental factors, access to facilities, work obligations, parental encouragement, etc. (Van der Horst, Paw, Twisk, & Van Mechelen, 2007; Jodkowska, Mazur, & Oblacińska, 2015). In particular, internal barriers are related to an individual's motivation, as opposed to external barriers, which are related to the community and environment's infrastructure (Lovell, Ansari, Parker, 2010). The most common and relevant barriers to physical activity are lack of time (external barrier) and lack of motivation (internal barrier) (Sharifi, Mahdavi, Ebrahimi-Mameghani, 2013). Adolescents, as well as people of other ages, are influenced by personal psychosocial factors when making decisions about their way of life and whether to engage in healthy or unhealthy behaviour. It has also been shown that personality traits are factors that are positively related to physical activity (Sallis & Owen, 2002)

Although perceived barriers are strongly associated with leisure-time physical activity, they differ by gender. The results of previous studies (Padehban et al., 2018; Rosselli et al., 2020) reveal that female adolescents experience more barriers to engaging in physical activity than males adolescents, with internal barriers predominating, while male adolescents report external barriers more often. Identifying these barriers is of great importance, because it would help in future interventions and when planning the increase of physical activity of the adolescent population, and the implementation of a health policy aimed at improving physical activity at school and community levels. For determining the critical period of the decrease in the physical activity level in adolescence, the adolescents' age that record the highest number of barriers for involvement in physical activity must be identified. Therefore, in order to determine differences in barriers to adolescents' physical activity, the objectives of this study were: (1) to determine whether there are differences in barriers to physical activity between male and female adolescents; and (2) to determine whether there are differences in barriers to physical activities depending on age.

METHODS

Sample of Respondents

The sample of respondents consisted of 1350 adolescents between the ages of 15 and 18, of which 672 are boys and 678 are girls (Table 1). All respondents were randomly selected from cities in the region of southeastern Serbia (Niš, Leskovac, Aleksinac, Pirot, Vranje, Vladičin Han, Prokuplje, Kuršumlija). The majority of the respondents (33.3%) were 15-year-old adolescents (450 respondents), and the smallest proportion of subjects were 16-year-olds (270 respondents).

Table 1. Sample of respondents according to gender and age

Age	Male (n=672)		Female (n=678)		Total (n=1350)	
	n	%	n	%	n	%
15	199	29.6	251	37.0	450	33.3
16	141	21.0	129	19.0	270	20.0
17	182	27.1	148	21.8	330	24.5
18	150	22.3	150	22.1	300	22.2

This research was conducted in accordance with the Declaration of Helsinki, and the recommendations for research involving human subjects (Christie, 2000). Prior to conducting the survey, written consent from the principals of the schools was requested. Additionally, each parent provided consent for their child to participate in the research before the start of the study. All of the potential respondents were invited to participate in the survey after receiving their parents' permission. The respondents had to be high school students, free of physical disabilities or chronic illnesses, enrolled in regular classes at their school, and not excused from physical education programmes in order to be included in the study. Exclusion criteria were the respondents' lack of desire to fill out the survey questionnaire, lack of consent from parents and/or guardians for participation in the study, as well as incompletely filled surveys.

The survey was carried out at school after physical education classes. Before the survey itself, the interviewers explained the procedure and the course of the survey itself to the respondents, so that the respondents were familiar with it. Respondents were informed that their participation in the survey was voluntary, that their answers would remain anonymous, and that the obtained data would be used only for research purposes. Respondents had the option to leave the survey at any time while it was still ongoing.

Sample of Measuring Instruments

The questionnaire used in this research was adapted from already-existing questionnaires (Mitić, Radisavljević-Janić, Milanović, Pantelić, Marković, Stanković et al., 2010; Santos, Fermino, Reis, Cassou, & Rodriguez-Añez, 2010; Santos, Wanderley Júnior, Barros, de Farias Júnior, & de Barros, 2010), and it contains a total of nine questions. All questions are of the close-ended type, and each question is rated on a four-point Likert scale. In order to identify what may be a barrier to physical activity, each question contains the following response options: 'strongly disagree', 'disagree', 'agree', and 'strongly agree'.

For data analysis, responses were classified according to the presence or absence of barriers, and were categorised into dichotomous variables. The answers of respondents who answered 'I agree' and 'I strongly

agree' were combined, and it was considered that certain barriers were 'present'. If the respondents answered 'I disagree' or 'I strongly disagree', it was considered that there are no barriers to physical activity (Becker, Fermino, Lima, Rech, Añez, & Reis, 2017).

Statistical Data Processing

The basic descriptive statistics of the parameters of both subsamples, as well as of the total sample, are presented as absolute and relative frequencies. For data analysis, respondents who were classified only according to the presence or absence of barriers were taken into account. Respondents who answered 'agree' and 'strongly agree' were considered to have some barriers to physical activity, and were included in the analysis. When the respondent's answer was 'disagree' or 'strongly disagree', it was considered that there were no barriers, and the results of those respondents were not analysed.

To determine the differences according to gender and age, the Chi-square non-parametric test was used. The level of significance was set at $p<0.05$. The results were processed with the Statistical Package for the Social Sciences for Windows, version 20.0 (IBM SPSS 20.0, SPSS Inc, Chicago, IL, USA).

RESULTS

Table 2 shows the results of the basic descriptive statistics of the parameters of established barriers in adolescent boys and girls, as well as the differences between them (Chi-square) in the total sample. The analysis of the obtained data showed that adolescents stated that the most common barriers to physical activity are: *Financial costs* (50.7%), *Misunderstanding of milieu* (49.89%), *Lack of time* (48.6%), and *Non-availability of sports facilities* (48.4%). Among adolescent girls, the most common barriers are *Misunderstanding of milieu* (63.5%), *Lack of habits* (53.1), *Lack of place to perform it* (52.8%) *Lack of organisers (of the physical activity)* (52.0%), *Non-availability of sports facilities* (51.5%), and *Lack of time* (51.4%). In general, adolescent girls have been found to have a greater number of barriers compared to adolescent boys.

The results of the Chi-square test showed that there are significant differences between male and female adolescents in whether they feel the need to exercise (47.3 vs. 42.6, retrospectively; Sig.= .029), as well as in whether they are bothered by not being understood by the milieu (49.8 vs. 63.5, retrospectively; Sig.= .007) (Table 2). No statistically significant differences were found for other barriers.

Table 2. Differences in barriers according to gender

Barriers to physical activity	n	M		F		M vs. F	
		n	%	n	%	Chi-square	Sig.
I don't feel the need	710	336	47.3	374	42.6	4.75	.029*
I lack habits	851	399	46.8	452	53.1	.81	.369
My age bothers me	269	137	50.9	132	49.0	.09	.760
I lack time	856	416	48.6	440	51.4	.67	.412
Financial costs are considerable	577	293	50.7	284	49.2	.14	.708
Misunderstanding of milieu bothers me	507	223	49.8	284	63.5	7.34	.007**
Sports facilities are not available	623	302	48.4	321	51.5	.58	.447
There is a lack of organisers (of PA)	720	345	47.9	375	52.0	1.25	.264
There is a lack of place to perform it	624	294	47.1	330	52.8	2.08	.150

Legend: n – number of respondents; PA – physical activity; M – male; F – female; % – percentage values; Chi-Square – Chi-square test, Sig – significance; * – significant at p< .05; ** – significant at p< .01

The results of the basic descriptive statistics of the established barriers in male and female adolescents depending on age, as well as the differences between ages (Chi-square) are shown in Table 3. Among male adolescents, except for *Lack of habits* (Sig.= .162) and *Lack of time* (Sig.= .052), there were significant differences in relation to age in all other established barriers to physical activity (p< .01 and p< .05). The percentage of perceived barriers decreases with age, and the highest percentage of barriers was observed in 15-years-old respondents. Male adolescents stated that the most common barriers to physical activity are: *Non-availability of sports facilities* (36.3%), *Misunderstanding of milieu* (35.4%), *Financial costs* (34.1%) and *Lack of place to perform it* (34.0%).

Significant differences in barriers to physical activity were also found in female adolescents depending on their age (p< .01 for all barriers). In contrast to male adolescents, the greatest number of barriers in girls was found at the age of 15 (*I don't feel the need* – 36.6%; *I lack habits* – 30.5%; *My age bothers me* – 45.4%; *I lack time* – 35.2%; *Financial costs are considerable* – 39.4%; *Misunderstanding of milieu bothers me* – 34.8%; *Sports facilities are not available* – 36.7%; *There is a lack of organisers* – 35.4%; *There is a lack of place to perform it* – 38.7%). Compared to male adolescents, adolescent girls were more likely to report a greater number of barriers to physical activity.

In the total sample, depending on age, statistically significant differences in barriers to physical activity were determined (p< .01 for all barriers except for Lack of habits: p< .05). In relation to age, it can be stated that adolescent boys and girls aged 15 reported the highest percentage of barriers (*I don't feel the need*, Sig.= .000; *I lack habits*, Sig.= .027; *My age bothers me*,

Sig.= .000; *I lack time*, Sig.= .000; *Financial costs are considerable*, Sig.= .000; *Sports facilities are not available*, Sig.= .000; *There is a lack of organisers*, Sig.= .000; *There is a lack of place to perform it*, Sig.= .000), and the number of barriers decreases with age (p< .01).

Table 3. Differences in barriers according to age

		M				F				M vs. F			
	Age	n	%	Chi-square	Sig.	n	%	Chi-square	Sig.	n	%	Chi-square	Sig.
I don't feel the need	15	95	28.2	16.14	**.001** **	137	36.6	35.98	**.000** **	232	32.6	44.78	**.000** **
	16	59	17.5			58	15.5			117	16.4		
	17	107	31.8			99	26.4			206	29.0		
	18	75	23.3			80	21.3			155	21.8		
I lack habits	15	94	23.5	5.14	.162	138	30.5	11.62	**.009** **	232	27.2	9.15	**.027** *
	16	90	22.5			87	19.2			177	20.8		
	17	119	29.8			111	24.5			230	27.0		
	18	96	24.0			116	25.6			212	24.9		
My age bothers me	15	50	36.5	37.14	**.000** **	60	45.4	49.27	**.000*** *	110	40.8	83.19	**.000** **
	16	26	18.9			22	16.6			48	17.8		
	17	52	37.9			43	32.5			95	35.3		
	18	9	2.9			7	5.3			16	5.9		
I lack time	15	106	25.4	7.63	.052	155	35.2	29.25	**.000*** *	261	30.4	22.42	**.000** **
	16	86	20.6			78	17.7			164	19.1		
	17	125	30.0			97	22.0			222	25.9		
	18	99	23.8			110	25.0			209	24.4		
Financial costs are considerable	15	80	27.3	18.87	**.000** **	112	39.4	37.73	**.000** **	192	33.2	43.73	**.000** **
	16	62	21.1			44	15.4			106	18.3		
	17	100	34.1			75	26.4			175	30.3		
	18	51	17.4			53	18.6			104	18.0		
Misunderstanding of milieu bothers me	15	64	28.7	29.00	**.000** **	99	34.8	34.53	**.000** **	163	32.1	57.01	**.000** **
	16	56	25.1			56	19.7			112	22.0		
	17	79	35.4			85	29.9			164	32.3		
	18	24	10.7			44	15.4			68	13.4		
Sports facilities are not available	15	83	25.7	26.09	**.000** **	118	36.7	22.18	**.000** **	201	32.2	34.79	**.000** **
	16	62	19.2			58	18.0			120	19.2		
	17	117	36.3			86	26.7			183	29.3		
	18	60	18.6			59	18.3			119	19.1		
There is a lack of organisers (of PA)	15	96	27.8	8.03	**.045** *	133	35.4	23.19	**.000** **	229	31.8	24.50	**.000** **
	16	89	25.8			83	22.1			172	23.8		
	17	96	27.8			87	23.2			183	25.4		
	18	64	17.6			72	19.2			136	18.8		
There is a lack of place to perform it	15	91	30.9	27.44	**.000** **	128	38.7	40.18	**.000** **	219	35.1	59.85	**.000*** *
	16	56	19.0			62	18.7			118	18.9		
	17	100	34.0			86	26.0			186	29.8		
	18	47	15.9			54	16.3			101	16.1		

Legend: n – number of respondents; PA – physical activity; M – male; F – female; % – percentage values; Chi-square – Chi-square test, Sig. – significance; * – significant at p< .05; ** – significant at p< .01

DISCUSSION

This research was conducted with the aim of determining the barriers to adolescent population's participation in physical activities, but also to determine possible differences in relation to gender and age. The obtained results indicate that adolescent girls reported a greater number of barriers compared to boys, although there are no statistically significant differences in the mentioned barriers (Table 2). It is observed that adolescent girls perceive a greater number of barriers compared to adolescent boys. Similar results were found in other studies (Padehban et al., 2018; Abdelghaffar, Hicham, Siham, Samira, & Youness, 2019; Portela-Pino, López-Castedo, Martínez-Patiño, Valverde-Esteve, & Domínguez-Alonso, 2020; Rosselli et al., 2020), wherein adolescent girls reported a lower level of physical activity, as well as a greater number of barriers to engaging in it. There are many reasons for this outcome in the mentioned studies. On the one hand, girls engage less in physical activities, they are less interested in them, they prefer activities of lower intensity, they spend their free time at home helping with household chores, but they are also ashamed to participate in outdoor physical activities. On the other hand, they are often underprivileged in engaging in physical activities compared to boys – boys tend to occupy places in the neighbourhood with sports activities, especially football (Abdelghaffar et al., 2019), and there is also a lack of a suitable place for girls that is safe for the realisation of physical activities and well monitored.

In our research, among adolescent girls, the biggest barrier is 'misunderstanding of milieu bothers them' and 'the lack of habits (for physical activity)', which indicates that the social environment in which they grow up can have a great influence on this behaviour. Above all, this refers to family relationships and parental support for physical activity (Sharara, Akik, Ghattas, & Makhlouf Obermeyer, 2018). Additionally, the social environment has an impact on how adolescents behave, particularly when considering the relationships that a child has at school (Hesketh, Lakshman, & van Sluijs, 2017). The barrier *Misunderstanding of milieu bothers me* for participating in physical activities was also highlighted by male adolescents, so in addition to the above, mutual interactions among this population can affect the motivation to engage in physical activities. This behaviour results from group interactions, and some studies have shown that friends in the same group have a similar level of physical activity (Lopes, Gabbard, & Rodrigues, 2016). Also, research shows that adolescents whose friends are physically active become physically active themselves (Fermino, Rech, Hino, Rodriguez-Anez, & Reis, 2010). This indicates that peers can be an incentive and a motivator for the involvement of their adolescent friends in various physical activities, but also a hindering factor.

When considering physical activity habits, the reason for taking part in physical activity can also be found in the behavioural patterns of the

parents – if the parents themselves are not physically active (Timperio et al., 2013), or have prejudices related to the child injuring themselves during exercise (Hesketh et al., 2017; Abdelghaffar et al., 2019). The lack of physical activity habits can be explained by insufficient information about the recommended levels of physical activity, as well as about the positive effects of it on health (Janssen & Leblanc, 2010). The study of Vanhelst et al. (2018) found that most adolescents, as well as their parents, do not know that it is necessary to have at least 60 minutes a day of moderate to vigorous physical activity in order to achieve health benefits. Significant differences in the reported barriers of male and female adolescents were found in the barriers *I don't feel the need* and *Misunderstanding of milieu bothers me*, and those are more dominant barriers among girls, while the dominant ones among boys are *Financial costs are considerable*, *Sports facilities are not available*, and *I lack time*. The results obtained in this way showed that there are gender differences in barriers between male and female adolescents, which is in line with other studies (Padehban et al., 2018; Abdelghaffar et al., 2019; Portela-Pino et al., 2020; Rosselli et al., 2020). The obtained data match the results of the review study of Manić et al. (2021), which stated that internal barriers are more prevalent in adolescent girls, while external ones are more dominant in adolescent boys. Also, the reason why adolescent girls report a greater number of barriers and are less physically active than adolescent boys may be due to the fact that their social environment is not physically active, and therefore even some adolescent girls who would be physically active have no one to practice physical activity with, which was confirmed by the studies conducted by Lazarowicz, O'Hara, Broder, Grunberg, & Gasevic (2021). In the aforementioned study, adolescent girls stated that their friends did not want to participate in physical activity, so they themselves did not participate either.

Male adolescents stated that the biggest barriers to physical activity were the financial expenses required for the conduction of some forms of physical activity, and that the sports facilities were either non-existent or far away. The obtained results are in line with the results of Ries, Gittelsohn, Voorhees, Roche, Clifton and Astone (2008), and Bélanger, Casey, Cormier, Laflamme Filion, Martin, Aubut and associates (2011). The results of these studies showed that adolescents from families of low economic status were less physically active, and that they reported barriers related to financial expenses.

The results of this research show that the largest number of barriers to engaging in physical activity were found at the age of 15, and the most frequent were: *I don't feel the need*, *I lack habits*, *My age bothers me*, *I lack time*, *Financial costs are considerable*, *Sports facilities are not available*, *There is a lack of organisers (of physical activity)*, and *The lack of place to perform it*. Similar barriers among the adolescent population were also determined in the study of Kalac et al. (2014). The authors stated that adoles-

cents in this age period (15 years) are the least physically active. The reason for the greater number of barriers at this age may be due to the fact that this is a period of transition from primary to secondary school, where students have a greater number of curricular and extracurricular activities, and have to spend more time preparing for the entrance exam, for example (Brodersen, Steptoe, Boniface, & Wardle, 2007; Kalac et al., 2014). Also, this can be explained by the fact that the awareness of the health-related benefits of physical activity comes in the later years of adolescence (Vanhelst et al., 2018). The aforementioned studies, which are in concordance with the results obtained in this study, indicated that the number of barriers in this population group decreases with age.

CONCLUSION

The aims of this study were to determine whether there are differences in barriers to performing physical activities between male and female adolescents, and to determine whether there are differences according to age. The study showed that adolescent girls reported a higher percentage of barriers than adolescent boys. Significant differences in the reported barriers between male and female adolescents were found in the barriers *I don't feel the need* and *Misunderstanding of milieu bothers me*, highlighting the fact that the mentioned barriers are more dominant in female adolescents, while the dominant barriers in male adolescents are *Financial costs are considerable, Sports facilities are not available,* and *I lack time*. Based on the aforementioned, it can be concluded that internal barriers are more prevalent in female adolescents, while external barriers are more dominant in male adolescents. The results of this research showed that the largest number of barriers to engaging in physical activity was found at the age of 15, and that the number of barriers decreases with age. Identifying barriers will help in planning and implementing certain programmes to increase the physical activity in this population group. It is necessary for the implementation of the health policy to pay more attention on the improvement of physical activity at the school and community level. In other words, the health policy should focus on promoting physical activity and its health benefits, both among children and their parents, and on providing better access to facilities for the realisation of physical activities.

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БАРИЈЕРЕ КОЈЕ УТИЧУ НА ФИЗИЧКУ АКТИВНОСТ АДОЛЕСЦЕНАТА

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Резиме

Адолесценција представља период између детињства и одраслог доба. Овај период почиње између једанаесте и тринаесте године, и завршава се између осамнаесте и двадесете године, а праћен је појавом секундарних полних карактеристика, односно динамичким физичким развојем. Адолесценцију карактеришу значајне промене у емоционалном, когнитивном и социјалном развоју. То је веома битна фаза живота у којој долази до формирања различитих животних навика. Навика бављења физичком активношћу једна је од многих животних навика које се развијају током адолесценције. Светска здравствена организација деци и адолесцентима препоручује учествовање у умереној до интезивној физичкој активности најмање 60 минута дневно. Велики број адолесцената не испуњава дневне норме физичке активности јер томе постоје разне баријере. Циљ ове студије био је да се утврде баријере које утичу на бављење физичком активношћу код адолесцената, односно да се утврди да ли постоје разлике у тим баријерама између адолесцената и адолесценткиња, као и да ли постоје разлике у претходно споменутим баријерама у зависности од година старости. Узорак испитаника чинило је укупно 1350 адолесцената узраста између 15 и 18 година, од чега је било 672 адолесцената и 678 адолесценткиња. За потребе истраживања примењен је анкетни упитник који је прилагођен из постојећих упитника, а који садржи укупно девет питања. Сва питања су затвореног селективног типа, а свако питање оцењено је на Ликертовој четворостепеној скали. Да би се идентификовало шта може представљати препреку за упражњавање физичке активности, свако питање је садржало следеће опције одговора: „уопште се не слажем", „не слажем се" „слажем се", и „у потпуности се слажем". Хи-квадрат тест је примењен за утврђивање полних и узрасних разлика. На основу добијених резултата утврђено је да су адолесценткиње процентуално пријавиле већи број баријера у односу на адолесценте, иако статистички значајне разлике изостају, као и да је највећи број баријера пријављен код испитаника узраста 15 година ($p < .05$). Код адолесценткиња, највећу баријеру представља то да им „Смета неразумевање околине" и да „Недостају навике за физичком активношћу", што указује да на овакво понашање велики утицај може имати окружење у коме адолесценткиња одраста. Адолесценти су као највеће баријере за физичку

активност навели следеће: „Материјални издаци коју захтева физичка активност“ и „Удаљеност терена“. Уочавање баријера помоћи ће у планирању и реализацији одређених програма за повећање физичке активности ове популационе групе. Потребно је већу пажњу посветити спровођењу здравствене политике о побољшању физичке активности на нивоу школе и заједнице, односно промовисању физичке активности и њених бенефита по здравље, како код деце тако и код њихових родитеља. Напослетку, потребно је омогућити повећани приступ местима за реализацију физичких активности.