

**Research article**

**DO STUDENTS FROM RURAL SETTINGS HAVE MORE POSITIVE ATTITUDES TOWARDS OUTDOOR ACTIVITIES?**

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**Abstract.** *The main goal of the present study was to explore if there are any differences in attitudes toward outdoor activities between students from urban and rural areas. Moreover, it was necessary to extract data regarding implementation of certain models of outdoor activities in order to evaluate which models are mostly carried out as extracurricular activities in nature in order to draw valuable conclusions for future practice. The results showed that there were no significant differences between students from urban and rural settings, except in students' attitudes towards benefits of outdoor activities on proper growth and development in favor of students from rural areas. According to Cohen's interpretation, a small to moderate effect (Cohen's  $d=0.02-0.38$ ) regarding living environment variations was present in the relevant items. Moreover, excursions were the most implemented extracurricular activity at schools, and regarding outdoor activities, outings and athletic cross country were the most dominant. However, outdoor activities like winter and summer outdoor activities, camping, cycling, hiking tours should be implemented in order to potentially improve students' engagement in physical activity in natural environments. Future studies should be focused on exploring the effect of diverse natural environments, PE teachers' and practitioners' competencies, school curriculums, students and parents' barriers towards outdoor physical activities. This multifactorial approach could probably provide causal relationship, which could clarify this issue.*

**Key words:** *Extracurricular physical activities, natural environment, urban and rural areas.*

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## INTRODUCTION

McCurdy et al. (2010) came up with the interesting term of “nature-deficit disorder” to describe children’s lack of outdoor activity, replaced by electronic media and a demanding school schedule. These lifestyle trends have certainly promoted physical inactivity, which could possibly impair physical and psychological health. However, a growing body of evidence has suggested that exposure to nature may directly benefit health. Physical benefits of outdoor activities are well supported in the literature. Outdoor activities provide an essential basis for the development and improvement of motor skills (Little & Wyver, 2008). Vigorous physical activity improves lung function, strengthens the heart, contributes to bone, joint, and muscle health (Bell, Wilson, & Liu, 2008). Researchers have linked a lack of outdoor time with asthma (Lovasi et al., 2008), vitamin D deficiency (Hu et al., 2017), as well as myopia (Deng & Pang, 2019). The reported effects of physical activity in natural environments were that participants had greater feelings of revitalization and positive engagement, decreases in tension, anger, depression, and confusion (Thompson Coon et al., 2011). Outdoor activities provide an environment that enhances contact with others and nature, therefore, may have a positive impacts on self-development, and building a relationship with nature (Eigenschenk et al., 2019). However, in a growing body of literature unanimous consensus regarding the benefits of outdoors activities from the aspect of potential safety issues has not yet been met. Apparently, Fuselli et al. (2012) emphasize that outdoor activities should be actively supervised in order to minimize the risk of injury. On the other hand, Tremblay et al. (2015) argue that we have become an excessively risk adverse society, that we have potentially limited crucial learning and developmental opportunities for children, that could be acquired only during outdoor activities. On the basis of the previous statement, this overprotective approach could reduce physical activity even further and increase more sedentary behaviors. Furthermore, the belief that the indoors is safer than the outdoors could however be misleading from the aspect of the potential harms of the internet (cyber-bullying, violence, and pornography), and reduced physical activity (Browne & Hamilton-Giachritsis, 2005; Burdette et al., 2004). Tremblay et al. (2015) argue that the potential risk of outdoor activities is commonly interpreted as alarming; however, exposure to risk could be essential for healthy child development. Decreasing time spent in outdoor activities should be a major concern. Outdoor activities provide crucial benefits, learning and developmental experiences that cannot be efficiently provided through indoor activities (Kemple et al., 2016). Burdette et al. (2004) emphasize that parents reported that physical activity usually occurs during outdoor playtime as opposed to during indoor activities. Moreover, to the best of our knowledge, neither of the previous studies has found outdoor time to be associated with decreased physical activity.

From a living environment standpoint, it is possible that increased physical activity is associated with vegetation-rich living environments. For example, urban vegetation might influence children and youth, and could provide more opportunities for engagement in outdoor physical activity due to a wider variety of open spaces (parks, school yards, bicycle tracks, etc.) (Bell et al., 2008). Parks, school yards, trails, and other open spaces provide surroundings that can stimulate physical activity. It is important to note that positive attitudes toward lifelong physical activity are developed in early childhood (Tammelin et al., 2014). However, due to increasing urbanization and population density, many people live in urban areas lacking vegetation, parks, and other natural environments, limiting the availability of accessible and safe outdoor activities for children (McCurdy et al., 2010). Therefore, it could be assumed that children from rural settings have more

opportunities to engage in outdoor activities, and consequently have more positive attitudes toward them. However, contemporary pandemic conditions have certainly reduced outdoor physical activity in children, and possibly influenced more sedentary behavior (Vuković et al., 2021). Moreover, Zenic et al. (2020) point out that there was a significant reduction in children's physical activity during the pandemic caused by the Covid-19 virus, especially from urban areas. Similar to physical activity engagement, the parental environmental circumstances could influence the total amount of electronic device time a child is consuming. For example, a full-time parent living in a rural environment is potentially more able to engage their child in outdoor physical activities than a full-time working single parent living in a small apartment in an urban environment (Bates et al., 2020). Furthermore, schools from urban and rural settings could potentially have vastly different opportunities to implement different models of outdoor activities (hiking tours, outings, winter and summer outdoor activities, athletic cross-country, etc.). Existing problems regarding open space availability could potentially limit schools from urban areas to implement certain extracurricular contents in nature, especially in contemporary pandemic conditions. We should emphasize, that schools are potentially very valuable institutions when it comes to promoting physical activity (Bailey, 2006).

Therefore, the main goal of the present study was to explore if there are any differences in attitudes toward outdoor activities between students from urban and rural areas. Moreover, it was necessary to extract data regarding implementation of certain models of outdoor activities in order to evaluate which models are mostly carried out as extracurricular activities in nature in order to draw valuable conclusions for future practice.

## MATERIALS AND METHODS

### Study design and Procedures

This cross-sectional study was conducted during first semester in October 2021. The study included 8<sup>th</sup> grade students and employed a self-reported questionnaire assessing attitudes towards outdoor activities. The completion of the questionnaire was not limited by time. To ensure the complete honesty of the self-reported attitudes towards outdoor activities, respondents were informed that their answers would remain anonymous, and the results would be used only for research purposes. Incompletely administered responses with an ambiguous outcome were not included in the further analysis. 141 responses out of 143 met the inclusion criteria for further analysis. The questionnaire was preceded by sociodemographic questions. Therefore, it was possible to examine possible differences between different categories (urban vs rural students). The procedures in this study were conducted according to the Declaration of Helsinki as the statement of ethical principle for research involving human subjects.

### Participants

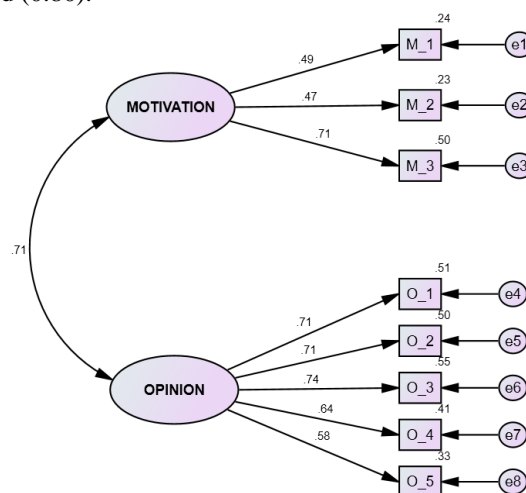
The sample was comprised of a total of 141 eighth-grade students, 64 (45.4%) of which were males, and 77 (54.6%) females. Furthermore, 71 (50.4%) of the respondents were from urban, and 70 (49.6%) from rural surroundings. During the testing procedure, the respondents were fully acquainted with the research procedure and informed that they could withdraw from the study at any time.

## Measures

**The Attitudes toward outdoor activities questionnaire (ATOAQ).** A newly constructed ATOAQ inventory was used in the present study. The ATOAQ assesses students' attitudes towards outdoor activities. This questionnaire is composed of 8 items, where 3 items (“Do you like to spend more time in nature”, “Do you like to walk during the day?”, “Do you like to engage in outdoor activities at your school”) represent individuals' motivation to engage in outdoor activities (items M1-M3), and the other 5 items (“Do outdoor activities affect the proper growth and development”, “Do outdoor activities develop a collective spirit?”, “Do outdoor activities develop discipline and responsibility?”, “Do outdoor activities reduce peer violence?”, and “Do outdoor activities provide new knowledge and have application in daily life?”) represent individuals' opinion on the benefits of outdoor activities (items O1-O5). Statements were evaluated using a three-point Likert scale. The response options for each question were as follows: 1) No; 2) Partially; and 3) Yes. Apart from individual item analysis, relevant items for each variable were summed to form composite scores included in the comparative analysis (urban vs rural students). For example, the outdoor activities benefits scale score was formed by summing the scores of the relevant items (No = 1; Partially = 2; Yes = 3).

We were able to extract two distinct factors using the explorative factor analysis (EFA). The principal component factor analysis using direct oblimin rotation method proved that each item corresponds to theoretically assumed factors. Item communalities (median = .57; range .45–.68) were over 0.40, which indicate that each item is related to the other items on the scale, and suggest that two factors are appropriate for the present inventory. Factor loadings for this scale were clear, with moderate to high factor loadings (ranging from .53 to .82, and .57 to .88 on the two factors) and minimal cross-factor loadings, except from items 3 and 7 (.31 and .27). The KMO was 0.81.

Moreover, it was necessary to evaluate the fit of the model for the scale. The results of the confirmatory factor analysis (CFA) indicated a good fit (SRMR = .047; CFI = 0.949, RMSEA = .074) (see Fig. 1). The internal consistency in this study for the scale proved to be good (0.80).



**Fig. 1** Confirmatory factor analysis (CFA)

### Data analysis

All data analyses were carried out using SPSS (IBM SPSS, version 23.0; IBM SPSS, Armonk, NY, United States). Descriptive statistics were computed for all sociodemographic and study variables. Means, medians, standard deviations, frequencies, and percentages where appropriate were computed to describe both categorical and continuous variables for the total sample. The exploratory factor analysis was performed to reduce data to distinct factors which could explore the underlining theoretical structure of the construct. The confirmatory factor analysis (CFA) was performed to evaluate the fit of the newly constructed scale. Since the assumption of normal distribution was violated, the Mann-Whitney U test was performed to assess the differences between distinct subsamples (urban vs rural students) in both individual items and the overall scale score. Cohen's *d* analyses were performed to evaluate the effect size. Significance was set at the 0.05 level.

## RESULTS

The sample demographic characteristics and outdoor specific data are presented in Table 1. It should be noted that outdoor specific data were extracted from the multiple response analysis, therefore, one respondent could choose more than one response. Excursions were the most present extracurricular activity at the schools. Moreover, from the aspect of outdoor activities organized within the regular school curriculum, outings and athletic cross country were the most dominant ones.

**Table 1** Summary of demographic and outdoor activity specific data (frequencies and percentages)

	n (%)	
Gender		
Male	64	(45.4)
Female	77	(54.6)
Living environment		
Urban	71	(50.4)
Rural	70	(49.6)
Extracurricular activities at the schools		
Excursions	114	(80.9)
School in nature	40	(28.4)
Recreational classes	19	(13.5)
None	17	(12.1)
Outdoor Activities at the schools		
Winter outdoor activities	10	(7.1)
Summer outdoor activities	7	(5.0)
Outings	90	(63.8)
Athletic Cross Country	60	(42.6)
Hiking tours	11	(7.8)
None	17	(12.1)
Students needs for outdoor activities		
Winter outdoor activities	37	(26.2)
Summer outdoor activities	52	(36.9)
Outings	38	(27.0)
Cycling	35	(24.8)
Hiking tours	12	(8.5)
Camping	57	(40.4)

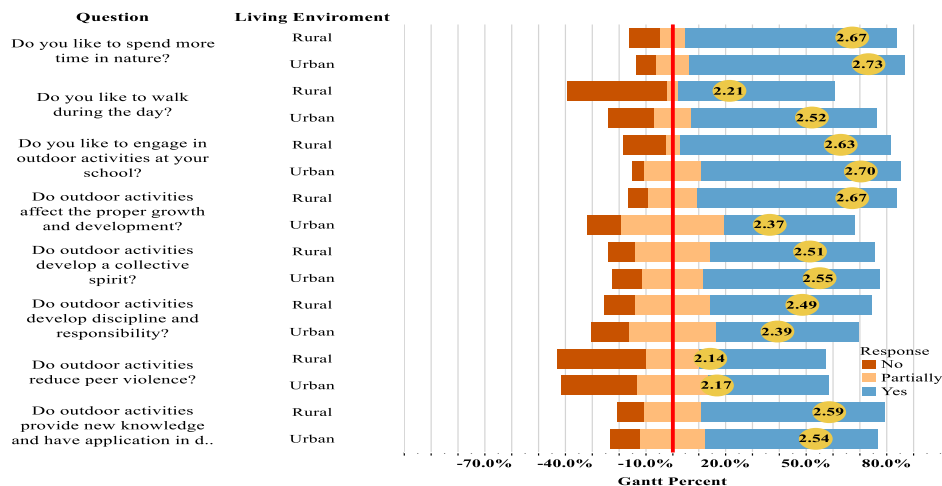
The differences between students from urban and rural settings are presented in Table 2. Since the Kolmogorov-Smirnov test was significant for all the continuous variables, non-parametric statistical procedures were applied. Living environment variation showed significant differences among distinct groups only in the item “Do outdoor activities affect the proper growth and development”, where students from rural settings presented significantly higher scores. According to Cohen’s interpretation, small to moderate effects regarding living environment variations were present in the relevant items.

**Table 2** Differences between students from urban and rural settings, Independent Samples Mann-Whitney U test

Item	Mann-Whitney U	Z	Cohens' d	P
Do you like to spend more time in nature?	2395.5	-.517	0.06	.605
Do you like to walk during the day?	2124.5	-1.750	0.25	.080
Do you like to engage in outdoor activities at your school?	2438.5	-.246	0.03	.806
Do outdoor activities affect the proper growth and development?	1933.0	-2.603	0.39	.009
Do outdoor activities develop a collective spirit?	2367.0	-.569	0.08	.569
Do outdoor activities develop discipline and responsibility?	2304.5	-.838	0.13	.402
Do outdoor activities reduce peer violence?	2467.5	-.078	0.01	.938
Do outdoor activities provide new knowledge and have application in daily life?	2413.5	-.352	0.05	.725
Overall Score	2452.0	-.137	0.02	.891

Note. Mann-Whitney U – value of Mann-Whitney U test;  
Z – z score; Cohens' d – effect size; P – p value

The graphical representation of average values of the relevant items for students from urban and rural settings can be seen in Fig. 2. Students’ attitudes toward outdoor activities were mostly positive; however, it should be noted that negative attitudes were also present. For example, the relevant item “Do outdoor activities reduce peer violence” proved to have more than 40% negative responses, among both urban and rural students.



**Fig. 2** Graphical representation of average response values for students from urban and rural settings. A red vertical reference line separates positive and negative responses.

## DISCUSSION

The main goal of the present study was to explore if there are any differences in attitudes toward outdoor activities between students from urban and rural settings. The initial assumption was that students from rural settings could potentially have more positive attitudes towards outdoor activities due to the availability of more natural environment surroundings and lower residential density. Bell et al. (2008) emphasize that there is a positive relationship between neighborhood greenness and residential density and physical activity, where open spaces could promote increased time spent in outdoor activities. Moreover, the abovementioned authors argue that outdoor spaces with vegetation are more likely to stimulate physical activity than outdoor spaces without vegetation. Looking back on the previous statement, students from rural settings should have significantly higher scores regarding attitudes toward outdoor activities. However, the results of our study failed to confirm the initial assumption. Based on our results, there was no significant difference among the surveyed populations, except in the items created to explore attitudes towards benefits of outdoor activities on proper growth and development, in favor of respondents from rural areas. It has been shown that physical activity improves children's health, and a growing body of evidence suggests that exposure to natural environments could decrease stress and improve attention in children (McCurdy et al., 2010). From a practitioner's standpoint, outdoor activities provide significant physical and mental health benefits that often go beyond the benefits of indoor physical activity (Eigenschenk et al., 2019). Research has demonstrated that outdoor activities, especially in natural environments, have significant potential to benefit children's cognitive, emotional, social, and physical development, as well as their health and overall well-being, self-regulation skills, and attention (Kemple et al., 2016). The study conducted by Fjørtoft (2001) indicates that there is a positive relation between outdoor activities in the natural environment and motor fitness in children. Authors argue that motor competences are of great importance to children's general adaptation to the physical environment. Apparently, there is a strong relation between the natural environment and outdoor play, which could be physically and psychologically beneficial. However, although studies have proved the various benefits of outdoor activities in natural environments, many playgrounds in early childhood do not entirely encourage children's interaction with nature. Furthermore, childhood educators are often unaware of the importance of outdoor activities and children's interactions with nature (Kemple et al., 2016). This could potentially explain the results of our study, meaning that natural surroundings, although beneficial, without systematic planning and early childhood engagement in natural settings could not alter attitudes toward outdoor activities. Therefore, PE teachers should provide the opportunity for highly efficient models of outdoor activities in natural environments, especially during school hours. Teachers' knowledge and attitudes on importance of outdoor play activities are essential. It should be noted that schools as educational institutions are the most important environment for the promotion of the physical activity of students. Physical education and school sports, in addition to directly affecting the development of motor skills, primarily enable increased physical activity of children during physical education classes and extracurricular school activities (Bailey, 2006). For example, Davies (1997) found a relationship between teachers' behavior and teachers' self-reported beliefs about their role as an educator during outdoor activities, and suggested that there is a need for professional development of teachers, which would emphasize the positive effects of

outdoor activities and how to overcome eventual barriers which could limit implementation of such contents. Authors Burdette et al. (2004) measured outdoor time and physical activity in children by direct observation, and the evidence suggests that higher physical activity levels occur during prolonged outdoor staying in comparison to indoor. In a context of school curriculum, outdoor extracurricular activities in Serbia are described as very valuable for the development children and adolescents. However, the results from the multiple response analysis in our study suggest that outings (63.8%) and athletic cross-country (42.6%) are the most implemented models of outdoor activities, while winter outdoor activities (7.1%), summer outdoor activities (5.0%), and hiking tours (7.8%) are implemented to a much lesser extent. The possible explanation for this unequal distribution could be found in the complexity of the content of summer and winter activities, and hiking tours which would require a longer stay in a particular destination, which implies greater organization and greater responsibility of the schools and PE teachers. In addition, it is important to note that outdoor activities could carry potential risk, which could explain the reduced involvement of schools and PE teachers in organizing such activities, especially in a situation of restrictive measures during a pandemic. Fuselli et al. (2012) emphasize that outdoor activities should be accompanied with active supervision, teaching about safety rules, and remind children how to use equipment safely, check local area equipment and surfacing, etc. Yet, Tremblay et al. (2015) argue that recent decades have shown an increasing trend toward greater monitoring and restrictions on child play. Consequently, half of Canadian children actively play outdoors only 3 hours per week. While safety issues should be addressed, avoiding all risk is not a good solution, as doing so we could create a potential limit in children's participation in such activities that promote their optimal development and health. As Little and Wyver (2008) argue, the ultimate goal for parents and PE teachers should be to provide outdoor activity environments and models where the risks of serious injury are reduced, but creativity, challenge, and excitement are preserved. However, the results of our study cannot confirm these statements, therefore future research should examine this issue in more detail. Nonetheless, outdoor activities should be utilized in regular curricular and extracurricular programs including sustainable development of education process. Eigenschenk et al. (2019) argue that investments in outdoor activities are estimated as being very cost-effective, as many positive effects could be provided without significant infrastructure investments (nature provides more than enough). However, based on our results, excursions (80.9%) were the most dominant extracurricular activities at schools, followed by school in nature (28.4%), and recreational classes (13.5%) (see Table 1). We should note that excursions are facultative extracurricular activities, which are mostly organized only once per year in Serbia. Therefore, it is rather questionable whether this particular model could permanently improve students' attitudes towards outdoor activities; therefore more extended outdoor activities program may be warranted. The worrying fact however is that activities like school in nature and recreational classes, which could promote the benefits of outdoor activities, were much less implemented. This could be an important finding, and future studies should explore the effects of an extended outdoor activities program on students' attitudes in more depth. Actually, based on the results of our study, we can observe that the students' needs for a wider range of activities in the natural environment are very well represented. For example, students expressed a need for different models of outdoor activities such as winter (26.2%) and summer (36.9%) activities, outings (27.0%), cycling (24.8%), camping (40.4%), and hiking tours (8.5%) (see Table 1). In fact, it is quite plausible that more content rich



programs, as well as more frequent engagement in such activities can contribute to the development of more positive attitudes towards them. We can support the previous claim with the research that emphasizes that a more content rich extracurricular program in school provides students with the opportunity to engage in activities of their choice, which could develop overall satisfaction with friends, family, and school, and develop positive attitudes (Gilman, 2001).

Furthermore, our results showed that more than 40% percent of the respondents (both urban and rural) had negative attitudes toward the benefits of outdoor activities on peer violence (see Fig. 1). These results are not entirely surprising, giving the fact that contemporary circumstances regarding the pandemic may reduce the implementation of potentially beneficial models like winter and summer outdoor activities, and hiking tours. Therefore, it is possible that reduced participation in the number of outdoor activities could influence the overall attitudes of students. Physical contact restrictions during the pandemic caused by the COVID-19 virus, including distance learning strategies, reduced engagement in physical activity, sports, and other models of school-related organized outdoor physical activity. Bates et al. (2020) argue that school and parental strategies to increase physical activity should be directed toward implementing contents that promote outdoor activities. However, these authors also emphasize that there are some possible difficulties in conducting such activities, due to specific work schedules during pandemic restrictions. Although the recommendations for the regular physical activity of children basically refer to normal circumstances, the limited opportunities to engage in outdoor activities could develop inactive lifestyle habits in Serbian school children (Vuković et al., 2021). Furthermore, physical activity levels before the onset of the pandemic caused by the COVID-19 virus suggested that Croatian adolescents were not meeting physical activity recommendations due to COVID-19 restrictions, and that individuals living in urban environments were experiencing a greater decrease in physical activity levels than in rural environments (Zenic et al., 2020). Schmidt et al. (2020) found that sports activity declined whereas recreational screen time increased. Therefore, it is plausible that increased screen time could potentially reduce time spent in natural environments as well. Moreover, there is evidence that violent screen content has significant short-term effect on altering aggressive behavior (Browne & Hamilton-Giachritsis, 2005). It should be noted that the presence of vegetation during outdoor activities may impact physical activity. In fact, boys may feel more relaxed and therefore better able to interact productively in this greener area of their playground (Kemple et al., 2016). Moore and Wong (1997) found that when an asphalt play area is transformed into a more natural area, children's social behavior could change, which could influence less aggressive behavior. Although we could assume that reduced outdoor physical activity and increased screen time could have impacted attitudes towards peer violence during the period of data collection for the present study, our result cannot support this statement.

In future practice students should be offered more than a few effective models of outdoor activities in order to provide the potential to develop a connection with nature as an important foundation for the development of an environmental codex and commitment to the preservation of nature (Kemple et al., 2016). We found some evidence from a previous study that physical activity in an outdoor natural environment could provide more beneficial positive effects on mental wellbeing than in an indoor environment. The natural environment includes many different types of green space such as wilderness areas, urban parks, open countryside, country parks, woodlands, and wildlife reserves.

However, the influence of different type of green space as a moderator on overall physical activity should be clarified in future studies (Thompson Coon et al., 2011).

Finally, from the aspect of differences between students in urban and rural areas, the present study cannot explain the cause-and-effect relationship. It is quite possible that the available natural environment in rural areas is not a sufficient stimulus for students' active engagement in outdoor activities, and therefore the development of more positive habits and attitudes towards them could not be met, at least not significantly. Future research should examine the immediate activity of students in outdoor activities, as well as outdoor space availability for implementing different contents in urban and rural areas. Moreover, it is necessary to investigate the activity of PE teachers and other practitioners in the affirmation and promotion of contents that encourage physical activity in a natural environment.

#### CONCLUSION

The main goal of the present study was to explore whether any differences regarding attitudes towards outdoor activities were present between students from urban and rural settings. The initial assumption was that rural students would have significantly more developed positive attitudes due to a potentially more favorable natural environment to engage in outdoor activities. However, results from our study could not support such a hypothesis, meaning that the natural environment alone could not substantially influence improvements in attitudes towards outdoor activities. In addition, we should note that outdoor activities like occasional outings and athletic cross-country may be insufficient to develop positive attitudes; therefore, additional activities like winter and summer outdoor activities, camping, cycling, and hiking tours may be warranted. It is quite plausible that an extended number of extracurricular activities and more frequent implementation of such models could improve students' engagement and their attitudes towards outdoor activities. However, our results could not fully explain the current issue and provide solid evidence; therefore, future studies should investigate this matter in more depth. For example, future studies should be focused on exploring the effect of diverse natural environments, PE teachers' and practitioners' competencies, school curriculums, and students and parents' opposition towards outdoor physical activities. This multifactorial approach could probably provide a causal relationship which could clarify this issue.

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## **DA LI UČENICI IZ RURALNIH SREDINA IMAJU POZITIVNE STAVOVE PREMA AKTIVNOSTIMA U PRIRODI?**

*Osnovni cilj ove studije bio je da se istraži da li postoje razlike u stavovima prema aktivnostima u prirodi između učenika iz urbanih i ruralnih sredina. Takođe, bilo je potrebno izdvojiti podatke o implementaciji određenih modela aktivnosti u prirodi kako bi se uvidelo koji se modeli uglavnom sprovode kao vannastavne aktivnosti u prirodi, radi donošenja korisnih zaključaka za buduću praksu. Rezultati su pokazali da nije bilo značajnih razlika između učenika iz urbanih i ruralnih sredina, osim u stavovima učenika prema benefitima aktivnosti u prirodi na pravilan rast i razvoj, u korist učenika iz ruralnih sredina. Prema Cohenovom tumačenju, mali do umereni efekat (Cohen's  $d=0,02-0,38$ ) u pogledu životne sredine bio je prisutan u relevantnim stavkama. Štaviše, ekskurzije su za većinu učenika bile najčešće organizovana vannastavna aktivnost u školama, a kada su u pitanju aktivnosti u prirodi, najdominantniji su izleti i atletski kros. Međutim, aktivnosti u prirodi kao što su zimske i letnje aktivnosti na otvorenom, kampovanje, biciklizam, pešačke ture bi trebalo učestalije da se realizuju u cilju povećanog angažovanja učenika u fizičkoj aktivnosti u prirodnom okruženju. Buduće studije bi trebalo da budu fokusirane na istraživanje efekata različitih prirodnih okruženja, kompetencije nastavnika fizičkog vaspitanja i ostalih edukatora, školskih programa, barijera učenika i roditelja prema aktivnostima u prirodi. Ovaj multifaktorski pristup bi verovatno mogao bliže da objasni uzročno-posledične veze, u cilju rasvetljavanja ovog problema.*

*Ključne reči: vannastavne fizičke aktivnosti, prirodno okruženje, urbane i ruralne sredine*