

THE EXAMINATION OF HEALTH-CONSCIOUS BEHAVIOUR AMONG SECONDARY SCHOOL STUDENTS

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Abstract

The development and everyday practice of health-conscious behaviour have become increasingly important in contemporary society. In the process of shaping a healthy lifestyle, the enhancement of awareness plays a key role; therefore, it is essential that education promoting regular physical activity and a health-conscious way of life begins at an early age. The aim of the present study was to explore the extent to which health consciousness and the pursuit of a healthy lifestyle are present in the lives of secondary school students in a small town, as well as to examine whether behaviours harmful to health occur in their everyday lives, with particular emphasis on the increasingly popular tobacco products. Furthermore, the study sought to investigate the influence of socialisation contexts, specifically the relationship between family background and willingness to engage in sports, and the impact of online social media applications on regular physical activity. The primary research was conducted using an online questionnaire survey to students in grades 9–11 (n = 69) at Derecske I. Rákóczi György Secondary Grammar School, Technical School, and Dormitory. The survey assessed students' attitudes toward a healthy lifestyle. The findings indicate that students at the investigated secondary school are familiar with the key components of a healthy lifestyle and strive to incorporate them into their everyday lives. The family, as the primary socializing environment, appears to have a significant influence on their health consciousness. Health-risk

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behaviors such as smoking, alcohol consumption, and illicit drug use were not characteristic of the respondents. In contrast, the consumption of unhealthy foods, including fast food and sugar-sweetened beverages, was reported to be common among the participants. The impact of the internet and media on sporting habits was found to be substantial, with these factors exerting a predominantly negative influence on adolescents' willingness to engage in regular physical activity.

Keywords: health consciousness, health-risk behavior, physical activity habits

Discipline: Health Science

Abstract

AZ EGÉSZSÉGTUDATOS MAGATARTÁS VIZSGÁLATA KÖZÉPISKOLÁS DIÁKOK KÖRÉBEN

Az egészségtudatos magatartás kialakítása és annak mindennapi gyakorlása napjainkban egyre hangsúlyosabb szerepet tölt be. Az egészséges életmód formálásának folyamatában a tudatosság fejlesztése kiemelt jelentőséggel bír, ezért alapvető fontosságú, hogy a rendszeres testmozgásra és az egészségtudatos életvitelre irányuló nevelés már korai életkorban megkezdődjön. A kutatás célja annak feltárása, hogy egy kisváros középiskolás tanulóinak életében milyen mértékben jelenik meg az egészségtudatosság és az egészséges életmódra való törekvés, továbbá, hogy a szervezetre káros magatartási formák jelen vannak-e a mindennapjaikban, különös tekintettel az egyre nagyobb népszerűségnek örvendő dohánytermékekre. Emellett a tanulmány azt is vizsgálja, hogy van-e összefüggés a családi viszonyok és a sportolási hajlandóság között és, hogy az internetes közösségi alkalmazások hogyan hatnak a rendszeres testmozgásra. A primer kutatás során online kérdőívvel vizsgáltuk a Derecskei I. Rákóczi György Gimnázium, Technikum és Kollégium, 9-11. évfolyamos diákjainak (n=69) egészséges életmódhoz való attitűdjét. A kutatás eredményei alapján megállapítható, hogy a vizsgált középiskola tanulói ismerik az egészséges életmód összetevőit és törekednek a mindennapjaik részeként alkalmazni. A család, mint elsődleges szociális színtér befolyásolja az egészségtudatosságukat. Az egészségkárosító magatartás, a dohányzás, az alkoholfogyasztás, kábítószerhasználat a kitöltőkre nem jellemző. Ezzel szemben az egészségtelen élelmiszerek, többek között a gyorsételek és a cukros üdítők fogyasztása gyakori náluk. Az internet és a média sportolási szokásokra gyakorolt hatása jelentős, e tényezők kedvezőtlenül befolyásolják a fiatalok sportolási hajlandóságát.

Kulcsszavak: egészségtudatosság, egészségkárosító magatartás, sportolási szokások

Disciplína: egészségtudomány

Theoretical Background

Health is one of the most important and defining values of human life; therefore, the development of health-conscious behaviour and its conscious application in everyday life are indispensable for maintaining health (Szabó et al., 2021; Müller et al., 2023; Kovács et al., 2025; Bácsné Bába et al., 2025;

Kinczel et al., 2025). However, health consciousness and the pursuit of a healthy lifestyle may manifest in different forms among individuals: while some people pay particular attention to ensuring that their lifestyle is as healthy as possible within their means, others place less emphasis on health-preserving habits in their daily activities (Vajda et

al., 2018; Kinczel and Müller, 2020; Moravec, 2020; Kinczel et al., 2023; Moravec et al., 2024; Gombás & Vári, 2025; Müller et al., 2025; Židek et al., 2025).

The development of health-conscious behaviour is fundamentally influenced by three main factors: biological, psychological and social determinants. Biological factors include physiological characteristics, genetic predispositions and hormonal features, while psychological factors involve the individual's value system, level of health culture and personal dependencies. Social factors, such as family background, social and occupational status, as well as prevailing social norms and expectations, also play a significant role in shaping health-conscious behaviour (Fodor, 2013).

One of the fundamental pillars of a healthy lifestyle is balanced and conscious nutrition, which contributes significantly to the reduction of civilisation-related diseases, particularly obesity (Szabó et al., 2021). Obesity is one of the major risk factors for the development of chronic diseases, and approximately 20% of deaths worldwide can be directly attributed to unhealthy nutrition; this proportion increases further when the effects of obesity are also taken into account (Központi Statisztikai Hivatal [KSH], 2019). In Hungary, approximately 60% of the population aged 15 years and older is overweight or obese, which represents a serious public health challenge.

Although obesity was previously characteristic mainly of developed societies, it has increasingly become prevalent in moderately developed countries as well (Farkas, 2019). At the same time, the growing level of health consciousness observed in developed countries represents a promising trend, as it may contribute to a reduction in the proportion of obese individuals. These positive changes can be attributed, among other factors, to more conscious attention to food labelling, increased interest in food composition, and greater awareness of vitamin and mineral content. As a result of more

goal-oriented consumer behaviour, an increasing number of individuals strive to preserve and improve their quality of life (Balogh et al., 2008).

Vegetables and fruits play a particularly important role in nutrition, as they serve as natural sources of vitamins and ensure adequate micro- and macronutrient intake for the body (Bács et al., 2018). Epidemiological studies clearly demonstrate that high consumption of vegetables and fruits significantly reduces the risk of developing chronic, non-communicable diseases (Balogh et al., 2008). Nevertheless, only 14% of the Hungarian population consciously recognises and chooses foods that support health preservation. Consumer behaviour is characterised by the fact that the majority of individuals are unwilling to make substantial changes to their dietary habits even after the onset of illness (Panyor, 2019).

According to the KSH (2019) survey on dietary habits, 49% of men and 61% of women aged 15 years and older consume fruit at least once a day. Vegetable consumption is lower: 40% of men and 49% of women eat vegetables daily. The consumption of dairy products shows similar proportions among both sexes, while daily meat consumption is characteristic of approximately one-third of the population (KSH, 2019). Research conducted by the National Institute for Health Development (2014) on the health behaviour of school-aged children revealed that only one-third of children consume vegetables or fruits at least once a day. In contrast, daily consumption of sweets reaches approximately 30%, while carbonated soft drinks are consumed daily by around 20% of children, reflecting the persistence of unhealthy dietary patterns among young people.

Materials and Methods

The present study aimed to explore the extent to which secondary school students attending a small-town secondary school are familiar with the prin-

principles of health-conscious behaviour, whether they practice a health-conscious lifestyle in their everyday lives, and to what degree healthy nutrition is realised in their daily routines. Furthermore, the research examined the presence of behaviours harmful to health, with particular emphasis on the increasingly popular tobacco products. In addition, the influence of socialisation contexts was analysed, focusing on the relationship between family background and willingness to engage in sports, as well as the impact of online social networking applications on regular physical activity habits.

In order to answer the research questions, an online questionnaire survey was conducted among students in grades 9–11 at the I. Rákóczi György Secondary School, Technical School and Dormitory in Derecske. The response rate was 70.4%, which provided an adequate level of participation for the evaluation of the data. Regarding gender distribution, 33.3% of the respondents were female and 66.7% were male. The participants belonged to the 14–18 age group. The highest proportion of respondents were 17 years old (42%), followed by 16-year-olds (27%) and 15-year-olds (22%). Only 6% of the respondents were 18 years of age.

The questionnaire consisted of four main sections. The first block focused on the demographic characteristics of the respondents. The second section examined students' dietary habits and the presence of health-damaging behaviours, particularly smoking and alcohol consumption. The third block aimed to explore family and peer relationships, while the fourth section contained questions related to leisure time activities, sporting habits and physical activity patterns.

The questionnaire included both closed-ended questions and Likert-scale items. In the case of Likert scales, a five-point rating system was applied, which allowed for a more precise quantification of respondents' attitudes and behavioural patterns.

Results

Health Consciousness of Secondary School Students

Based on the results, health-conscious nutrition is partially present among the examined students; however, several deficiencies can also be identified. The frequency of daily meals can generally be considered adequate; nevertheless, nearly 9% of the respondents reported eating fewer than two meals per day, which may have an adverse long-term effect on the body's energy and nutrient supply. Regarding fluid intake, the majority of students (73%) do not reach the recommended daily amount, which may also pose problems in terms of hydration and metabolic processes.

With respect to eating habits, breakfast consumption can be considered relatively frequent; however, mid-morning and afternoon meals are often omitted by many students, indicating uneven nutrient intake throughout the day. The consumption of cooked meals is relatively regular; nevertheless, the intake of vegetables and fruits is low, particularly in the case of vegetables, which represents one of the most common shortcomings of a balanced diet.

Among the surveyed secondary school students, the consumption of meat and dairy products is widespread, egg consumption is more moderate, and the proportion of students following a vegan diet is negligible. Overall, these findings suggest that young people's dietary habits partially comply with the basic principles of a healthy lifestyle; however, greater emphasis should be placed on improving meal regularity, ensuring adequate fluid intake, and increasing the consumption of plant-based foods.

The frequency of consumption of foods and beverages harmful to health was also examined.

Within fluid intake, the consumption of sugar-sweetened beverages proved to be particularly high.

Table 1. Frequency of consumption of healthy foods (%) (n = 69). Source: Authors.

Meals	Vegetables	Fruit	Meat	Dairy products	Eggs
Several times a day	15.9	15.9	56.5	27.5	1.4
Once a day	13.0	18.8	15.9	23.2	13.0
Several times a week	47.8	44.9	20.3	36.2	42.0
Once a week	10.1	10.1	4.3	7.2	21.7
A few times a month	13.0	10.1	0.0	2.9	18.8
Never	0.0	0.0	2.9	2.9	2.9

According to the results, 41% of respondents consume sugary soft drinks several times a day, while 17% drink such beverages once a day. Furthermore, 26% consume them several times a week, 9% once a week, and only 7% a few times per month.

The consumption of caffeinated beverages, especially energy drinks, showed an alarmingly high prevalence among the surveyed students. Nearly half of the respondents (44%) consume energy drinks on a daily basis, of whom 29% do so several times a day. A further 19% consume energy drinks several times a week, 3% once a week, and 20% a few times per month. Only 14% of the surveyed secondary school students reported that they had never consumed such beverages. This finding is particularly concerning given the high caffeine and sugar content of these products and their adverse effects on the developing organism. The results indicate that energy drink consumption has become widespread among young people, posing significant long-term health risks. The frequency of consuming snack foods such as crisps, biscuits and sweets was also high. Approximately 30% of students consume snacks several times a day, 16% once a day, and 38% several times a week. A further 13% reported consuming such products

once a week, while only 3% do so a few times per month.

In contrast, the consumption of fast food was less frequent among the surveyed students. Among the respondents, 3% eat fast food several times a day, 15% several times a week, 22% once a week, and the majority (60%) consume fast food only a few times per month. Notably, one student reported never consuming fast food.

Regarding alcohol consumption, more than one-third of the respondents (36%) reported that they never drink alcohol. Daily alcohol consumption was reported by only 3% of students. Weekly consumption characterised 12% of respondents, while 42% reported consuming alcohol a few times per month. These proportions are largely consistent with the findings of the ESPAD survey conducted in 2019 (ESPAD, 2019).

A summary of the consumption frequency of foods harmful to health is presented in Table 2.

Table 2. Frequency of consumption of foods harmful to health (%) (n = 69) Source: Authors.

Meals	Snacks	Sugary soft drinks	Fast food	Energy drinks	Alcohol
Several times a day	30.4	40.6	2.9	29.0	1.4
Once a day	15.9	17.4	0.0	14.5	1.4
Several times a week	37.7	26.1	14.5	18.8	7.2
Once a week	13.0	8.7	21.7	2.9	11.6
A few times a month	2.9	7.2	59.4	20.3	42.0
Never	0.0	0.0	1.4	14.5	36.2

Family Background and Young People's Attitudes towards a Healthy Lifestyle

The results of the study indicate that family-based recreational activities are only partially present in the lives of the examined students, and their frequency can be considered relatively low.

Regarding joint family outings and hiking activities, participation was predominantly occasional: 23% of respondents reported taking part in such activities every two to three months, 25% every six months, and 23% once a year. Only a small proportion of students engage in these activities on a regular basis, with 4% participating weekly and 12% monthly. Notably, 13% of secondary school students reported that they never take part in joint outdoor activities with their parents. These findings suggest that family-based activities in natural environments are increasingly marginalised, which may indicate a long-term decline in recreational habits.

Joint family leisure activities in a broader sense—such as visiting cinemas or restaurants—were found to be somewhat more frequent. Among the respondents, 27% participate in family leisure programmes on a weekly basis, 26% monthly, and 17% every two to three months. A further 12% reported participating only every six months, while 9% do so once a year. Additionally, 9% of students indicated that they do not participate in any shared family leisure activities at all.

In contrast, the results related to family communication showed particularly high values. Seventy percent of students reported spending at least 20 minutes per day talking with family members, while a further 14% do so several times a week. This finding indicates that personal communication remains important in most families, which is a favourable factor in terms of family cohesion and emotional stability. Nevertheless, despite frequent communication, the regularity of shared recreational activities and family meals appears to be lower than optimal. This suggests that the role of family socialisation—particularly in relation to shared, health-promoting activities—is gradually diminishing, which may negatively affect the development of health-conscious behaviour in the long term.

The frequency of shared family meals showed considerable variation. While 28% of students

reported eating together with their family several times a day and 16% once a day, nearly one-third of respondents reported participating in shared meals only on a weekly or monthly basis (20% several times a week, 14% once a week, and 10% monthly or less frequently). Of particular concern is the finding that 12% of students never participate in shared family meals, which may indicate a loosening of family ties and the growing dominance of individual lifestyles.

Following the analysis of shared family activities, the study also examined attitudes towards sport within the family. The results clearly demonstrate that the family plays a key role in shaping young people's attitudes towards physical activity. A substantial majority of students (88%) reported that their parents or grandparents encouraged them to start engaging in sports, regardless of whether the encouraging family members had a sporting background themselves. This finding suggests that support for physical activity is embedded in family values rather than being solely based on personal sporting experience. Regarding siblings, 28% of respondents reported having a sibling who regularly participates in sport, while the majority (68%) did not. However, the data also revealed that in families where a sibling is physically active, parental encouragement was present in 94% of cases, highlighting the importance of a supportive family environment for sport participation.

Among the surveyed secondary school students, the motivational effect of engaging in sport together with others was clearly observable. More than half of the respondents (58%) indicated that they would be more willing to participate in sport if they could do so together with a family member. The influence of peer relationships was found to be even more pronounced, as 75% of students reported having friends who regularly engage in sport, and 77% stated that they would prefer to participate in physical activity with friends rather than with family members. This trend reflects the

specific characteristics of adolescent socialisation, whereby the role of peer groups becomes increasingly influential in shaping health behaviour and leisure activities.

Overall, the findings indicate that while family encouragement forms the foundation of young people's motivation to engage in sport, peer relationships gradually become the primary social driving force behind physical activity as adolescence progresses. This phenomenon clearly illustrates that different levels of the socialisation environment—family and peers—interact and complement each other in shaping health-conscious behaviour.

Physical Activity and the Balance between Physical Activity and Digital Leisure

Regular physical activity is one of the most important components of a healthy lifestyle among young people; however, it is increasingly pushed into the background by the growing prevalence of digital device use (Kinczel et al., 2020; Hónyi et al., 2021; Kinczel et al., 2021; Molnár and Müller, 2025). One of the main objectives of the present research was to explore the extent to which young people prioritise the use of digital devices over physical activity.

The results revealed that social media applications—such as Facebook, Instagram and TikTok—play a dominant role in the everyday lives of students. Regarding the statement *“I prefer using social media applications instead of engaging in physical activity”*, 30% of respondents fully agreed, 14% mostly agreed, and 28% partially agreed, while 28% reported that they did not agree or did not agree at all. These findings indicate that more than two-thirds of the respondents (72%) prefer spending at least part of their leisure time in the digital space rather than engaging in physical activity.

In contrast, television viewing appears to exert a considerably weaker influence. Approximately 70%

of students reported that they do not prefer watching television over physical activity, indicating the declining relevance of traditional media compared to social networking platforms among young people.

The impact of digital device use on physical activity is further reinforced by the fact that more than half of the respondents (55%) fully or partially agreed with the statement that they would spend more time engaging in physical activity if social media applications did not exist. This suggests that young people are consciously aware of the displacement effect of social media on physical activity, even if they do not always compensate for it through increased exercise.

In practice, the amount of time devoted to physical activity remains relatively low. Only 30% of respondents reported engaging in sport on a daily basis, while a further 38% do so several times a week. Notably, the absence of family encouragement significantly reduces willingness to engage in physical activity. Among students who were not encouraged to participate in sport by their parents or grandparents, 25% reported never engaging in physical activity lasting longer than 30 minutes, compared to only 6% among those who received family encouragement.

Responses to the statement *“I would not be able to replace one hour of daily digital device use with physical activity”* provide further insight into this issue. A total of 62% of respondents did not agree or did not agree at all with the statement, while 22% partially agreed and 16% considered it true or fully true. These results suggest that although most young people are theoretically willing to reduce their digital device use in favour of physical activity, practical implementation often faces significant barriers.

The frequency of daily physical activity in the examined sample falls short of recommended levels. Among the students, 30% engage in at least 30 minutes of physical activity daily, 38% several

times a week, 7% once a week, and 16% only once or twice a month. Alarming, 9% of secondary school students reported that they never engage in sport. The role of family background is again evident: complete physical inactivity was reported by only 6% of students who received parental or grandparental encouragement, compared to 25% among those without such encouragement.

Among students who regularly engage in sport, individual sports were found to be the most popular. Fitness and gym training were reported by 40% of respondents, running by 36%, while football and combat sports were also popular activities (35–35%). Cycling was reported as a regular activity by 24% of students. Regarding the location of physical activity, most students exercise at home (42%) or in indoor facilities, while 36% engage in outdoor activities and 24% use outdoor sports fields.

Among students who do not engage in sport, the most frequently reported reasons were lack of time (29%), lack of motivation or laziness (20%), and lack of interest (14%). Health-related reasons were reported by only 6% of respondents. These findings suggest that a sedentary lifestyle is primarily explained by psychological and lifestyle-related factors rather than physical limitations.

An analysis of sport-related motivations revealed that physical activity primarily serves aesthetic and health-related purposes. A total of 59% of respondents reported exercising to improve appearance, 42% for health preservation, 39% for the enjoyment of movement, and 29% for improved well-being. Social motivation also played a role, as 26% of students considered participation in sport important due to friendships, while 10% indicated that physical activity held no particular value for them.

Conclusions

The aim of the present study was to explore the extent to which students attending a small-town

secondary school are familiar with and apply the principles of health-conscious behaviour in their everyday lives. The research focused on the realisation of healthy nutrition, the occurrence of behaviours harmful to health—particularly the consumption of tobacco products—and the influence of socialisation contexts, primarily family background and peer relationships, on willingness to engage in sport. In addition, the role of digital device use and social media in shaping young people's physical activity patterns was examined.

Overall, the results indicate that health-conscious behaviour among the examined age group presents a contradictory picture. Although the majority of students are aware of the importance of physical activity and a healthy lifestyle, in everyday practice these intentions are often replaced by digital device use and sedentary leisure activities. Thus, knowledge of a healthy lifestyle alone does not guarantee its implementation. The gap between awareness and actual behaviour is clearly observable in the examined sample.

The findings also confirm that family background and parental role models play a decisive role in shaping young people's health behaviour. Students who were encouraged by their parents or grandparents to engage in sport were significantly more physically active than those who did not receive such support. In contrast, the immediate gratification and constant stimulation provided by social media platforms often divert attention away from long-term health goals, contributing to the decline of regular physical activity.

The growing dominance of digital media presents new challenges for health promotion and prevention efforts. Based on the results, mere information transfer is insufficient; greater emphasis must be placed on strengthening motivational factors and supporting the development of conscious lifestyle management (Kinczel et al., 2020). Health education must address young people using the tools of

the modern age and offer programmes capable of competing with the easily accessible stimuli of the digital world.

In this context, the role of the family, school and peer relationships is of crucial importance. School-based physical education and leisure-time sport activities can contribute not only to physical fitness but also to social experiences and mental well-being. Parental encouragement and positive peer role models can effectively reinforce commitment to a health-conscious lifestyle.

In conclusion, the development of health consciousness among young people requires a complex, interdisciplinary approach that integrates the shaping of knowledge, attitudes and motivation. An experience-oriented approach to physical activity, the promotion of conscious digital device use, and the strengthening of cooperation between family and school are all essential to enable young people to achieve a sustainable balance between the digital world and physical activity in the long term (Czeglédi et al., 2020; Bíró et al., 2020; Borbély et al., 2025).

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