

Chapter #3

ASSESSMENT OF PUPILS' SOCIAL RELATIONSHIPS AND LEISURE ACTIVITIES IN TWO ROMANIAN HIGH SCHOOLS

Adriana Albu¹, Mihaela Vlada², Adina Iustina Nechita¹, & Florin Dima²

¹Grigore T. Popa University of Medicine and Pharmacy, Romania

²Vaslui Public Health Department, Romania

ABSTRACT

It is necessary to assess the way students spend their free time in the final years of high school due to the poor results that have appeared recently in the baccalaureate exams. The study was carried out using a group of 202 students from two high schools in the Romanian county of Botoșani. The young people filled in a questionnaire with questions about leisure activities and social relationships. The results were processed using Pearson's chi-squared test. The time allocated daily for physical activity is mostly 15-30 minutes (23.76%). The time spent watching television programs is mostly 0.5-1 hours (35.64%). Most pupils (44.05%) do not spend free time on the computer. In the majority of cases (32.4%) pupils have „one” true friend. In their free time, they go out, mostly 2-3 evenings per week (28.71%), but there are also 31.68% negative answers. Parents are less concerned about school activity (“never” answers – 34.15%) and are also less concerned with the way their children spend their free time (“never” answers – 34.65%). There is a series of situations that guide us towards a modest concern for the future, both from pupils and their parents.

Keywords: physical activity, friends, computer use, watching television.

1. INTRODUCTION

In recent years, we have witnessed in Romania a drastic reduction in the percentage of pupils who finish high school. It is necessary to evaluate some factors that may explain the causes of this result. We focused on the elements represented by leisure activities and social relationships because they can be quite demanding.

Unfortunately, in Romania, the studies oriented towards the way children spend their free time and the relationships they develop are few and are restricted by geographical area. In this context, it was necessary to report on studies carried out in other countries, in different geographical areas, which allows a better interpretation of the results.

Sports activities are a healthy way to spend your free time. There is an interesting result for pupils with anemia in Damanhur that should attract the attention of specialists. Only 44.2% of those with anemia admit to exercising while 78.5% of those without anemia exercise, with statistically significant differences (Naglaa & Marwa, 2018). Daily physical activity contributes to the support of cardiac function, the development of motor and cognitive skills, and metabolic improvement (Haapala, 2013). Unfortunately, most young people do not pay attention to this way of spending their free time.

A special problem occurs in the family because parents are very busy and do not pay attention to how much exercise their children do (Tanaka, Okuda, Tanaka, Inoue, & Tanaka, 2018). Parents can become role models for their children by systematically engaging in

physical activity. This type of activity can take place in the family, which contributes to the improvement of relationships between its members (Bringhof-Iser, Schinder, Kayser, Suggs, & Probst-Hensch, 2018).

Their favorite activities are watching television shows and playing computer games. Such activities are also preferred by young women in Damanhour with and without anemia, but there are no significant differences, so it represents the same way of spending free time (Naglaa & Marwa, 2018).

Adolescents in the Philippines recognize the constant watching of television programs as the main way of spending free time, while exercise is practiced "sometimes" or "often" (Yap, 2017).

Special attention should be paid to the time spent at the computer because currently, the literature describes the term "digital addiction" as highlighting the situations in which a person uses the computer intensely, uncontrolled, in a pathological way (Baciu, 2020a). It also describes internet addiction present in people who use the internet in a pathological sense, being unable to use it constructively. Unfortunately, we reach a situation of social isolation, the appearance of stress reactions, and depressive states (Baciu, 2020a). At present, it is important to pay special attention to computer activities because modern pedagogy is increasingly based on this type of education with a major development of digital platforms. This phenomenon was extended in the last period of the pandemic, which allowed the continuation of teaching in special conditions (Montebello, 2020).

Social isolation can be associated with the orientation towards alcohol consumption, some drugs, and even with the emergence of ideas of suicide or self-aggression (Endo et al., 2017). Starting from these elements, special attention must be paid to body appearance and diets that are uncontrolled and performed only according to the recommendations obtained from the Internet. Serious eating problems can occur due to a lack of control from family and low support from friends (Arseniev-Koehler, Lee, McCormick, & Moreno, 2016; Haynos, Watts, Loth, Pearson, & Neumark-Stzainer, 2016).

In Romania, we pay special attention to food because we face a strong anchoring in the traditions of families. Sometimes there are deficient eating habits that will persist throughout life, which will affect the health of young people (Albu, Moraru, & Hodorcă, 2015). All these aspects must be in the attention of parents and preventive medical services. Specialized intervention is needed to address issues related to alcohol and drug use, unprotected sex, nutrition, and physical activity. Risky behaviors are becoming more common with age, so the role of preventive services is becoming increasingly important (Harris et al., 2017).

The family is the environment in which a child develops fully physically and mentally. For this reason, it is important to carefully evaluate the situations present in family life and especially the parents' level of interest in the pupils' school and leisure activities (Popescu, 2015). Any inattention can lead to inappropriate behaviors that will have negative effects on the further development of the young person.

2. OBJECTIVES

- to assess the daily time set aside for physical activity, differentiated by class and starting from the specifics of the high school;
- to study the daily time spent by young people watching TV and using the computer, focusing on pupils in the 12th grade of the theoretical high school;
- to estimate the number of friends and the time spent with them - an essential study especially for students in the 12th grade where the group of friends should become less important;

- to assess the extent to which parents are involved in the school and leisure activities of their children, taking into account the fact that they are in the final years of high school and want to become independent.

The evaluation will be performed by comparing school years and the two schools to be able to assess the changes that appear or do not appear according to these two parameters.

3. METHOD

The study was carried out in Dorohoi, a small city in Botoşani County. The studied group consists of 202 pupils from the 11th and 12th grades from a National College (117 young people) and a School Group (85 young people). The National College is an elite high school with a theoretical program. The School Group is a high school with a technical/vocational program where pupils prepare to become specialists in various fields. Out of the total number of pupils that received the questionnaire, 98 were from the 11th grade and 104 from the 12th grade. The questionnaire contained questions about how they spend their free time and about their social relationships.

o Leisure was studied using three questions:

- How much sports or other physical activities do you practice per day (in minutes)?: under 15; 15-30; 30-45; 45-60; over 60 minutes.

- How many hours per day do you spend watching television?: none; 0.5-1 hour; 2-3 hours; 4-5 hours.

- How many hours per day do you spend on the computer?: none; 0.5-1 hour; 2-3 hours; 4-5 hours.

o Social relationships were assessed using four questions:

- How many true friends do you have?: none; one; two; three or more.

- In general, how many times per week do you go out with friends after school?: 0 times; 1 time, 2-3 times; 4-5 times; 6-7 times.

- Do parents (at least one of them) have time to help you prepare your homework?: always; often; rarely; never.

- Do your parents have time to organize your free time?: always; often; rarely; never.

The study does not focus on the relationship between students' school results and the way they spend their free time, as we did not intend this element. Instead, we analyzed the level of the determining factors that can lead to school failure.

The processing of the results was done taking into account school years and the two communities out of the desire to try to understand the disastrous results that have appeared lately in high school final exams.

The statistical interpretation was performed using Pearson's chi-squared test.

4. RESULTS

The study focuses on two main directions represented by leisure time and social relationships. Also, the evaluation will be performed by school years (11th and 12th) but also by school (the School Group and National College).

When looking at free time activities, we will insist on physical exercise, watching television, and using the computer. Sustained physical activity (over 60 min.) is present in 19.30% of cases; the dominant response is 15-30 min. (23.76%) or 30-45 min (23.26%). Pupils in the 12th grade do fewer sports, an easy situation to understand considering the time needed to prepare for the graduation exams, thusly the calculated differences are significant ($p < 0.05$; $f = 4$; $\chi^2 = 10.213$) (Table 1).

Table 1.
Daily time spent doing physical activity/sports (by school year).

Time	under 15 minutes	15-30 minutes	30-45 minutes	45-60 minutes	over 60 minutes
11th grade	15	24	31	10	18
12th grade	30	24	16	13	21
Total	45	48	47	23	39
%	22.27	23.76	23.26	11.38	19.30

We also did a comparison between the two schools. The pupils from the National College do more sports compared to those from the School Group so that the calculated differences are significant at a $p < 0.01$ ($f=4$, $\chi^2=13.570$) (Table 2). It is an interesting result when considering pupils from a technical-agricultural high school.

Table 2.
Daily time spent doing physical activity/sports (by school).

Time	under 15 minutes	15-30 minutes	30-45 minutes	45-60 minutes	over 60 minutes
School Group	29	15	15	8	18
National College	16	33	32	15	21

Another leisure activity is watching television programs or playing computer games. Television programs are watched mainly 0.5-1 hour, daily (35.64%). There are also 32.67% of young people who mark the “none” answer. There are 26.73% of teenagers who sit 2-3 hours per day in front of the television screen and 4.95% who mark the “4-5 hours” answer. The calculated differences are statistically insignificant ($p > 0.05$, $f=3$, $\chi^2=3.076$) an unexpected result in young people in the final years of high school who should be preoccupied with preparations for the graduation exams.

The situation is even more interesting in terms of time spent on the computer because 44.05% of pupils choose the “none” option. We must not overlook the 16.33% of pupils who mark the “4-5 hours” result which is difficult to understand especially for pupils in the 12th grade (Table 3).

Table 3.
Time spent watching television/using the computer (by school year).

Time	None	0.5-1 hour	2-3 hours	4-5 hours
	Television			
11th grade	32	40	22	4
12th grade	34	32	32	6
Total	66	72	54	10
%	32.67	35.64	26.73	4.95
	Computer			
11th grade	40	22	19	17
12th grade	49	22	17	16
Total	89	44	36	33
%	44.05	21.78	17.82	16.33

The calculated differences are statistically insignificant ($p > 0.05$; $f=3$; $\chi^2=0.791$) and draw attention to the young people in the final year who have time to sit at the computer, socialize or play games.

Television is an uninteresting leisure activity for most pupils so the calculated differences between schools are statistically insignificant ($p > 0.05$, $f=3$, $\chi^2=4.255$) (Table 4).

Table 4.
Time spent watching television/using the computer (by school).

Time	None	0.5-1 hour	2-3 hours	4-5 hours
	Television use			
School Group	28	26	24	7
National College	38	46	30	3
Computer use				
School Group	39	20	12	14
National College	50	24	24	19

The results are interesting in terms of time spent using the computer. The pupils from the National College should have more activities in front of the computer compared to those from the other high school but the calculated differences are statistically insignificant ($p > 0.05$, $f=3$, $\chi^2=1.406$).

In adolescents, social relationships diversify, being necessary to assess the existence of the group of friends but also the relationships with the parents. The group of friends is essential until the age of 14-15, after which its importance decreases, with restricted, selective friendships being preferred.

In the pupils in the studied group, the group of friends is still present in 28.21% of situations, but the calculated differences are statistically significant ($p < 0.05$; $f=3$; $\chi^2=8.33$) which leads to the reduction of its role in young people in the final years of high school. The "none" answers in 10.89% of cases are worrying, which leads us to the situation of dangerous social isolation in this age group (Table 5).

Table 5.
Number of true friends (by school year).

Number of friends	None	One	Two	Three or more
11 th grade	8	24	37	29
12 th grade	14	39	23	28
Total	22	63	60	57
%	10.89	31.18	29.70	28.21

The presence of the group of friends (socializing) is not dependent on the type of school. We can see that pupils from both high schools recognize the presence of the group of friends even at 17-18 years of age, the calculated differences being statistically insignificant ($p > 0.05$, $f=3$, $\chi^2=6.304$) (Table 6).

Table 6.
Number of true friends (by school).

Number of friends	None	One	Two	Three or more
School Group	6	33	26	20
National College	16	30	34	37

The presence of the group of friends also means the existence of time spent with them outside of school. The result obtained is interesting because 31.68% of pupils mark the “0 times” answer. Being a small town, there are not many possibilities to spend time somewhere with friends where teenagers will find it interesting (Table 7).

Table 7.
Going out with friends (by school year).

Going out	0 times	1 time	2-3 times	4-5 times	6-7 times
11th grade	35	24	24	8	7
12th grade	29	27	34	8	6
Total	64	51	58	16	13
%	31.68	25.24	28.71	7.92	6.43

We can see that 7.92% of young people marked the “4-5 times” answer and 6.43% marked the “6-7 times” answer. The calculated differences are statistically insignificant ($p > 0.05$; $f = 4$; $\chi^2 = 2.325$) a result difficult to understand for young people in the final year of high school.

Limited socialization possibilities are present in pupils from both high schools so the calculated differences are statistically insignificant ($p > 0.05$, $f = 4$, $\chi^2 = 5.181$). In small towns there are too few areas of interest and fun for teenagers thusly socialization outside the school environment is limited. This should be in the attention of parents but also of the school psychologist (Table 8).

Table 8.
Going out with friends (by school).

Going out	0 times	1 time	2-3 times	4-5 times	6-7 times
School Group	31	23	22	3	6
National College	33	28	36	13	7

These results require further study with the assessment of the parents' interest in the pupils' school activity.

In most cases (34.15%) parents are not at all concerned about school activity. At the opposite pole are placed 13.36% of families in which this concern is permanent (Table 9).

Table 9.
Parents' interest in school activity and free time (by school year).

Level of interest	Always	Often	Rarely	Never
	Homework			
11th grade	6	23	38	31
12th grade	21	18	27	38
Total	27	41	65	69
%	13.36	20.29	32.17	34.15
Level of interest	Free time			
	Always	Often	Rarely	Never
11th grade	7	34	25	32
12th grade	19	20	27	38
Total	26	54	52	70
%	12.87	26.73	25.74	34.65

The calculated differences are statistically significant ($p < 0.01$; $f = 3$; $\chi^2 = 11.375$) and draw attention to the parents of pupils in the 12th grade who are more interested in preparing their homework.

Leisure activity is not supervised by 34.65% of parents; there are also 12.87% of families where there is permanent supervision. However, the significant differences calculated ($p < 0.05$; $f = 3$; $\chi^2 = 9.125$) are encouraging because they focus on the higher percentage of parents of pupils in the final high school year who are interested in this aspect.

It is important to assess the concern of parents by also looking at the differences between the two schools. The pupils from the National College dream of going further with their studies so they need the support of the family but the level of support they obtain is insufficient. The calculated differences when looking at parents' concern for school activity are statistically insignificant ($p > 0.05$, $f = 3$, $\chi^2 = 3.097$) as are those related to how young people spend their free time ($p > 0.05$, $f = 3$, $\chi^2 = 1.282$) (Table 10).

Table 10.
Parents' interest in school activity and free time (by school).

Level of interest	Always	Often	Rarely	Never
	Homework			
School Group	10	13	31	31
National College	17	28	34	38
Level of interest	Free time			
	Always	Often	Rarely	Never
School Group	10	24	19	32
National College	16	30	33	38

5. DISCUSSION

The focus is mainly on pupils in the 12th grade who will take the graduation exam. It is an important exam because it allows them to continue their studies at a college or a post-secondary school. Solving this problem requires in-depth study that leads to the minimization of free time.

In this context, more attention must be paid to the pupils from the National College who need to be oriented towards a certain profession, which will ensure success in their future. The pupils from the technical high school are already oriented towards a certain profession (agriculture) but also some of them want to continue their studies.

Systematic physical activity is recommended for any age group. According to WHO recommendations, young people (5-17 years old) need at least 60 minutes of sustained activity per day, and adults (18-64 years old) need 150 minutes of moderate activity per day (WHO, 2017a; WHO, 2017b). Unfortunately for pupils in the studied group, such an answer appears only in 19.30% of situations, a result also present in other studies carried out on adolescents from a high school in the county of Iasi (15.8%) who were not in the final year of high school (Albu, Onose, Negrea, Crăcană, & Hodorcă, 2015).

When looking at schools, the calculated differences are statistically significant and draw attention to pupils in the School Group who are less interested in physical activity. It is a difficult result for pupils who are preparing for a job that requires a lot of movement. The pupils from the National College are a bit more interested in physical activity, but they also do not consistently reach the internationally recommended norms of at least 60 minutes a day (WHO, 2017b).

The modest time allotted for physical activity is recognized by most pupils, being present in 60.6% of young people in the USA (Miller, Sliwa, Brener, Park & Merlo, 2016). Instead, these young people spend more than 3 hours per day watching television programs (33.2%) or using the computer (40.3%).

In Ghana, many young people have a television in their room, which is turned on during their homework (27.6%), have a personal computer/laptop (41.7%) and even a gaming console (38.1%) in their room, so they have all the conditions to spend too much time in front of the television or computer (Gaa, Apprey, Annan, Mogre & Dzogbefia, 2019).

For pupils in the studied group, the result is interesting because there are many negative answers for both television programs (32.67%) and computers (44.05%). The study carried out on pupils from different high schools in Iasi highlights 22.78% negative answers for watching television programs and 11.81% for computer use (Albu, Hodorcă, Onose, Negrea & Crăcană, 2016). In the studied group, the differences obtained between the two schools are not statistically significant, an aspect that is difficult to understand when considering the pupils from the National College. Elite high schools, even in smaller cities, insist on computer activity and the development of educational and didactic programs with the help of digital technology. However, most pupils in our group do not spend much time on the computer, an aspect that must be taken into account.

Adolescents in southeastern Iran respond negatively in 9.03% of situations for watching television programs and in 49.34% of situations for computer use (Shahraki-Sanavi, Rakhshani, Ansari-Moghaddam & Mohamad, 2017). At the same time, daily physical activity that lasts 60 minutes is recognized by only 4.19% of girls. It is necessary to carry out in-depth studies related to pupils' habits of spending free time. These assessments are especially important for final high school years and pupils in large cities, but also in small cities where leisure activities are less numerous or tempting (Baciu, 2020b). Social relationships become essential for the evolution of young people. In the studied group, there is an interesting situation represented by maintaining the group of friends (3 or more friends) after the age of 14-15 years (28.21%) which demonstrates a later development of pupils in the studied group. Unfortunately, there are many negative responses (I do not spend time outside of school with friends) which raises some worries related to the trend of isolation.

Parents still have an important role to play. They must closely monitor the pupil's school and leisure activities. We obtained an important result because the parents of the 12th-grade pupils show a greater level of interest in these aspects, however, permanent supervision is present in about 10% of families. Results obtained when looking at the differences between the two schools are interesting but also alarming. Parents of pupils from the National College do not show an increased preoccupation with school activity, even though it is essential to graduate high school and go towards a higher level of study that will give them a better chance for employment. At the technical high school, the pupils are already oriented towards a certain type of profession, which can ensure their future, so the modest concern of parents for school activity and free time is easy to understand.

These are important issues because they can often be associated with inappropriate behavior. In England, lack of parental supervision (never/rarely) is associated with smoking (1.5%), alcohol consumption (10.4%), antisocial behaviors (18.5%) and behavioral problems (19.4%) (Zilanawala, Sacker & Kelly, 2017).

The study should continue by following issues related to when fatigue occurs and the clinical signs present in students. It is necessary to extend the study to larger and larger groups of students, from all geographical regions of Romania. Unfortunately, the ongoing global pandemic caused by the new coronavirus makes it extremely difficult to perform such a study.

6. CONCLUSION

Leisure activities must be closely supervised by parents as they can easily become tiring and disruptive for the sustained study required to finish high school. The time spent in front of the television screen does not indicate any major problems as in most cases it is between 30 minutes and 1 hour. The results are surprising when looking at time spent at the computer, where 40% of pupils choose the "none" option. The young people from the National College do not show a special interest in computer activity, which is interesting because they have computer classes in the school program and carry out a series of such activities. The many negative answers for watching television programs but also for computer activity highlight an unusual case for high schoolers.

Physical activity is practiced systematically by only 20% of young people, a result that is not encouraging. The pupils from the National College are more interested in this way of spending their free time, even though they are intensely preparing for their future careers. Sustained sports activity is not a concern of most pupils, an interesting result especially for young people from the school with a technical profile.

Social relationships are present in most cases but there is still a group of friends even in the 12th grade. The age of 17-18 years is associated with a change in social relationships and the orientation towards the formation of pairs of friends (especially boy-girl pairs) but this aspect is not yet present in a third of the students in the studied group. There is slow social evolution where we see young people maintaining the same group of friends, which in the final years of high school is an aspect that must be carefully monitored by specialists in the field. There is also a tendency towards isolation in a third of cases, which is worrying.

Generally, parents of students in their final high school years are less concerned with school performance or leisure activities, with more than 60% of cases choosing the "rarely" or "never" answers. This is especially important for pupils from the National College where graduation is essential for career orientation or continuing education at the postgraduate or university level, yet we do not see a significant difference between the two schools. In some cases, parents show an increased level of interest, because they are

preoccupied with securing their children's future. It is an essential moment in the young person's life, because at that age they do not become fully independent and aware of the importance of passing the graduation exam and securing a good career. Modest support from the family can easily be associated with school failure.

Such studies are important because they allow us to account for some factors that can be considered a risk in ensuring the future of young people.

REFERENCES

- Albu, A., Hodorcă, R. M., Onose, I., Negrea, M., & Crăcană, I. (2016). The evaluation of the scholar fatigue phenomenon and some causative factors in a group of teenagers from Iasi. *Global Journal of Sociology: Current Issues*, 6(2), 44-49.
- Albu, A., Moraru, C. E., & Hodorcă, R. M. (2015). The evaluation of some eating habits at a group of teenagers studying at Dimitri Catemir high school in Iasi. *Procedia - Social and Behavioral Sciences*, 197, 1947-1951.
- Albu, A., Onose I., Negrea M., Crăcană I., & Hodorcă R. M. (2015). Correlation between physical development diagnostic and exercise in a group of teens from Garabet Ibrăileanu high school in Iasi. *The European Proceedings of Social & Behavioral Sciences*, XI, 273-279.
- Arseniev-Koehler, A., Lee, H., McCormick, T., & Moreno, M. (2016). #Proana: Pro-eating disorders socialization on Twitter. *Journal of Adolescent Health*, 58(6), 659-664.
- Baciu, A. (2020a). *Digital addiction – an anthropological phenomenon of the present century*. Antropologia Mileniului III, București: Ed. Academiei Romane.
- Baciu, A. (2020b). Medical and social consequences of digital addiction. *Medical Anthropology, The Publishing House of the Romanian Academy*, 22(3), 141-147.
- Bringhof-Iser, B., Schinder, C., Kayser, B., Suggs, S., & Probst-Hensch, N. (2018). Objectively measured physical activity in population-representative parent-child pairs: parenteral modeling matters and is context-specific. *BMC Public Health*, 18,1024, 1-15.
- Endo, K., Ando, S., Shimodera, S., Yamasaki, S., Usami, S., Okazaki, Y., Sasaki, T., Richards, M., Hatch, S., & Nishida, A. (2017). Preference for solitude, social isolation, suicidal ideation, and self-harm in adolescents. *Journal of Adolescent Health*, 61(2), 187-191.
- Gaa, P., Apprey, C., Annan, R., Mogre, V., & Dzogbefia, V. P. (2019). The home and school environment, physical activity levels and adiposity indices of school-age children. *International Journal of Public Health Science*, 8(1), 82-92.
- Haapala, E. (2013). Cardiorespiratory fitness and motor skills in relation to cognition and academic performance in children- a review. *Journal of Human Kinetics*, 36(1), 55-68.
- Harris, S., Aalsma, M., Weitzman, E., Garcia-Huidobro, D., Wong, C., Hadland, S., Santelli, J., Park, J., & Ozer, E. (2017). Research on clinical preventive services for adolescents and young adults: where are we and where do we need to go? *Journal of Adolescent Health*, 60(3), 249-260.
- Haynos, A., Watts, A., Loth, K., Pearson, C., & Neumark-Stzainer, D. (2016). Factor predicting an escalation of restrictive eating during adolescence. *Journal of Adolescent Health*, 59(4), 391-396.
- Miller, G., Sliwa, S., Brener, N., Park, S., & Merlo, C. (2016). School district policies and adolescents' soda consumption. *Journal of Adolescent Health*, 59(1), 17-23.
- Montebello, M. (2020). A digital pedagogies'-based learning platform. In M. Carmo (Ed.), *Education and New Developments 2020* (pp. 168-172). Lisbon, Portugal: inScience Press.
- Naglaa, K. A. H. & Marwa, M. A. O. (2018). Lifestyle risk factors of iron deficiency anemia among adolescents' girls. *International Journal of Nursing Didactics*, 8(10), 18-28.
- Popescu, A. I. (2015). Family the center of qualitative development at the human species. *Anthropological Researches and Studies*, 5, 47-59.
- Shahraki-Sanavi, F., Rakhshani, F., Ansari-Moghaddam, A., & Mohamad M. (2017). Association of physical activity and sedentary behavior with dietary behavior among mid-adolescent female students in the southeast of Iran. *Medical Communication, bioscience biotechnology Research communication*, 10(4), 739-745.

- Tanaka, C., Okuda, M., Tanaka, M., Inoue, S., & Tanaka, S. (2018). Associations of physical activity and sedentary time in primary school children with their parenteral behaviors and supports. *International Journal of Environmental Research and Public Health*, 15(9), 1-15.
- WHO, 2017a. Physical activity and adults. Recommended levels of physical activity for adults aged 18-64 years. Retrieved from <https://www.who.int/dietphysicalactivity/physical-activity-recommendations-18-64years.pdf>
- WHO, 2017b. Physical activity and young people. Recommended levels of physical activity for children aged 5-17 years. Retrieved from <https://www.who.int/dietphysicalactivity/physical-activity-recommendations-5-17years.pdf>
- Yap, R. A. (2017). Weight management: it's effect in the prevention of obesity related illness. *International Journal of Physical Education, Fitness and Sports*, 6(4), 20-25.
- Zilanawala, A., Sacker, A., & Kelly, Y. (2017). Longitudinal latent cognitive profiles and psychosocial well-being in early adolescence. *Journal of Adolescent Health*, 61(4), 493-500.

AUTHORS' INFORMATION

Full name: Adriana Albu

Institutional affiliation: Grigore T. Popa University of Medicine and Pharmacy, Department of Preventive Medicine

Institutional address: Str. Universitatii nr.16, 700115, Iasi, Romania

Short biographical sketch: Associate Professor Dr. Adriana Albu graduated from the "Grigore T. Popa" University of Medicine and Pharmacy. She is a specialist in the field of Hygiene, especially school hygiene involving the supervision of physical and neuropsychological development of young children and teenagers. She is a Doctor of Medical Science with a Doctoral Thesis in the field of Physical Deficiency / Insufficiency, entitled: New physiometric tests to assess physical development and early stages of motor skills disorders.

Full name: Mihaela Vlada

Institutional affiliation: Vaslui County Public Health Department

Institutional address: Str. Republicii, nr. 367, sc. E-F, Vaslui, Romania

Short biographical sketch: Medical Bioengineer Mihaela Vlada graduated from the Faculty of Medical Bioengineering in Iași, with a specialization in Medical Bioinformatics and Health Management, and a master's degree in Medical Management. Involved in public health activities first as a coordinator of the national health programs in Vaslui county, then from the leading position of the county Public Health Department, the concern for health remaining a constant one.

Full name: Adina Iustina Nechita

Institutional affiliation: Grigore T. Popa University of Medicine and Pharmacy, Department of Preventive Medicine

Institutional address: Str. Universitatii nr.16, 700115, Iasi, Romania

Short biographical sketch: Dr. Adina Nechita graduated from the University of Medicine and Pharmacy in Iasi in 2020. Presently she is continuing her training in Denmark.

Full name: Florin Dima

Institutional affiliation: Vaslui County Public Health Department

Institutional address: Str. Republicii, nr. 367, sc. E-F, Vaslui, Romania

Short biographical sketch: Dr. Florin Dima graduated from the University of Medicine and Pharmacy in Iasi. He is a specialist in the field of Hygiene. In 2019, he started working in the Risk Factors for Living and Working Environment section of the Vaslui Public Health Department.