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## THE INFLUENCE OF THE COVID-19 PANDEMIC ON PHYSICAL ACTIVITY IN GIRLS

VAIDA Marius<sup>1</sup>

### Abstract

*Objective.* This study complements other studies previously conducted and aims at determining the current level of physical activity in girls in the current pandemic context, the data obtained being compared with the mentioned studies.

*Methods.* The research was conducted in 2022 on a number of 60 girls between the ages of 19 and 35 and was based on a questionnaire that shows the Physical Activity Index. The mentioned questionnaire has three parameters (intensity, duration and frequency) and is calculated very easily by multiplying the scores from each parameter, resulting in a value that shows us a score that can be interpreted according to a given appreciation grid.

*Results.* The results obtained show that, with the exception of the frequency parameter, all parameters and the Physical Activity Index decreased in 2022 compared to the other years researched, the difference between the best value of the Physical Activity Index and that obtained in 2022 being over 10 points, which shows us that the pandemic situation has affected us all, regardless of age, the girls being classified as insufficiently active/relatively sedentary, with a category of poor physical condition. Under the given conditions, it is recommended that the physical activity to be carried out permanently, even if this is done at home, at the office (during break), in the park, etc., and it can be done in the form of stretching, walking, running, fitness, etc. Movement containment measures taken during the COVID-19 pandemic have also had a negative effect on physical activity, the impossibility of leaving the house or certain restrictions that have been taken have caused regular physical activity to suffer.

*Conclusions.* Realizing that during the pandemic it is quite difficult to be an active person by diminishing opportunities, I believe that a regular schedule of physical activity can be maintained, which is a matter exclusively for the person concerned, the formation of a daily routine in which involves movement being recommended, by this maintaining a state of well-being felt by those who achieve this.

*Key words:* physical activity, girls, pandemic.

### Introduction

The current pandemic situation has had effects not only on the psyche of the population but also on the physique, this comparative study trying to determine the level of physical activity in girls in the given situation. Although there has been a lot of talk about the need for a weekly physical activity program at the level of young people and not only I want to emphasize what I have said above by the fact that a regular physical activity can only have beneficial effects on the functions, organs and tissues of the human body (Bota, 2000) .

Dumitru (1997) mentioned that "In 1988, in Toronto was held the first International Symposium on effort, fitness and health, a symposium that aimed

to critically examine all the evidence on the relationships between these three factors and to formulate a unified point of view of the experts in the field". The same author mentions that there was another symposium that had the same topic of discussion in 1992 "in which the issues and knowledge were brought up to date. Subsequently, the health benefits of physical activity have been examined and recognised by several international bodies, such as the World Health Organization, The International Federation of Sports Medicine, the American College of Sports Medicine and the Council of Europe". From the above we can clearly understand the importance of regular physical activity, this being recognized by the great

<sup>1</sup> Petroleum - Gas University of Ploiești, Romania



specialists from different fields but also by the international bodies.

Stoenescu (1990) recalled that before mentioning the multiple advantages related to the periodic practice of physical activity we must be aware of the effects that this activity has on the body. Also Stoenescu (1990) pointed out that regular practice of physical activity has the following effects:

- strengthens health, which positively influences various apparatuses and systems of the human body (systems: cardiovascular, endocrine, musculoskeletal, respiratory, digestive, nutrition and excretion functions, etc.);

- develops physical qualities with the increase of the body's resistance which leads to increased intellectual and physical output to increase the capacity to work and, implicitly, to increase the biological potential. Within the development of physical qualities we mention that a special coordination and skill is formed, practically and aesthetically reflected in physical exercise or various other activities;

- favors the independence between brain and morphic functions, simply put – between the intellect and the body (conclusion scientifically established by renowned scientists such as: Pavlov, etc.), as well as other well known effects.

Practicing any form of physical exercise also brings us benefits by forming the habit to exercise regularly, the more this skill occurs at a younger age, the greater the benefits (Cristea, 1990). It is also recommended, where possible, the movement to be done outdoors, in areas preferably unpolluted and to be a permanent practice, not only at certain times of the year.

Another recommendation is to choose various physical exercises that also take into account the options of those who execute them.

#### Research purpose and objectives

This study complements other previously conducted studies and aims to determine the current level of physical activity in girls in the current pandemic context, the data obtained being compared with the abovementioned studies (Vaida, 2019).

#### Research methods

The study was conducted in 2022 on 60 girls aged 19 to 35 years and was based on a questionnaire that shows us the Physical Activity Index (Dumitru, 1997).

The mentioned questionnaire has three parameters (intensity, duration and frequency) and is calculated very easily by multiplying the scores from each parameter, resulting in a value that shows us a score that can be interpreted according to a given appreciation grid (Dumitru, 1997; Suci, Dumitru., 1999).

Dumitru (1997) presents the questionnaire on the parameters, score and type of activity: *The intensity parameter* has the following activity types punctuated as follows: "Physical activity leads to pronounced acceleration of breathing (gasping) and relatively abundant sweating – 5 points; Effort that leads only from time to time (intermittent) to gasping and sweating – field tennis, etc. – 4 points; Effort not too hard - leisure sports – cycling – 3 points; Moderate effort – volleyball, etc – 2 points; Light effort – fishing, walking etc – 1 point". *The duration parameter* has the following activity types punctuated as follows: "Over 30 de minutes – 4 points; 20 – 30 de minutes – 3 points; 10 – 20 de minutes – 2 points; Under 10 minutes – 1 point". *The frequency parameter* has the following activity types punctuated as follows: "Daily or almost daily – 5 points; 3 – 5 times per week – 4 points; 1 – 2 times per week – 3 points; Several times per month – 2 points; Once or less per month – 1 point".

The evaluation grid (Dumitru, 1997) is presented with the characterization and category of physical condition according to the score obtained as follows: "80-100 points - very active lifestyle, physical condition category – superior; 60-80 points - active and healthy person, physical condition category – very good; 40-60 points – acceptable, physical condition category – reasonable; 20-40 points - insufficiently active/relatively sedentary, physical condition category – weak; <20 points – sedentary, physical condition category – very weak".

#### Results

The results obtained are presented below and reflect the current state of physical activity in young women in the current context.

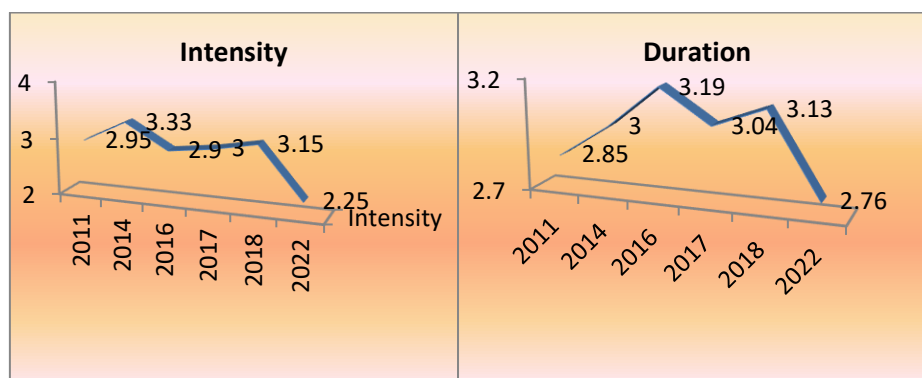
**Table 1.** Intensity parameter values

Girls	Intensity					
	2011	2014	2016	2017	2018	2022
<b>Arithmetic mean</b>	2,95	3,33	2,90	3	3,15	2.25
<b>Minimum</b>	1	1	1	2	1	1

<b>Maximum</b>	5	5	5	5	5	5
<b>Amplitude</b>	4	4	4	3	4	4
<b>Median</b>	3	3	3	3	3	2
<b>First quartile</b>	2	3	2	2	3	1
<b>3<sup>rd</sup> quartile</b>	3	4	3	3	4	3
<b>Standard deviation</b>	1,07	1,01	0,94	0,84	0,96	1.18
<b>Variability coefficient</b>	36,28	30,49	32,48	27,88	30,66	52.55

**Table 2.** Duration parameter values

<b>Girls</b>	<b>Duration</b>					
	2011	2014	2016	2017	2018	2022
<b>Arithmetic mean</b>	2,85	3	3,19	3,04	3,13	2.76
<b>Minimum</b>	1	1	1	2	1	1
<b>Maximum</b>	4	4	4	4	4	4
<b>Amplitude</b>	3	3	3	2	3	3
<b>Median</b>	3	3	4	3	3	3
<b>First quartile</b>	2	2	2	3	3	2
<b>3<sup>rd</sup> quartile</b>	3	4	4	3	4	3.5
<b>Standard deviation</b>	0,79	0,89	0,98	0,66	0,79	1.01
<b>Variability coefficient</b>	27,74	29,81	30,74	21,95	25,22	36.54



**Graphic 1.** Average values for intensity and duration parameters

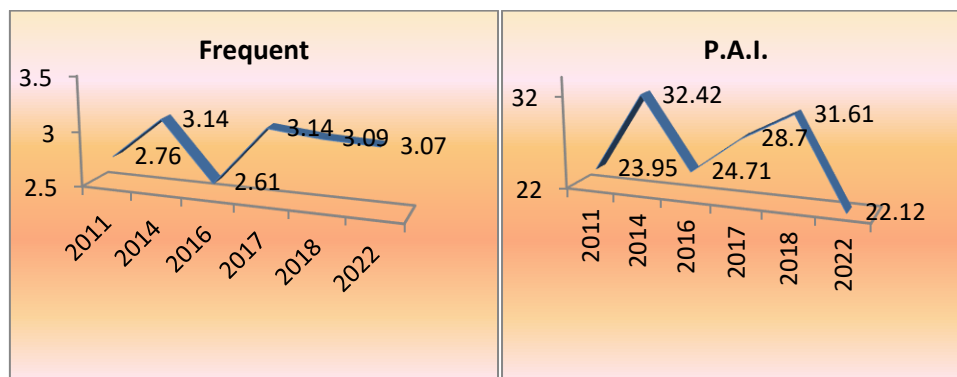
**Table 3.** Frequent parameter values

<b>Girls</b>	<b>Frequent</b>					
	2011	2014	2016	2017	2018	2022
<b>Arithmetic mean</b>	2,76	3,14	2,61	3,14	3,09	3.07
<b>Minimum</b>	1	1	1	1	1	1
<b>Maximum</b>	5	5	5	4	5	5

<b>Amplitude</b>	4	4	4	3	4	4
<b>Median</b>	3	3	3	3	3	3
<b>First quartile</b>	2	3	2	3	3	2
<b>3<sup>rd</sup> quartile</b>	3	4	3	4	3	4
<b>Standard deviation</b>	0,88	0,91	0,93	0,85	0,76	1.17
<b>Variability coefficient</b>	32,19	28,96	36	27,15	24,82	38.29

**Table 4.** Physical activity index values

<b>Girls</b>	<b>P.A.I.</b>					
	2011	2014	2016	2017	2018	2022
<b>Arithmetic mean</b>	23,95	32,42	24,71	28,7	31,61	22.12
<b>Minimum</b>	6	6	4	9	6	1
<b>Maximum</b>	48	80	60	60	64	80
<b>Amplitude</b>	42	74	56	51	58	79
<b>Median</b>	18	27	24	27	27	18
<b>First quartile</b>	12	18	12	24	18	8.5
<b>3<sup>rd</sup> quartile</b>	36	45	36	36	45	27
<b>Standard deviation</b>	14,39	18,89	15,31	13,03	16,16	20.85
<b>Variability coefficient</b>	60,10	58,25	61,97	45,30	51,10	94.26



**Graphic 2.** Average values for frequent and P.A.I. parameters

**Discussion**

Regarding the intensity parameter, it is noted that in the year 2022 the average value is the lowest of the six years investigated, a small scattering of the data is observed, i.e. the grouping of values around the average of 2.25 points. With the exception of 2011 and 2016 where the average value approaches 3 points, the rest of the years have values above 3 points.

The duration parameter is characterized in 2022 by an average of 2.76 points, having (like the intensity parameter) the lowest value of the average of the six years compared. With the exception of 2011 all years have values above 3 points. In 2022

the data are grouped around the average, their scattering being reduced.

Related to the frequency parameter we can see from the table and graph above that the average value is not the lowest (as it was at the parameters presented above), lower values being recorded in 2011 and 2016, the rest of the years having values higher than 2022. Maintaining the trend of the previous parameters, the year 2022 is characterized by a low scattering of data and its grouping around the average of 3.07 points.

The Physical Activity Index that was the basis of this study has the lowest value in all the years investigated, the year 2022 having an average of 22.12 points. Unlike the three parameters



previously discussed, the data scattering is high, the values being very varied.

### Conclusions

From the data presented it is found that, except for the frequency parameter, all parameters and the Physical Activity Index decreased in 2022 compared to the other years investigated.

The difference between the best Physical Activity Index value and the one obtained in 2022 is over 10 points which shows us that the pandemic situation has affected us all, regardless of age, girls qualifying as insufficiently active/relatively sedentary, with a category of poor physical condition.

Movement containment measures taken during the COVID-19 pandemic have also had a negative effect on physical activity, the impossibility of leaving the house or certain restrictions that have been taken have caused regular physical activity to suffer.

Under the given conditions, it is recommended that the physical activity to be carried out permanently, even if this is done at home, at the office (during break), in the park, etc., and it can be done in the form of stretching, walking, running, fitness, etc.

Movement, in whatever form it is achieved, brings only benefits that, in addition to those

presented in the introduction of the work they can also relieve mental tension by creating comfort for the person.

Realizing that during the pandemic it is quite difficult to be an active person by diminishing opportunities, I believe that a regular schedule of physical activity can be maintained, which is a matter exclusively for the person concerned, the formation of a daily routine in which involves movement being recommended, by this maintaining a state of well-being felt by those who achieve this.

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