

## THE IMPACT OF COVID-19 PANDEMIC ON STUDENTS' SPORT ACTIVITY

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**ABSTRACT.** The rapid spread of COVID-19 virus in Romania has had a substantial impact on higher education, where almost all institutions have been closed and on-site teaching activities have been replaced by online courses (at the peak of the pandemic, 90% of the world's students were affected by the closure of institutions). International research papers show that these prevention measures have increased stress and anxiety levels and the number of cases of depression. This fact had a considerable effect especially among the students of the physical education faculties, who could no longer support their sports activities. As shown in the present study, 80.5% of the students confirmed that they were affected physically and mental/emotional by the COVID-19 pandemic. The research aimed to identify the current physical condition, but also to compare the physical condition before and during the pandemic and to understand the emerging negative effects of the pandemic on students of the Faculty of Physical Education and Sports at Babeș-Bolyai University in Cluj-Napoca.

**Keywords:** *physical activity, health, pandemic, lifestyle, influence, benefits*

**REZUMAT.** *Impactul pandemiei de covid-19 asupra activității fizice a studenților.* Răspândirea rapidă a virusului COVID-19 în România a avut un impact substanțial asupra învățământului superior, unde aproape toate instituțiile au fost închise, iar activitățile de predare la fața locului au fost înlocuite cu cursuri online (în perioada de vârf a pandemiei, 90% din studenții lumii au fost afectați de închiderea instituțiilor). Cercetări internaționale arată că aceste măsuri de prevenire

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au crescut considerabil nivelul de stres și anxietate și numărul cazurilor de depresie. Acest fapt a avut un efect considerabil mai ales în rândul studenților facultăților de educație fizică, care nu mai puteau susține activitățile sportive. După cum se arată în studiul de față, 80,5% dintre studenți au confirmat că au fost afectați fizic și psihic/emoțional de pandemia COVID-19. Cercetarea și-a propus să identifice condiția fizică actuală, dar și să compare condiția fizică dinaintea și în timpul pandemiei și să înțeleagă efectele negative emergente ale pandemiei asupra studenților Facultății de Educație Fizică și Sport din cadrul Universității Babeș-Bolyai din Cluj-Napoca.

***Cuvinte-cheie:** activitate fizică, sănătate, pandemie, stil de viață, influență, beneficii*

## INTRODUCTION

Physical education and sports represent one of the most important components of a healthy lifestyle. Sport is a physical activity that takes place according to certain rules, assuming a specific training, based on obtaining results or performances. This activity influences a person's lifestyle, health and personality.

The COVID-19 pandemic has significantly influenced the well-being of students, as highlighted by multiple studies. For instance, Yotsidi et al. (2023) examined the mental distress and well-being of university students during the pandemic, revealing that students aged 18-20 experienced higher stress levels, and poor academic quality led to increased anxiety. Gratitude and resilience were positively correlated with improved relationships and well-being. Similarly, Lorini et al. (2023) found high levels of future anxiety and health complaints among Italian university students, with a sense of coherence and digital health literacy playing crucial roles in mitigating these effects. Siddiqua et al. (2023) reported that the pandemic exacerbated pre-existing mental health issues, with severe anxiety and stress prevalent among young students, particularly females. Furthermore, Younas et al. (2023) highlighted the importance of coping behaviors in alleviating the negative impact of the pandemic on students' physical and psychological health. Lastly, Seydooğulları (2023) identified various biopsychosocial, spiritual, and economic factors affecting students' well-being, emphasizing the need for targeted support to address these multifaceted challenges.

The above being considered, the onset of the pandemic has had a negative effect on the health and well-being of people around the world. The COVID-19 pandemic disrupted our lives in all its aspects: online education, homework,

social distancing, all of which had the greatest devastating impact on young people. With the limitation of travel, physical and social distance, the use of health protection measures, the prohibition of organizing activities, many young people were forced to give up sports, whether professional or amateur, thus affecting their mental, physical health and well-being. Through isolation, people were deprived of necessary information about their living environment, which caused a lot of anxiety.

Due to the introduction of measures to prevent the spread of the virus, the level of physical activity decreased and established a more sedentary lifestyle for students.

International research papers/documents show that these prevention measures have increased stress and anxiety levels and the number of cases of depression (Debowska, 2020). This fact had a considerable effect especially among the students of the physical education faculties, who could no longer support/practice their sports activities. As shown in the present study, 80.5% of the students confirmed that they were affected physically and mentally/emotionally by the COVID-19 pandemic.

The rapid spread of COVID-19 virus in Romania has had a substantial impact on higher education, where almost all institutions have been closed and on-site teaching activities have been replaced by online courses. In this context, the research aims to identify the status of the physical activity of students and compare data from before the pandemic to those during it in order to understand the emerging negative effects of the pandemic on students from the Faculty of Physical Education and Sports of the Babes-Bolyai University in Cluj-Napoca.

## **METHODS**

The impact of the COVID-19 pandemic on the sports activity of the students of the Faculty of Physical Education and Sports was examined through a confidential form addressed to all students of the faculty. The form was distributed both physically and online, with a design that made it easy to fill in via phone, tablet or computer, and had an average completion/filling time of 15 minutes.

“Snowball sampling” was used - a useful procedure in characterizing a population with specific traits - so the form was distributed as a web link to faculty members and was later provided to students who were encouraged to fill it in. The questionnaire was available for completion for one month, at the end of the year 2021.

The first part of the questionnaire included sociodemographic questions such as: gender, age, faculty, level of education and academic year. The next part included 7 questions assessed on a Likert scale with a linear set of answers with

values between 1 and 5 where 1 represents "total disagreement" and 5 represents "total agreement". The resulting internal consistency of the answers is relevant, an alpha coefficient (Cronbach) was obtained on average of 0.77. The last part consisted of 2 questions where the students had to answer if they started practicing a new sport during the pandemic and how they were affected by it.

## RESULTS

### Response rates

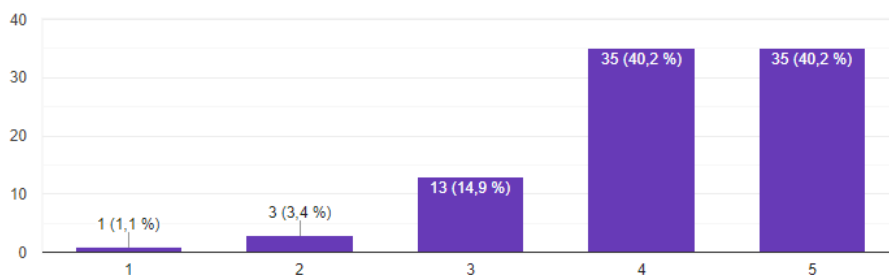
The number of recorded answers was 87, representing both bachelor's and master's degree students. Subjects that at the time were from the 2nd year of studies were overrepresented in the sample, for this reason it must be taken into consideration that the results of the study should be examined dissociated from this aspect. However, the age groups are adequately represented.

### Representativeness of the sample

The participants were 87 students with an average age of 20.87 years (standard deviation = 1.39) aged between 19 and 24 years. In terms of gender, 44 (50.6%) of the students reported male gender, and 43 (49.4%) reported female gender. The age difference between the genders is insignificant. 76 (87.4%) of the students are part of level 1 of higher education (bachelor's degree) and 11 (12.6%) are part of level 2 of studies (master's degree).

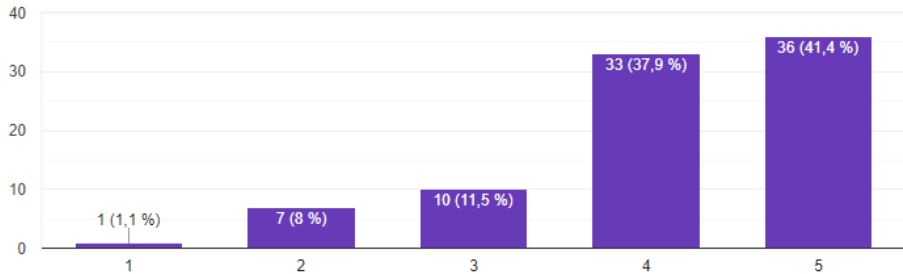
### The situation before the pandemic

80.4% of the students say they had a good or excellent physical condition before the pandemic, while a small part (14.9%) only average.



**Figure 1.** The level of the physical condition of students before the pandemic

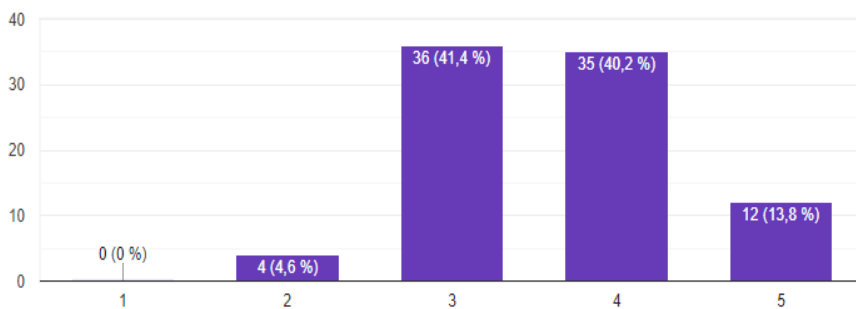
Also, 79.3% of them practiced sports often and very often, which was to be expected. This fact further outlines the previous pandemic situation, when students had an active sports life.



**Figure 2.** The level of the physical activity of students before the pandemic

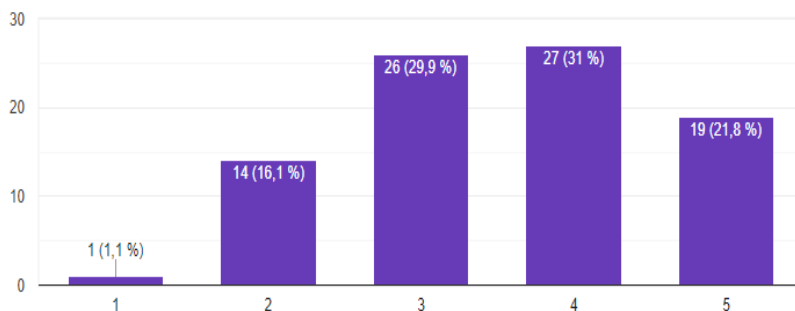
### The current situation

Currently, the physical condition of the students has decreased, but not very drastically. 41.4% of the students reported an average physical condition, 40.2% a good one, and a small part of them (13.8%) claim that they have a perfect physical condition. In the present, this fairly good physical condition (compared to that during the restrictions) of students may be due to the physical resumption of the faculty and the reduction of restrictions at the national level (reopening of gyms, etc.).



**Figure 3.** The level of the current physical condition of students

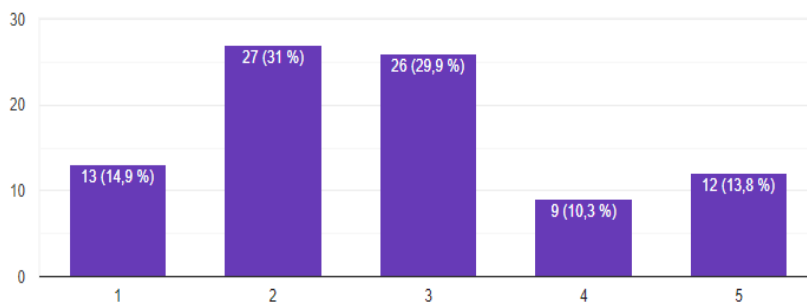
It should be noted that the time allocated to physical activities has decreased proportionally, on average a student currently does more than 20% less sports than he or she did before the pandemic.



**Figure 4.** The level of the current physical activity of students

### The situation during the restrictions

During the restrictions (quarantine, closed gyms, etc.) the situation of the students worsened, 45.9% of the students did little and very little sports.



**Figure 5.** The level of the physical activity of students during the pandemic.

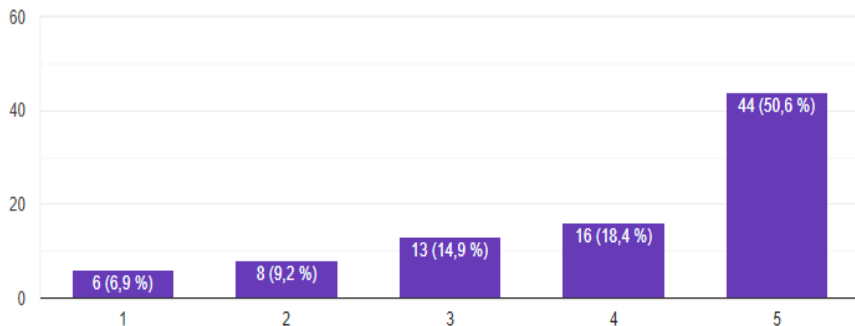
The pandemic caused by the spread of the COVID-19 virus has led to the creation of new measures such as isolation where the level of uncertainty has led to increased effects and negative emotions such as anxiety, depression, anger and stress (Tai et al., 2017). Other similar studies showed that participants had increased levels of stress, sleep disturbances, anxiety, and social dysfunction. Exposure to high levels of stress, anxiety, and depressive symptoms results in short- and long-term adverse effects on fitness, sleep quality, and athletic performance (Di Fronso et al., 2020).

The practice of physical activities has a great influence on the nervous system. By exercising regularly, we will have the pleasure of getting rid of the stress and constraints we face in our daily lives, because when we are active, we reduce the level of hormones that are responsible for producing stress. At the same time, exercise stimulates the production of endorphins, and we can keep stress and depression to a minimum.

Another important benefit that physical activities have on the body is the improvement of sleep quality. This is possible since sport requires physical effort. In this situation, the chances of falling asleep faster at the end of the day and having a deep and restful sleep increase. If we sleep better, we improve our memory, attention and concentration. Regular exercise requires the body to move, intensifying all activities in the human body: blood circulation in the lungs and other organs, respiration, exchange of nutrients in the tissues.

As highlighted in other studies, the health crisis has created new difficulties in the lives of students trying to combine academic study with a sports career, which has negative consequences on their emotional state. This can be explained by the emergence of new challenges in resuming activities and recovery, considering their dual careers (Abenza et al., 2020).

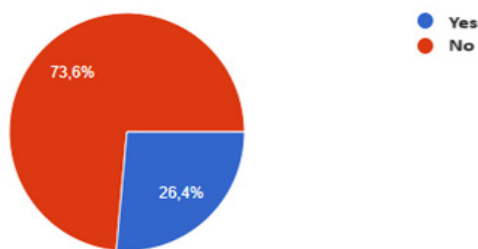
This was also reflected in the opinion of the students in the current study. 69% of them confirmed that the pandemic took a negative toll on their sports activity.



**Figure 6.** Perception of students regarding the negative toll of the pandemic on their sports activity

## DISCUSSIONS

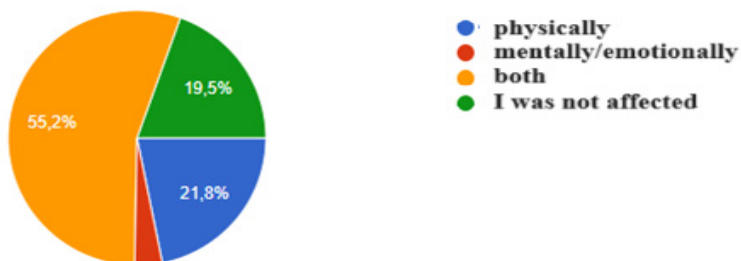
In the years before the pandemic, students used to learn and practice new sports on a regular basis. However, due to the conditions and the COVID-19 pandemic, 73.6% of the students claim that they have not started doing any new sport in the last 2 years, which is quite worrying.



**Figure 7.** The practice of a new sport during the pandemic.

There are theories that try to explain the effects of physical activity from a psychological point of view on the motivation and behavior of the participants. The results show that constant physical training has effects, in addition to the physical and psychological benefits, on the attitude, motivation and intention of the candidates who often support a high emotional load (Waddington et al., 1997).

Also, 55.2% of the students admitted that, due to the sudden and prolonged change in the way they were used to doing sports, they were affected both physically and mentally/emotionally.



**Figure 8.** Self-perceived physical and mental impact of the pandemic.

Some of them (19.5%) claim that they were not affected at all, most of the unaffected students had an active sports life during and before the pandemic.



Maintaining a high frequency of physical training can be associated with positive effects compared to the previous pandemic period. Thus, physical activity can be protective for emotional well-being and for mental well-being.

As a result of the COVID-19 virus, quarantine and isolation measures have been applied in many parts of the world. Although their purpose was to reduce contamination, other health problems such as stress, anxiety and other mood disorders have emerged (Sanguino et al., 2020). In relation to the students from the faculties of physical education and sports, the measures had adverse effects, due to the limitation of the students' possibilities to participate in various competitions and sports championships but also to the performance of sports in general. These things affected the level of physical performance, resulted in feelings of anxiety and depression and in some cases the onset of exhaustion syndrome (Gupta et al., 2021).

## CONCLUSIONS

The pandemic impact of the COVID-19 epidemic has undoubtedly affected higher education institutions. In order to study its effects on physical activity and the positive and negative effects of pandemic control measures such as quarantine, change of teaching and social physical distancing, the present study investigated the level of physical activity of students of the Faculty of Physical Education and Sports before pandemic but also during the pandemic. Based on the results obtained, it can be concluded that, in the case of the analyzed sample, maintaining a high frequency, intensity and duration of physical training during the pandemic can be associated with maintaining positive and negative effects similar to those before the pandemic.

The study seeks to highlight and identify different profiles of students because of the difficulties caused by the health crisis in their lives. Thus, some students with a pre-pandemic excellent physical condition - which may be associated with highly competitive or professional performance - suffer greater insecurity due to postponed competitions and other restrictions, which can result in decreased attention and of motivation during training, compared to the time before the crisis. Also, the level of stress remains high for all students due to the increased workload for physical and academic recovery.

Following the students' answers to the questionnaire, we concluded that many young people are aware of how important sport is in their lives, thus trying to make the best possible decisions regarding the practice of physical activities. With the onset of the pandemic, most young people have realized the strong impact that exercise can have on the human psyche and metabolism. So, whether it is a pandemic or not, sports should not be missing from the daily routine.

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