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STUDY ON THE FACTORS THAT DETERMINE ABANDONMENT IN PERFORMANCE SPORT IN ROMANIA

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Abstract

The COVID-19 pandemic has had serious effects on communities globally, leading to significant restrictions on all aspects of society, including sports. Several significant decisions have been made to postpone or cancel major swimming events by FINA (International Swimming Federation) and IBF (International Basketball Federation), including the unprecedented decision of the WHO (World Health Organization) and CIO (International Olympic Committee), to postpone the Summer Olympics, Tokyo 2020, for the period 23.07-08.08.2021. In addition to the structural aspect of the competition plan, in our study, we will look at how the COVID-19 pandemic affected athletes and coaches at the individual level and the professional relationship between them, as well as the dynamic and complex process of physical and psychological effects that isolation and the lack of training and competition activity have produced or not, anxiety or psychological disorders at the level of cadets and juniors both in individual sports (swimming) and in a team sport (basketball).

Keywords: COVID-19 pandemic, cadets, performance sports, swimming and basketball

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1. Introduction

Coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has had a severe effect on different communities, leading to many restrictions on several areas of society, including sports (Lai et al., 2020). Many governments have asked the population to stay home, except for urgent or necessary exits. Swimmers around the world found themselves in a unique situation, in which they were not only forced to stop their usual sports activity in the pools, but were also confined to their homes.

Being considered a contagious disease with a high degree of transmission through coughing, sneezing, direct skin contact, direct contact with contaminated surfaces, especially in enclosed spaces or by touching the eyes, nose and mouth, interpersonal relationships have been particularly affected, and the psychological repercussions are not yet fully known. The consequences of a pandemic, such as financial instability and/or social connection, go beyond the physical danger of the virus, turning in a concrete way the way people live, work, socialize and resist the stressors encountered daily.

In the absence of treatment for SARS-COV2, prevention strategies have been implemented and hygiene requirements have intensified, and intervention protocols have been developed to limit the transmission of the virus. Thus, in the case of swimmers, in addition to regular PCR testing and epidemiological triage performed before each training, special rules have been established regarding the number of athletes performing their training at the same time, as well as the constant sanitation of common areas. In the case of basketball players, the situation was similar regarding the epidemiological assessment and the implementation of mandatory hygiene rules on common areas and materials used during training, but being considered a contact sport, the training was carried out with the following specifications: mandatory wearing of masks, social distance at least 2 meters, training in small groups without physical contact, etc.

As of March 2020, most sports activities have been discontinued. Athletes have lost access to their main training mode because sports facilities have been closed. Thus, athletes and coaches were forced to turn their homes or yards into gyms and be creative about their basic training sessions in the water (e.g., private pools and indoor swimming in their backyard), and basketball (outdoor spaces, parks, spaces around the block), to maintain their fitness level and to avoid excessive detraining.

2. Problem Statement

The aim of this study is to highlight the difficulties that athletes face at the bio-psycho-social level resulting in early and / or voluntary cessation of performance sports activity before they have reached their full potential.

The extent to which the Covid-19 pandemic affected the training of performance swimmers in terms of training program and competitive activity, as well as the identification of the psychological and physical consequences it had on athletes.

The identification and delimitation of these factors will help us in the elaboration of a post-competitive intervention protocol and the adaptation of the teaching methodology according to age groups.

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3. Research Questions

i. Maybe the inability to adapt to the physical and mental effort, or the insufficient time to participate in other age appropriate activities are the causes of premature abandonment?
ii. Psychological interventions and training awareness through the application of programs specially designed for stress management will reduce the abandonment of performance athletes.
iii. Monitoring physiological parameters with polar-heart rate sensor and using cognitive restructuring techniques will prevent injuries and overtraining.

4. Purpose of the Study

The purpose of this study is to determine why cessation of sports activity occur before the athletes reach their full potential and how we can prevent it.

The inability to adapt to the physical and mental effort, or the insufficient time to participate in other age appropriate activities may causes crisis-specific symptoms, such as such as low self-esteem, emotional discomfort (doubts, anxiety, fear), increased sensitivity to failure, disorientation in decision making and confusion.

Psychological interventions can prevent these negative effects through specific stress management programs, cognitive restructuring techniques and development of assertive-emotional expression skills.

5. Research Methods

Starting from these premises, we propose the following research directions as a mixed method design:

Step 1. A Qualitative Study

A study on the number of junior swimmers and basketball players - legitimate athletes - who have given up sports in the last 5 years with the identification of the age range at which the dropout rate is the highest;

Analysis of the factors that determined the sports abandonment in the year of the pandemic with Sars-Cov 2;

Analysis of the competitive activity within the Swimming and Triathlon Federation, in terms of the dynamics of the number of athletes and performances (children-juniors-seniors) in the last 5 years.

Step 2.

Identifying the factors that led to the abandonment of competitive activity by established performance athletes and capitalization of this information in improving / optimizing sports activity at lower levels.

I will apply the questionnaire for the established performance athletes who retired from swimming in the last 10 years.

I will conduct interviews with coaches and top athletes from the best 10 clubs in Romania who gave up swimming in the last 5 years.

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Step 3. A Quantitativ Study

Modification of the training methodology for junior athletes - swimming, and monitoring its effects on involvement in training and competition activity, and assessment of the level of personal satisfaction.

Using the ”Polar - Waterproof Optical Heart Rate Sensor” we will measure heart rate, distance and pace automatically in pool, This will give us real feedback about the ability of each athlete.

By becoming aware of the program and the objectives, from the small age groups, we help on developing a long-term plan and continuity in training.

6. Findings

The joint study by several experts (Haddad et al., 2021) provided recommendations for the specific and non-specific training of swimmers during quarantine or isolation at home in order to maintain the optimal level of fitness. They listed some extremely expensive methods that could not be implemented in our country: the use of portable swimming pools that can be installed in the backyard, the use of the flume pool, the use of the simulator or the ergonomic trainer.

Most athletes have had to train using classic methods to reduce the effect of undraining, or decreasing muscle tone: running or cycling, land workouts using elastic bands or stretchers, circuit exercises, yoga workouts, plyometrics, isometrics, stretching and breathing, as well as improving psychological techniques through visualization and motivation exercises.

The physiological effect of detraining from the cardiovascular, cardiorespiratory, musculoskeletal and other perspectives has been studied by Mulcahey et al. (2021). Undraining is defined by these specialists as the partial or total loss of training-induced adaptations.

Studies on neuromuscular and cardiorespiratory function in terms of decreased muscle mass and strength as well as VO2 max exercise capacity, following the quarantine and mandatory isolation period, have shown the effects of detraining and increased risk of injury. Muscle atrophy affects muscle and joint mobility, limiting an athlete's movements that can lead to an increased risk of injury (Bosquet et al., 2017).

Cessation of physical activity has affected both performance athletes and people who play recreational sports, or to maintain an optimal level of health. Varandas et al. (2017) reported an overall loss of up to 10% of fitness for each week of physical inactivity. In addition, the loss rate for aerobic endurance and strength endurance has been shown to be higher than for speed and maximum strength, which is important for endurance swimmers in developing a protocol for returning to physical performance.

Regarding the effect of the pandemic on the daily and weekly volume swam by athletes, research conducted by Perez et al. (2022) showed that the most affected are long distance swimmers of 800 m and 1500 m Freestyle, to an insignificant extent they have those in the middle distance were also affected, especially the 200 m swimmers, and the sprinters improved their performance, thus strengthening the authors' conception of the qualitative approach to training to the detriment of quantity.

Such research provides us with important information on the dropout rate because the high volume of swimming is one of the factors that determine the monotony and reduce the pleasure of participating in

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training. Thus, the development of a strategy for maximizing and cognitive restructuring of athletes in order to achieve long-term goals is emphasized. Regarding the risk of injury, the study conducted by Feijen et al. (2020) reiterated the concept of individualization of training, because training with high volume and intensity are associated with pain in the shoulders, especially in adolescents and increase the risk overtraining or burnout.

Specialist studies (Ormsbee & Arciero, n.d.) show that 35-42 days of swimming cessation for healthy young people (boys and girls) attending college, but who followed a light exercise program, led to an increase 1.3% of body weight; 12.2% increase in body fat; 7.7% decrease in maximum oxygen consumption; 7% decrease in resting metabolic rate and no difference in blood lipids or mood.

Alonso et al. (2022) investigating how the COVID-19 pandemic affected professional players in the NBA National Basketball League revealed the extraordinary level of performance athletes in understanding, adapting, and maintaining their calmness and optimal fitness level in the conditions imposed by isolation. As in the case of the swimmers, the professionals did not feel the effects of the untraining, the clubs and federations made immediate decisions so that they could carry out their activity in complete safety.

In team sports, an important aspect in training as well as in competition is the involvement and interaction of teammates and opponents. This was not possible in individual training and affected social behavior, decreasing the level of pleasure felt during training. Another notable consequence was the lack of fans and supporters in the stands in the 2020-2021 competition year. The advantage created by the fans, by intimidating the opposing team in the home matches, was considerably diminished by the measures imposed by the authorities by banning the fans present in the stands.

Research by Lorenzo Calvo et al. (2021), on basketball players in Spain, following the psychological effects that the lockdown had on their mood and level of training, highlighted the direct link between training habits and the decrease in fitness level, as well as the increase stress level. This has been especially noticeable in athletes who do not know how to manage their emotions and have a negative thinking, being even less trained aptly.

Demarie et al. (2022) conducted a comparative study on the impact of the COVID-19 pandemic following the rules imposed in the 2019-2020 competition year on the results of swimmers participating in the 100 m and 200 m back and free trials of the Games Summer Olympics from Rio de Janeiro (2016) and Tokyo (2021). The analysis of the data, regarding the times, records and the difference between the time of the winners and the last place in the final, showed that the athletes' performances continued in an ascending trend, and the quarantine period did not affect the quality and form of the sport. Unlike team sports, where fans play an important role in the Tokyo swimming competition, the lack of support from the stands did not affect the quality of the athletes and their results.

In Romania, starting with March 2020, all the competitions organized by the Bucharest Municipal Swimming Association have been canceled, a decision to be revised (2022), wishing to restart the competitions as soon as possible.

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Table 1. Swimming competitions held in 2019-2021

2019	2020	2021
Children age 10-11 :	**Children age 10-11 :**	**Children age 10-11 :**
National Championship, regional stage, București; Oradea; Bacău National Championship, Brașov National Championship Poliatlon, Pitești	National Championship, București, Lia Manoliu	National Championship Poliatlon, Bacău
Cadets age 12-14 :	Cadets age 12-14 :	Cadets age 12-14 :
National Championship regional stage, Izvorani; Baia Mare; Bacău National Championship, Târgoviște Romanian Cup, Pitești	National Championship, București Lia Manoliu	National Championship, București Romanian Cup, Brașov
Seniors, Youths, Juniors:	Seniors,Youths,Juniors	Seniors, Youths, Juniors:
National Championship in long course 50m, Bacău Interntional Championship of Romania, București National Championship short course 25m, seniors, youths, juniors	National Championship long course 50m, București, Lia Manoliu	Romanian Cup 2021, Male / Female Târgoviște National Championship, long course 50m. Female / Male, București National Championship Open Water, jun/youth/seniors/masters, Constanța National Championship short course 25 m, Miercurea Ciuc

According to F.R.N.P.M. (Romanian Swimming and Modern Pentathlon Federation) in 2020, only 3 swimming competitions took place, the National Championship in the 50m pool. Addressed to seniors, youth and juniors (30.09-03.10.2020); The National Championship for children 10-11 years old (9-11.10.2020) and the National Championship for Cadets 12-14 years old (22-29.11.2020). A remarkable difference compared to 2019, in which 14 national swimming competitions were organized and 2021, with 11 national swimming competitions but with the participation of a small number of athletes, differentiated by gender (sex). Another important aspect is the number of competitions addressed to a certain age categories: in 2019 there were 5 competitions for children 10-11 years, 5 competitions for cadets 12-14 years and 3 championships for seniors, youth and juniors; in 2020, with great difficulty the federation manage to organize a competition for each age category. And in 2021, under the auspices of legal regulations to reduce the epidemiological risk, separate championships were organized for women and men totaling: 1 championship for children, 2 for cadets and 4 for seniors, youth and juniors (table 1).

Within private clubs, the activity takes place in rented spaces, and the pandemic auspices have made it impossible to practice the sport and implicitly the material gain to pay for these facilities. There are situations in which the clubs have had to change their location or even close their professional activity.

In addition to this aspect, there is also the quarantine and/or isolation period from March 2020, when all the sports facilities were closed and the swimmers had to train at home. The athletes who are part of the national team, had the privilege to train in the Sydney 2000 sports facility, from Izvorani, in closed regime and with daily medical control. Athletes whose clubs have their own swimming pool carried out their activities according to the regulations imposed by the authorities and returned to the

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water, to specific training faster than the state clubs, which had to wait for certain specific ordinances and regulations.

Among established athletes, the loss of specific training was two months, during which they trained outdoors, or with the help of swimming simulators, as stated by Robert Glință for Digi24 (The Secret of Robert Glință, the golden swimmer of Romania: How it trained "on land", in a pandemic, when the pools were closed | Digi24). He said: "I had a lot to gain by training on land besides the simulator - running, running on a slope, which were very painful, I found some weights with which to do muscle hypertrophy, to continue training the muscles. And after the swimming pools opened, I entered the pool with a very good aerobic capacity, I really had something to gain, I had endurance training and it was really easy for me to support myself from a respiratory and cardiovascular point of view. , so it didn't take me long to get to the level I was in before the lockdown started. "

The losses were felt among the children, who had to stay at home for a long time. The gradual return to outdoor physical activity made them focus on more accessible sports, thus giving up swimming. Sprint Team 88 Csikzereda (private club) lost most of its athletes, noting that in the first pandemic period out of 118 legitimate athletes, only 18 returned to work when they were allowed to resume water activities, and the following year they managed to retrieve to swimming only 23 athletes. The Army Sports Club "STEAUA" Bucharest (state club), did not feel any loss among the performance athletes in the swimming section, they managed to maintain their physical condition through non-specific exercises, at home or outdoors with the help of technology, in live sessions. In the initiation and selection groups, there are no conclusive data to support the abandonment of swimming, due to pandemic restrictions.

In Australia, the pandemic effect on sports society has been strong, as much of the organization and practice of sport is based on volunteering and donations. According to research paper by Elliott et al. (2021) understanding the pandemic implications on young athletes, sports clubs and the organization process is an important component in restoring sport as a central component in community development, people, in a way healthy, harmonious both physically and psychologically. This study reinforces the conclusion of other authors that the most affected category is that of young athletes, especially girls who have a higher dropout rate, because performance, the elite of athletes in this country had the moral and financial support of profile government structures.

The research conducted by Torres-Martín et al. (2021) on the way in which the COVID-19 pandemic affected, psychologically, the basketball coaches delimited 3 areas (green-low risk, yellow-medium risk and red-high risk) of the level of stress felt by them in relation sportsman-coach-club and sports performance. This study showed that coaches with a low degree of experience are the most affected by stress, pressure and professional limitations that can lead to mental wear and burnout.

7. Conclusions

We can say that for the elite performance swimmers, participants in the J.O. Tokyo, the year of pandemic restrictions, was an opportunity to improve training through individualized programs that led to better performance, with clubs and federations providing them with the best conditions.

The categories of children, cadets and juniors were the most affected in that period of restrictions and isolation, being forced to be limited to land training, non-specific, for a longer period of time (over 2 months).

As a result of these data (Table 1) and research conducted globally, it is necessary to develop a larger study on the effects of the COVID-19 pandemic in Romania, which specifically targets the young age groups, children and cadets, practitioners of swimming and basketball in an organized framework, in order to be able to compare the flow and the level of the factors that determine the abandonment at these ages, as well as the elaboration of a prevention protocol, meant to diminish the discovered negative effects.

References

Alonso, E., Lorenzo, A., Ribas, C., & Gómez, M. Á. (2022). Impact of COVID-19 Pandemic on HOME Advantage in Different European Professional Basketball Leagues. *Perceptual and Motor Skills, 129*(2). https://doi.org/10.1177/00315125211072483

Bosquet, L., Berryman, N., & Mujika, I. (2017). Managing the training load of overreached athletes: Insights from the detraining and tapering literature. In *Sport, Recovery, and Performance: Interdisciplinary Insights*. https://doi.org/10.4324/9781315268149

Demarie, S., Chirico, E., & Galvani, C. (2022). Prediction and Analysis of Tokyo Olympic Games Swimming Results: Impact of the COVID-19 Pandemic on Swimmers' Performance. *International Journal of Environmental Research and Public Health, 19*(4). https://doi.org/10.3390/ijerph19042110

Elliott, S., Drummond, M. J., Prichard, I., Eime, R., Drummond, C., & Mason, R. (2021). Understanding the impact of COVID-19 on youth sport in Australia and consequences for future participation and retention. *BMC Public Health, 21*(1). https://doi.org/10.1186/s12889-021-10505-5

Feijen, S., Tate, A., Kuppens, K., Claes, A., & Struyf, F. (2020). Swim-Training Volume and Shoulder Pain Across the Life Span of the Competitive Swimmer: A Systematic Review. *Journal of Athletic Training, 55*(1), 32–41. https://doi.org/10.4085/1062-6050-439-18

Haddad, M., Abbes, Z., Mujika, I., & Chamari, K. (2021). Impact of covid-19 on swimming training: Practical recommendations during home confinement/isolation. In *International Journal of Environmental Research and Public Health, 1*8(9). https://doi.org/10.3390/ijerph18094767

Lai, C.-C., Shih, T.-P., Ko, W.-C., Tang, H.-J., & Hsueh, P.-R. (2020). Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): The epidemic and the challenges. *International Journal of Antimicrobial Agents, 55*(3), 105924. https://doi.org/10.1016/j.ijantimicag.2020.105924

Lorenzo Calvo, J., Granado-Peinado, M., de la Rubia, A., Muriarte, D., Lorenzo, A., & Mon-López, D. (2021). Psychological states and training habits during the covid-19 pandemic lockdown in spanish basketball athletes. *International Journal of Environmental Research and Public Health, 18*(17). https://doi.org/10.3390/ijerph18179025

Mulcahey, M. K., Gianakos, A. L., Mercurio, A., Rodeo, S., & Sutton, K. M. (2021). Sports Medicine Considerations During the COVID-19 Pandemic. *The American Journal of Sports Medicine, 49*(2), 512–521. https://doi.org/10.1177/0363546520975186

Ormsbee, M. J., & Arciero, P. J. (n.d.). *Detraining increases body fat and weight and decreases, vol 2 peak and metabolic rate*. www.nsca.com

Perez, G. M., Vansumeren, M., Brown, M., & Hew-Butler, T. (2022). Pandemic-induced reductions on swim training volume and performance in collegiate swimmers. *International Journal of Environmental Research and Public Health, 19*(1). https://doi.org/10.3390/ijerph19010164

Torres-Martín, C., Alemany-Arrebola, I., Lorenzo-Martín, M. E., & Mingorance-Estrada, Á. C. (2021). Psychological distress and psychosocial factors in the non-formal context of basketball coaches in

times of the covid-19 pandemic. *International Journal of Environmental Research and Public Health, 18*(16). https://doi.org/10.3390/ijerph18168722

Varandas, F., Oliveira, N., Araújo, J. P., Beckert, P., & Biosca, P. (2017). How to Examine an Athlete on the Field: What You Should Not Miss. In *Injuries and Health Problems in Football* (pp. 29–40). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-662-53924-8_5