

The Achievement Motivation Amongst Individual and Team Athletes in Response to Changes in Training Volume During the COVID-19 Pandemic

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Abstract

The present study addresses the difficulties faced by some athletes in the COVID-19 pandemic. We present the quantitative and qualitative changes in the training sessions of individual and team athletes and their adaptation to the pandemic. The study aimed principally to examine the differences in the athletes' achievement motivation resulting from changes in weekly training volume. To check the parameters of training and pandemic adaptation, 79 volleyball, basketball, and rowing athletes aged 19–24 filled in the Sport Orientation Questionnaire (SOQ) and a self-constructed questionnaire. There were differences in the quality and quantity of training before and after the pandemic in each discipline. Most of the athletes experienced mental and physical deterioration during the pandemic but declared that they coped moderately to well. Of those athletes who reduced their weekly training, team athletes were less competitive, and a decrease in goal and win orientation in individual disciplines was observed.

Keywords: COVID-19, individual and team athletes, weekly training volume, motivation

Introduction

The COVID-19 (or coronavirus) pandemic (hereafter, the pandemic) has been described as one of the most serious of the last hundred years (Yeo, 2020). The WHO defines a pandemic as “the global spread of a new disease to which the human population has little or no immunity” (Mann et al., 2020, p. 1). This infectious disease primarily affects the respiratory system, and the SARS-CoV-2 virus is responsible for its spread. The first outbreak of the disease was discovered in Wuhan, China, in 2019. Since then, it has spread very rapidly to other continents, and it has mutated. The pandemic was announced in March 2020. The very rapid spread of the disease, the result of its high infectivity, made it possible to speak of a threat to the whole world.

The pandemic has affected various areas of our lives – both private and professional. As a result of government restrictions, athletes have experienced wide-ranging effects, including unforeseen changes in their training routines (Fiorilli et al., 2021). The need to minimise the spread of the coronavirus has impacted sporting and physical activity. As a result of the lockdown (a term that referred to the need for people to isolate in their homes to avoid the risk of spreading the disease), athletes stopped using training rooms or gyms. From the moment the

pandemic was announced until the end of May 2020, training sessions took place only at home. Events were cancelled or postponed, including the Olympic Games in Tokyo, which were scheduled for 2020. Athletes were often not informed about changes to the dates of events, which caused chaos and confusion. Exercises in the open air were allowed to take place in a limited way. Due to the availability of equipment, some exercises / exercise groups could not be carried out to the extent that it was before the pandemic. There was also a significant increase in online activity (using the app) and an increase in home training (Martin, et. al., 2021). The resumption of activity at sports facilities required compliance with the sanitary regime – wearing a mask in public spaces, maintaining social distance, and disinfecting hands and surfaces. The training time had to be modified due to the availability of gyms, sports facilities or the limitation of the number of people training simultaneously. Therefore, athletes trained in smaller groups and began to take part in competitions where spectators were absent. Frequent changes to government restrictions introduced and the need for a limited form of training led to an increase in anxiety levels amongst athletes, isolation, and more sedentary lifestyles (Yeo, 2020).

The pandemic is closely related to the mental health of athletes (Kang, et. al, 2020). Research indicates that

quarantine was one of the risk factors for stress-related difficulties (Bai, et. al, 2020). A justified fear of worsening physical health was accompanied by concerns about mental health, for example, anxiety symptoms, apathy, and depression (Di Fronso et al., 2020; Mehrafsafar et al., 2020). Hejmanowski (2020) noted an increase in the number of athletes struggling with stress, which may in turn have had consequences in terms of motivation to continue training, compete, or achieve other sporting goals. Achievement motivation has been defined as the need to compete and the will to develop oneself, reach one's goals, and strive for the best results (Gorący & Opacińska, 2015). It is one of the key conditions for achieving sporting success. It also became a predictor of physical activity after the lockdown period. The relationship between achievement motivation and sporting activity was emphasized as early as in the 1970s, for example Karolczak-Biernacka (1976) emphasizes that motivation plays a decisive role in achieving sports success. Motivation directs an athlete to engage in activity and reach their goals and helps them to overcome obstacles (such as the pandemic; Ruffault, et al., 2020). Other studies have shown that older, long-serving athletes, lower-level athletes, and athletes without a designated training programme were characterized by a lower level of motivation during the coronavirus crisis (Ruffault et al., 2020). Lautenbach et al. (2020) stated that there were differences in motivation amongst athletes in team and individual disciplines during the pandemic. They also found differences between males and females, with the former showing a higher level of motivation during the pandemic.

Differences between individual and team athletes in functioning during a pandemic were indicated in other studies (f.e. Martin, et.al., 2021; Uroh, Adewunmi, 2021). Hence, it was also decided to point out the differences between volleyball players, basketball players and rowers. It is assumed that a representative of team sports experiences more restrictions due to the introduced restrictions of social distance, the number of people training, which applies mainly to teams. On the other hand, rowers could feel the change in the quality of training due to the specificity of sport (training on water during a pandemic had to be transferred to ergometers).

Aim of the Present Study

The main aim of the present study was to examine whether there were any differences in motivation levels amongst groups who had experienced a reduction or no difference in training due to the pandemic. We also wanted to investigate whether there were any qualitative changes in training, physical and mental states, and coping mechanisms amongst team and individual athletes, respectively. It was assumed whether there were a differences in the number and length of training between athletes in individual and team sports

Material and Methods

Participants

The present study included 79 individual and team athletes (44 of them were females) aged 19-24 years old with a minimum one year of sports experience and who trained for a minimum of three times per week before the pandemic. Respondents include both athletes of sports clubs and people not affiliated with clubs. Among the individual athletes there were 17 females and 23 males. In the group of athletes representing team disciplines, there were 27 females and 12 males. The average age of the respondents was 22.03 ± 1.50 years ($Mdn = 22$). Neither the females ($M = 21.98$, $SD = 1.36$; $Mdn = 22$) nor the males ($M = 22.09$, $SD = 1.69$; $Mdn = 22$) differed significantly in terms of age ($z = -0.60$; $p = 0.547$). Most of the participants represented large cities (83.54%) and had finished secondary education (81.01%).

The team athletes were volleyball ($n = 20$; 25.32% of all participants) and basketball players ($n = 19$; 24.05%) and the individual athletes were single rowers ($n = 40$; 50.63%). The team and individual athletes differed slightly but significantly in age ($Mdn_{team} = 22$; $Mdn_{ind} = 23$; $z = -2.67$; $p = 0.008$).

The study was conducted from May to November 2020 during the first and second waves of COVID-19 cases. The end of May saw the reopening of gyms and sports clubs that had been closed since the previous March. Some sports facilities were opened in compliance with the sanitary regime. The number of people who were allowed in sports halls at the same time were gradually increased. In October, regional restrictions on sporting events remained in force – in regions with the greatest restrictions, events were held without public participation, and in less restricted regions with lower occupancy, the number of spectators accounted for 25% of seats. Gyms and fitness clubs closed again in October. The research was anonymous, voluntary, and conducted entirely online. All the respondents gave their informed consent to participate in the study, and ethical guidelines were abided by. The study protocol was approved in accordance with the Helsinki Declaration.

Instruments

Two self-report questionnaires in online form were used in the present study.

The Sport Orientation Questionnaire (SOQ; Gill & Deeter, 1988; Polish adaptation by Krawczyński, 2004) is used to evaluate the achievement motivation construct. It comprises three subscales: competitiveness (13 items); win orientation (6 items); and goal orientation (6 items). Competitiveness describes the need to participate in, bear the associated effort, and the desire to be successful in sports competition. Win orientation refers to a player's orientation towards victory. The persistent effort to achieve sports goals is referred to as goal orientation.

tation. Due to the lack of information about the reliability of the Polish version of the questionnaire, the internal consistency of the own measurement was checked and it was found that Cronbach's alpha was 0.87 for the full scale and for the subscales: competition 0.78, win 0.79, goal 0.81. The different number of statements on the SOQ subscales makes it impossible to compare the raw scores obtained by summing the athletes' responses. Each sum was divided by the number of items on the subscale. Weighted averages allowed for the comparison of players' motivations.

The second questionnaire was created specifically for the present study. First, it allowed the assessment of quantitative and qualitative changes in training parameters relating to the periods before and during the pandemic. Quantitative training parameters included questions about e.g. the number of training sessions per week and the duration of daily training. Qualitative variables related to the form of training during the pandemic, for example, changes in endurance, strength, or stretching exercises, modifications in specialised training and being focused on particular parts of the body (the respondents could indicate whether the amount of these exercises increased, decreased or remained the same). Second, the respondents answered questions regarding physical and mental deterioration as a consequence of the pandemic, if they felt they adapted to the pandemic, whether they used the advice of specialists and whether they used the advice of specialists and how they coped with it (answers from bad to good). The questionnaire included questions relating to socio-demographic data (i.e., gender and age) and information relating to the respondent's sport (i.e., discipline and experience).

Statistical Analysis

Statistica Version 13 (Stat Soft, Tulsa, OK) was used to analyse the results. The normality of the distribution was checked. The data were not normally distributed for most of the variables, so non-parametric tests were used. In most cases, the team athletes differed statistically from the individuals, so the analyses proceed-

ed accordingly. Gender differences were also controlled for. Descriptive statistics (i.e., M , SD , minimum, maximum, and Mdn) were used to illustrate the characteristics of the respondents. Count tables were used to present qualitative changes in sports training during pandemic amongst individual and team athletes. The differences in the quantity of training and level of motivation between individual and team athletes were checked using the Mann-Whitney U test. Differences in motivation level in individual and team groups who have experienced a reduction in training due to the pandemic and who felt no changes in training volume due to the pandemic were examined by the same test. The significance of differences in the quality of training during the coronavirus pandemic between individual and team athletes was verified by the chi test² or Spearman's rank correlation coefficient. Wilcoxon test was applied to determine the differences in the quantity of training before and during pandemic in team and individual disciplines as well as to check the differences between the level of motivation in all subscales. Statistical significance was defined for a p -value lower than .05.

Results

Changes in Training Quantity

There are significant differences in the number and length of training between athletes in individual and team sports (Table 1). The mean number of trainings per week before the pandemic is greater than during the pandemic both in individual and team sports. The average duration of training per day before the pandemic was longer than during the pandemic in both individual and team sports. The individual athletes spent more time training before and after the pandemic than the team athletes.

Quality of Training Before and During the Pandemic

Differences in the quality of training noted by athletes of both types of disciplines were examined (Table 2). More than half of the individual athletes did not no-

Table 1. Descriptive Statistics and Differences in Quantity of Training Before and During the Pandemic in Two Types of Discipline ($n_{ind} = 40$; $n_{team} = 39$)

Variable	Type of discipline	Before the pandemic			During the pandemic			z (Wilcoxon test)
		$M \pm SD$	Mdn	Range	$M \pm SD$	Mdn	Range	
Trainings per week (no.)	Ind.	4.20 ± 1.2	4	3–7	3.93 ± 1.0	4	3–6	$z = 2.69, p = 0.007$
	Team	3.10 ± 0.4	3	3–5	2.72 ± 1.1	3	0–6	$z = 2.25, p = 0.024$
	U M-W	$z = -4.96, p = 0.000$			$z = -4.65, p = 0.000$			
Training length per day (hr)	Ind.	2.66 ± 0.9	3	1.5–6	2.59 ± 0.9	2.5	1–6	$z = 1.68, p = 0.000$
	Team	1.75 ± 0.3	1.5	1.5–2.3	1.53 ± 0.4	1.5	0–2	$z = 3.18, p = 0.000$
	U M-W	$z = -5.22, p = 0.000$			$z = -5.76, p = 0.000$			

Note. The significant ($p < .05$) results are in bold.

Table 2. Differences in Quality of Training Before and During the Pandemic in Individual and Team Athletes ($n_{ind} = 40$; $n_{team} = 39$)

Variable	The range of changes	N (%)		$r_s/\chi^2, p^*$
		Individual	Team	
Endurance exercises ¹	-1	8 (20)	8 (20.51)	$r_s = 0.12, p = 0.306$
	0	22 (55)	15 (38.46)	
	1	10 (25)	16 (41.03)	
Strength exercises ¹	-1	6 (15)	16 (41.03)	$r_s = -0.25, p = 0.029$
	0	22 (55)	15 (38.46)	
	1	12 (30)	8 (20.51)	
Core exercises	-1	3 (7.5)	5 (12.82)	$r_s = 0.01, p = 0.912$
	0	15 (37.5)	11 (28.21)	
	1	22 (55)	23 (58.97)	
Stretching exercises ¹	-1	13 (32.5)	13 (33.33)	$r_s = -0.05, p = 0.630$
	0	21 (52.5)	23 (58.97)	
	1	6 (15)	3 (7.69)	
Greater focus on specific parts of the body	No	25 (62.5)	33 (84.62)	$\chi^2 = 4.95, p = 0.026$
	Yes	15 (37.5)	6 (15.38)	
Changes in specialised training	No	4 (10)	26 (66.67)	$\chi^2 = 26.92, p < 0.001$
	Yes	36 (90)	13 (33.33)	

¹ Variable was marked according to the following criteria -1: fewer exercises of a given type, 0: no changes in the given type of training, 1: more exercises of a given type

* r_s : Spearman's rank correlation coefficient; χ^2 : chi-test; p: statistical significance level

Note. The significant ($p < .05$) results are in bold.

tice any changes in strength training, while most of the team athletes reported a lower amount. The vast majority of the individual athletes felt there were changes in specialist training (e.g., changing to home training from training on the water), while the team athletes did not. Additionally, more individual than team athletes noticed changes in focus on specific parts of the body (e.g., more workouts for legs, arms, and the back). The respondents also pointed to other changes, for example, training in smaller groups, at home, training without a trainer or the trainer's limited availability, less space for training, and less gym availability. Rehabilitation and self-discipline were considered difficult during the pandemic.

Pandemic Responses and Coping

Most athletes felt a deterioration in their physical and mental health during the pandemic. At the same time, most of the respondents (above 85%) declared that they had adapted to the requirements of the new situation and coped with the pandemic moderately well or well. Most of the participants felt they did not need the help of specialists (92.5% of the individual and 87.18% of the team athletes). Neither group differed in their declared reactions and coping during the pandemic. Detailed data were presented in Table 3.

Motivation During the Pandemic

Both groups achieved the highest score on goal-oriented motivation. Goal orientation was statistically the highest ($z_{ind} = 4.35, p < 0.001$; $z_{team} = 4.46; p < 0.001$). The differences in the level of motivation amongst the athletes were checked. Representatives of individual disciplines were characterized by a higher level of all three subscales of motivation, but the difference was not significant. The results were presented in Table 4.

Gender differences were controlled. There was a significant difference in competition motivation between female and male ($z = -2.63; p = 0.009$). This was the only difference, and it did not affect the differences between the disciplines.

At the end of the analysis of athletes' motivation, the difference in the amount of time spent per week on training comparing pandemic and pre-pandemic periods was taken into account. Among the respondents, 35 people declared reduction and 40 indicated no changes in weekly training volume before and during the pandemic. An analysis of differences in the levels of motivation subscales between the two groups was performed (Table 5). There were also 4 respondents (one individual and three team athletes) who indicated an increase in the number of workouts per week compared to before the pandemic. Due to the small size of this group, they were not included in further analyses.

Table 3. Pandemic Responses, Coping During the Pandemic, and Differences Between Individual and Team Athletes ($n_{ind} = 40$; $n_{team} = 39$)

Variable	Answer	N (%)		$r_s/\chi^2, p$
		Individual	Team	
Deterioration (physical condition)	Yes	34 (85)	32 (82.05)	$\chi^2 = 0.12, p = 0.724$
	No	6 (15)	7 (17.95)	
Deterioration (mental condition)	Yes	33 (82.5)	33 (84.62)	$\chi^2 = 1.79, p = 0.181$
	No	6 (15)	2 (5.13)	
	No answer	1 (2.5)	4 (10.26)	
Adaptation to the requirements of the new situation	Yes	34 (85)	35 (89.74)	$\chi^2 = 0.40, p = 0.526$
	No	6 (15)	4 (10.26)	
Coping with the pandemic	Bad	1 (2.5)	2 (5.13)	$r_s = -0.07, p = 0.516$
	Moderate	28 (70)	28 (71.80)	
	Good	10 (25)	9 (23.08)	
	No opinion	1 (2.5)	0 (0)	
Using the advice of specialists*	No	37 (92.5)	34 (87.18)	$\chi^2 = 0.61, p = 0.433$
	Yes, occasionally	3 (7.5)	5 (12.82)	

* It was also possible to answer Yes, often, but none of the respondents did so.

Table 4. Descriptive statistics and significant differences in the achievement motivation subscales between individual and team players

Variable	Individual ($n = 40$)			Team ($n = 39$)			z
	$M \pm SD$	<i>Mdn</i>	Range	$M \pm SD$	<i>Mdn</i>	Range	
Competitiveness	4.34 ± 0.37	4.39	3.54–4.92	4.16 ± 0.49	4.15	3.15–4.85	$z = -1.55$ $p = 0.121$
Win orientation	4.33 ± 0.57	4.33	2.67–5.00	4.05 ± 0.78	4.17	1.67–5.00	$z = -1.67$ $p = 0.960$
Goal orientation	4.71 ± 0.36	4.83	3.83–5.00	4.59 ± 0.52	4.83	2.83–5.00	$z = -0.83$ $p = 0.407$

There is a statistically significant difference between competitiveness among team athletes who were not affected by changes in training volume due to the pandemic and those who have experienced a reduction in training

due to the pandemic. There is also a statistically significant difference between win- and goal orientation among the individual athletes who had felt they reduced their training volume during the pandemic and those who did not.

Table 5. Differences in the Level of Motivation Amongst Individual and Team Athletes who Experienced a Reduction and who Felt no Changes in Weekly Training Volume due to the Pandemic

Variable	Individual ($n = 40$)				Team ($n = 39$)			
	<i>Mdn</i> I-1	<i>Mdn</i> I0	z	p	<i>Mdn</i> T-1	<i>Mdn</i> T0	z	p
Competitiveness	4.19	4.38	-1.19	0.235	3.92	4.23	-2.03	0.043
Win orientation	4.00	4.67	-3.91	0.000	4.33	4.33	-0.77	0.439
Goal orientation	4.75	5.00	-1.96	0.050	4.67	4.83	-1.10	0.270

Note. The groups are marked as follows: groups I0/T0 – individual/team athletes who were not affected by changes in training volume due to the pandemic; I-1/T-1 – individual/team athletes who experienced a reduction in training due to the pandemic; $n_{I-1} = 12$, $n_{I0} = 27$, $n_{T-1} = 23$, $n_{T0} = 13$

Discussion

The pandemic situation has become a global phenomenon. Its effects translate into both private life and everyday routine, as well as the professional and health area (Sokół-Szawłowska, 2021). The situation seems to be particularly difficult for athletes who have changed their training conditions and have faced numerous changes in the organization of competitions. The work presents the subject of differences between individual and team athletes in terms of the quantity and quality of training coping with the pandemic and motivation.

The results showed that the duration and intensity of exercise amongst both groups lessened during the pandemic. This may have been due to limitations in access to sports facilities (Central Statistical Office, 2021) and changes in routine (Mucha & Mucha, 2021). The present study has shown that individuals trained significantly longer and more often than team athletes both before and during the pandemic. This was perhaps because individuals work independently for their success, while in team sports responsibility is shared. The time devoted to training in individual sports is not distributed amongst several players, so individual athletes may have tried to train longer and more often. In addition, limits were introduced on the number of people who were permitted to train in a particular space during the pandemic, which meant that team training virtually ceased. As has been noted, some training rooms and gyms were closed, so this may have accounted for why team athletes participated in fewer or shorter training sessions.

The Ringelmann effect suggests that as group size increases, the individual player becomes less productive. A decline in productivity accompanied by a decline in motivation is referred to as social idleness (Czyż et al., 2016). Training in a group can eliminate this effect when cohesion is maintained. The atmosphere within a team matters in the context of reducing social laziness. During the pandemic, players had limited opportunities to meet and train with each other, which may have affected team cohesiveness, which may, in turn, have translated into lower motivation (Jones et al., 2014)

The respondents also experienced qualitative changes in their training. Most team players said they reduced their strength training. This may have been related to gym closures or the unavailability of specialized equipment (though a new strategy of home-based exercise appeared). However, the team athletes (who would have been used to training together on a daily basis) may have been less inclined to exercise on their own. Moreover, the individual athletes paid attention to changes in their specialised training. The subjects were single rowers (who trained mainly on water). The suspension of training for several months meant that they only trained at home, using basic equipment (bicycles or ergometers). This may have led to a change in focus towards individual parts of the body, for instance, leg or back strengthening, using domestic equipment (Moscoso-Sánchez et al., 2021).

Most of the respondents felt a deterioration in their physical and mental health during the pandemic, though most declared that they had adapted to the new reality and coped moderately or even well. It was concluded that the outcomes were not mutually exclusive and that they resulted from the need to accept a situation that had persisted for a relatively long time. Adaptation was processual in nature, and the development of coping strategies had an impact on health. The pandemic, therefore, became a *new normal* in which most of the respondents were able to find themselves, but nevertheless had an impact on their physical and mental condition (Twardowska-Staszek et al., 2021). Most of the athletes did not declare any willingness to enlist the help of specialists, which may indicate that they were able to cope with the pandemic on their own. Research has shown that gender, age, sports group, and previous experience of sport psychology may influence attitudes regarding the use of psychological help. Professionals should take these factors into account when trying to attract athlete clients (Martin, 2006; Martin et al., 2011). Watson (2005) claimed that athletes underutilization such assistance.

When winning is at stake, athletes strive to demonstrate the highest possible level of skill. In assessing the competences and possibilities of winning, athletes use their sports orientations (Jamshidi et al., 2011). The main aim of the research was to determine the level of motivation in two groups of athletes in the context of the Covid-19 pandemic. Athletes who noticed a reduction in weekly training time due to the pandemic scored lower on selected aspects of motivation. The team players had less motivation to compete and individuals were less motivated to achieve goals or win. Noticing a reduction in training may reduce the willingness to act, compete, and gain further success. The smaller amount of sport in the life of the respondents could be accompanied by a decrease in motivation to practice it, and an increase in interest in other areas of life, more accessible during a pandemic. Lower competitiveness in team athletes who felt changes in the volume of training may have been due to the limited opportunities that were available to compete. The win orientation focuses the player on winning and avoiding failure by comparing to others (Jamshidi et al., 2011). The reduced quantity and quality of training during the pandemic, may have affected individual athletes' willingness to take on new challenges during competition. The win and goal orientation reflects the player's choices during practice. By focusing on goals, sportspeople can focus on achieving personal goals in sport by relating them to themselves. The decrease in goal motivation and desire to win amongst the individual athletes may have been associated with the huge number of restrictions and the progressive postponement of subsequent goals (which may have included beating the competition). Regularity and systematicity increase the orientation towards taking on the competition and being successful (Mucha & Mucha, 2021). Insufficient emotional drive and a lack of energy may have impacted their en-

durance levels (Olsson, 2019), and a decrease in motivation and satisfaction with training during the pandemic may have affected the perception of goals and the preparedness to compete or win (Jagim et al., 2020).

Many studies indicated the differences between male and female athletes (Deaner & Balish, 2016), hence this thread could not be omitted in this paper as well. In particular, the differences between the sexes of athletes in competition and risk-taking are emphasized. Gender differences were controlled for throughout the study. Only one significant difference was noted – competition motivation. Croson and Gneezy (2009) emphasized that “women are more reluctant than men to engage in competitive interactions such as tournaments, bargaining and auctions” (p. 464). The authors also stated that men felt more competitive about athletics. Niederle and Vesterlund (2007) observed sex differences regarding competition. Sex differences may have an evolutionary meaning (Deaner & Balish, 2016).

The present study has several limitations. First, measurements taken online have to be treated with caution (Batorski & Olcoń-Kubicka, 2006), albeit there was no option during the pandemic. In the other side, online measurements made it possible to collect a large amount of data from a large number of people. This method made it possible to quickly reach target groups by means of online surveys. Due to the anonymity of online surveys, it is assumed that respondents usually give more honest answers as they do not have direct contact with the researcher.

In addition, pre-pandemic measurements of motivation, which could have been used to compare how the pandemic affected this variable, were lacking. The study broadens the knowledge about the functioning of athletes during a pandemic. Undoubtedly, it indicates changes in the volume of training and the difficulties indicated by the respondents.

Also, too few participants experienced an increase in training volume; this made it impossible to make credible comparisons between those who felt their training volume decreased and those who felt it increased. It would be worth considering the positive impact of the pandemic on athletes in future studies.

Conclusions

The present study revealed differences in the quantity and quality of training between individuals and teams. The most important issue here seems to be that group training, which builds team spirit, needs to be given close attention; it was the team athletes who experienced the inability to train in larger groups the most. The study also confirms that there was a reduction in the time devoted to training in both types of disciplines. The willingness of athletes to exercise needs to be addressed, for example by encouraging them to set new tasks in difficult cir-

cumstances. This would involve mental training or psychoeducation (Behnke et al., 2017; Karageorghis & Terry, 2014), which might also help strengthen motivation.

Future researchers might further examine the effects of the pandemic on the quantity and quality of training and the level of motivation in individual and team athletes. Other types of sports could be used as comparators. However, because training conditions changed from month to month, it would be difficult to generalize from any findings. The results of the present study show that athletes can adapt quickly to difficult situations, although not without consequences for their physical and mental condition. It is therefore important to implement methods to improve their quality of life in this new, ever-changing world. The athletes in the study appeared not to have indicated that they did not seek professional psychological help. Future researchers might want to investigate whether this was due to prejudice or a lack of access. Athletes should be encouraged to use such external support (Martin et al., 2011).

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