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DEPARTMENT OF SPORTS ORGANIZATION AND MANAGEMENT

COVID-19 IMPACT ON THE INTERNATIONAL SPORT ORGANIZATIONS' ACTIVITIES

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SUMMARY

Sofiia Kokhanska: COVID-19 impact on the International Sport Organizations' activities

(Under the supervision of Guillaume Bodet, Professor)

The purpose of this study is a deep analysis of the activities of sports organizations in the context of the COVID-19 pandemic. The main tasks that were solved during the study were to determine the conditions of functioning of sports organizations during the COVID-19 pandemic. An important step of the research was to identify the challenges that various sports organizations are facing in relation to the worldwide pandemic. The next step of the study was to define the effective ways of solving the problems of functioning. A review of the existing bibliography was carried out regarding the operation features of the Olympic system components as well as the impact of the COVID-19 pandemic on various sports organizations, including the IOC, ISFs, NOCs and others.

Further, the study was conducted through interviews with 92 experienced sports professionals. The results of the interviews helped to create a questionnaire based on the received information. Through the questionnaire, the information about main problems in the functioning of sports organizations during the COVID-19 pandemic were identified. Moreover, based on the results of the survey, effective ways of solving the arisen problems were identified.

The results of the study showed that the COVID-19 pandemic has a significant impact on the activities of the vast majority of sports organizations. The main problems faced by the organizations were the inability to hold sports competitions, the lack of developed and effective online platforms and the deterioration of communication between representatives of the organization. According to the results of the study, the main ways to solve the arisen problems are the improvement of existing and the creation of new additional online platforms, the expansion of cooperation with other national and international institutions, the creation of new formats for holding national and international competitions.

Keywords: Covid-19 pandemic, sport organizations, Olympic system

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CHAPTER 1

INTRODUCTION

Abstract. Olympic sport is one of the most amazing phenomena in human history. However, today it faced an unprecedented problem in human history - the COVID-19 pandemic. An analysis of scientific publications shows that today the main sports organizations that have received the most impact from the pandemic are the components of the International Olympic system, namely the International Olympic Committee, International Sports Federations, National Olympic Committees and Olympic organizing committees.

Despite a relatively short period of existence - 2 years since the beginning of the pandemic, the coronavirus, according to the World Health Organization, has killed more than 6,2 million people and has had an inevitable impact on the life of the world community [75, 82, 89].

According to David Lange, sport is an integral part of modern life. During the first year of the pandemic, modern sports suffered losses of up to 42% of planned revenue. Some professional sports organizations, such as the national football leagues of England, Germany, Spain, France, resumed their seasons in the summer of 2020 with many restrictions, but failed to function and influence the development of sports [4, 61, 72, 85].

The analysis of literature data showed that the leading sports organizations have successfully adapted to modern conditions of sports development in the conditions of the world pandemic. Some organizations, such as FINA, UIMP, GYM CAN, FIG, have started online sports competitions [29, 33, 76], others - including NOCs, ASOIF - have focused on the digitalization of their activities [17, 53], and still others have paid more attention to the educational component of their activities. conduct courses for coaches, judges and specialists in their sport [44, 51, 76].

However, research has shown that due to the sufficient novelty of the topic, fundamental research on the impact of the COVID-19 pandemic on Olympic sports has not been conducted. Therefore, the analysis of the problems faced by the components of the international Olympic system during the COVID-19 pandemic and promising ways to solve them remain a topical issue of research.

The aim of the research is to analyse the impact of COVID-19 pandemic on the International Olympic system components and to identify ways of improvement of their activities during period of global pandemic.

Tasks of the research:

1. To determine the conditions of functioning of international sports organizations in the context of the COVID-19 pandemic.

2. To study the impact of the COVID-19 pandemic on the functioning of the International Olympic system components.

3. To highlight the problems of working of international sports organizations during COVID-19 pandemic.

4. To identify ways of overcoming the problems of international sports organizations during COVID-19 pandemic.

The object of research is the distinctiveness of the functioning of international sports organizations in the conditions of the COVID-19 pandemic.

The subject of research is the problems of functioning of international sports organizations during COVID-19 pandemic and the ways of solving them.

Limits of the present studies. One of the limitations of the studies is the small amount of literature that exists on the subject of the study. Since the COVID-19 pandemic has existed in the world for only 2 years, the amount of scientific literature cannot fully satisfy the needs of the researcher. Thus, filling in the gap in the existing literature will show the practical significance of this study. Moreover, the time during which the study is carried out is too limited and cannot fully reveal the goal set of the research, because in the context of the COVID-19 pandemic, the situation in the world has become too volatile and the results of the study may lose their relevance after a very short period of time.

Research questions:

1. What impact has the COVID-19 pandemic had on sports organizations?
2. What are the most common problems in the functioning of sports organizations in the context of the COVID-19 pandemic?
3. How have various improvements affected the performance of sports organizations in the context of the COVID-19 pandemic?

CHAPTER 2

LITERATURE REVIEW

The impact of the COVID-19 pandemic on sports

In the world, sport has become an integral part of international relations. This is evidenced by a number of important international documents, including the UNESCO Action Plan on Strengthening Law Enforcement in Sport and Ensuring Its Public Accessibility, UN Human Rights Council Resolution "Promoting Human Rights through Sport and the Ideals of the Olympic Movement", Final Act of the Conference on Security and Cooperation in Europe mention of the crucial role of sport in shaping security.

The Covid-19 pandemic has had an unprecedented impact on society, leading to the rapid closure of businesses, jobs, culture, social activities, schools and universities, and of course sports. According to Parnell, sports and sporting events play an important social role in society, which became apparent at the beginning of the pandemic. An outbreak of coronavirus has forced the suspension of international sports competitions in almost all sports. In the year when the European Football Championship, the Tokyo Olympics, and many regular world championships were planned, the sports calendar changed completely. Due to the pandemic, some starts were cancelled, others were moved to other cities or postponed indefinitely, and others were held without spectators or with a limited number of visitors.

According to experts, including Malcolm and Velija (2020), restrictive measures in connection with the COVID-19 pandemic had a significant negative impact on mass sports, which was not ready for drastic restrictions by governments around the world.

However, according to Daniela Bas, Melissa Martin, et al (2020), the greatest impact during the COVID-19 pandemic was on professional sports and absolutely all participants, including athletes, coaches, instructors, administrative staff (sports staff), volunteers, officials, persons involved in competitions (judges, members of delegations), enterprises, especially micro and small businesses (fitness clubs, gyms, event organizers, sporting goods manufacturers, marketing agencies and others).

According to the UN, sport is a significant sector in the economy of the world and individual countries. According to sources, the global industrial value of sports is estimated at \$756 billion in annual terms by 2019 (Figure 1) [79].

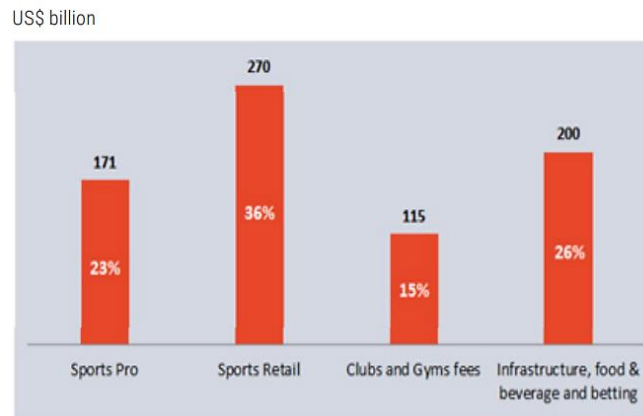


Figure 1. Global Revenues–Sports Industry (Source: Smoggi, Value and Industry, 2020)

At the same time, for European countries, the global industrial value of sports has been estimated at 279.7 billion euros, which is about 2.12% of total GDP of the European Union by 2018. It is also worth noting that the number of employees in the sports sector is 5.67 million people, which corresponds to about 2.72% of the working population in Europe [81].

According to the European Platform for Sport Innovation (EPSI), the main challenges faced by sports officials during the COVID-19 pandemic include the following:

- Loss of funding and income. The beginning of the COVID-19 pandemic coincided with the beginning of the season of most sports. In this regard, sports organizations have lost a significant portion of permanent income from the organization and conduct of competitions, membership fees, licenses, subscriptions and more.
- Lack of training and competitions. Due to the closure and ban on visiting sports facilities, athletes and sports teams have lost the opportunity to effectively prepare for competitions and maintain a high level of physical fitness. This course of events affected not only the physical shape of athletes, but also their financial and career status. Some athletes have ended their athletic careers due to the COVID-19 pandemic and the inability to return to baseline.
- Decreased support for athletes by sports organizations. Due to the lack of stable funding, sports organizations were forced to reduce financial support for athletes in the form of scholarships, grants and more.
- Rapid growth of unemployment. Many athletes, coaches, and staff lost their jobs, especially those who were directly dependent on sponsorship.

Thus, the analysis of literature data showed that due to the high involvement of people in sports as the main form of work, the COVID-19 pandemic had a significant impact on people's lives and working capacity.

The impact of COVID-19 pandemic on the International Olympic system components

The International Olympic system is a complex multi-level and multi-component structure. According to the Olympic Charter, the structure consists of the International Olympic Committee (IOC), International Sports Federations (ISF), National Olympic Committees (NOC), organizing committees for the Olympic Games (OCOG), national associations, clubs, and persons who are members of the ISF and the NOC, and, in particular, athletes, as well as judges, referees, coaches, other sports officials, and technical specialists. Apart from that, the Olympic system includes other organizations and institutions that promote the Olympic movement and are recognized by the International Olympic Committee.

According to Paragraph 3 of the Olympic movement's founding document, the IOC can recognize not only National Olympic Committees (or organizations that perform the same role) and International Sports Federations but also other organizations established with the aim of promoting the Olympic movement and which function in accordance with the Olympic Charter. Such organizations include associations of National Olympic Committees and associations of International Sports Federations, as well as some sports-related non-governmental organizations operating at the international level.

According to Burnett C., during its development the International Olympic system has acquired a complex multilevel structure, which has a large number of different sport, educational, governing and other organizations that play an important role in the functioning of the whole system [8, 45].

Along with Platonov's research, there are two main areas in the structure of the International Olympic system, which are clearly separated according to their functions. The first of them is based on the activities of National Olympic Committees (or institutions that perform their role) at all levels of the organization of Olympic sports. The latter deals with the activities of International Sports Federations, which committed to develop various sports [72, 73].

At the same time, it should be taken into account that the Olympic system (with its structure and functions) is a part of the international organizational system and related common interests. The areas of activity of the Olympic system overlap with both areas of activity of various international organizations (such as the UN, UNESCO, and others), and interstate organizations, and multinational corporations. Interaction with them allows the International Olympic system to respond appropriately to the current (or emerging) political situation, strengthen Olympic sports, and improve its organizational, financial, and physical infrastructure.

According to Jean-Loup Chappelet, the entire history of modern Olympic sports has convincingly shown that the success of the International Olympic system depends crucially on its autonomy: independence in decisions, lack of political, economic, and other influences [6, 49].

The autonomy of the International Olympic Committee would not be possible if this organization did not have sufficient financial resources of its own and depended on controlled funding from external sources. The current very sound financial position of the IOC allows it not only to maintain its independence but also to provide (mainly through the Olympic Solidarity Program) support to various National Olympic Committees and other components of the International Olympic Movement [48, 73].

As of 2021, Olympic sports are in a difficult situation. On the one hand, it strives for independence and defends its specificity and independence in every possible way. On the other hand, the COVID-19 pandemic has shown more than ever that the development of Olympic sports and its success in a particular country depend crucially on the capabilities and activities of the relevant state.

The impact of the COVID-19 pandemic on the activities of the International Olympic Committee.

According to Chapter 2, Paragraph 15 of the Olympic Charter, the International Olympic Committee is an international non-governmental non-profit organization, with unlimited validity, in the form of an association with the status of a legal entity. The main tasks of the IOC include spreading Olympism in the world and leading the Olympic movement. As the highest governing body of the International Olympic movement, the IOC has been most affected by the COVID-19 pandemic [49].

It should be noted that the COVID-19 pandemic occurred in the Olympic year, which could not but affect the activities of the IOC, one of whose tasks is to ensure the regular holding of the Olympic Games.

According to the official website of the IOC, during February and March 2020, the IOC, together with the Organizing Committee of the Olympic Games in Tokyo - the Japanese government, constantly monitored information about the possibility of holding the Olympic Games on the planned dates, namely from July 24 to August 9.

IOC President Thomas Bach has repeatedly emphasized that at the very beginning of the crisis, the IOC primarily assessed whether Japan could offer a safe environment for each participant in the Olympic Games. However, as the disease spread and the situation worsened, the IOC's focus expanded to the whole world. The question arose whether athletes, coaches, and official representatives will be able to safely reach the venue of the Games. The Tokyo 2020

organizing committee, together with the Japanese government, assured that they will be able to effectively and most importantly safely hold the Games on time, adapting all scenarios to the requirements of modern realities: mitigating measures, quarantine, and many other issues. However, the situation changed very quickly, and the number of new cases of coronavirus disease on all continents began to grow rapidly in mid-March 2020, and this affected the activities of the IOC.

The first step of the IOC, led by President Thomas Bach, was to convene an online conference with representatives of International Sports Federations and sports functionaries on the possibility of holding the Olympic Games in Tokyo in the summer of 2020.

According to George Ramsay, the IOC did not make a radical decision to cancel or postpone the 2020 Games after this meeting, because there were more than four months left before the start of the competition in Tokyo and there was no need to make hasty decisions. Also, President Bach said that holding competitions without spectators would be contrary to the "spirit of Olympism".

At the same time, according to the report of the IOC Athletes' Commission, on March 18, 2020, a video meeting of the IOC President, IOC directors, and about 220 athletes was held under the auspices of the IOC Athletes' Commission. During the meeting, they discussed the challenges faced by athletes in different countries due to the COVID-19 pandemic.

Hence, the postponement or cancellation of qualification competitions for the Olympic Games in Tokyo was named one of the main problems faced by athletes. According to the commission, only 57 percent of athletes were qualified for Tokyo 2020, which was significantly lower than expected. The report also notes that athletes noted the suspension of any sporting events and the inability to train according to training plans; uncertainty about the Olympic Games only increased stress and anxiety.

The IOC, led by President Thomas Bach, took into account the athletes' opinions and constructive comments and stated that the main task is to protect athletes' health and help to stop the virus.

However, the situation with the spread of coronavirus worsened and some sports organizations made radical decisions. This way, on March 23, 2020, representatives of the National Olympic Committees of Canada and Australia made statements about their refusal to participate in the Games of the XXXIII Olympiad in Tokyo. This statement was one of a number of events that influenced the further decisions of the IOC regarding the Olympic Games in Tokyo.

On March 24, 2020, after an emergency meeting of the IOC Executive Committee, President Thomas Bach announced the historic decision to postpone the Olympic Games in Tokyo to 2021. The IOC president noted that after lengthy discussions with representatives of the

International Paralympic Committee (IPC), the Tokyo 2020 Organizing Committee, the Tokyo city government, and the Government of Japan, all of them came to an agreement and decided to postpone the Olympic Games and Paralympic Games and choose new dates. So, according to the decision, the Olympic Games in Tokyo would be held from July 23 to August 8, 2021, and the Paralympic Games from August 24 to September 5, 2021.

Thomas Bach noted that the postponement of the Olympic Games has become a significant problem for the Olympic movement and its partners. It also caused numerous additional problems regarding the holding of qualifying competitions in many Olympic sports, the ceremonies of the games that did not take place due to the pandemic. There was also a question about agreements with sponsors, top partners, Olympic broadcasting companies, and so on. As noted in the statement of the IOC president, the newly created working group called "here we go", which consists of representatives of the Tokyo 2020 coordination commission and the Tokyo 2020 Organizing Committee, began to deal with all these issues.

However, the postponement of the Olympic Games has led to a number of pending problems faced by the IOC.

One of them was the pre-sale of 4.5 million tickets for sports competitions of the Games of the XXXIII Olympiad. As of March 20, 2021, during a five-party meeting of representatives of the International Olympic Committee, the International Paralympic Committee, the Local Government of Tokyo, the Organizing Committee of the 2020 Games, and the Government of Japan, it was decided to ban the arrival of foreign spectators to the 2020 Olympic and Paralympic Games due to the world-wide COVID-19 pandemic. The Tokyo 2020 Organizing Committee confirmed a refund for purchased tickets for both Olympic and Paralympic competitions.

Another problem faced by the IOC was the revision of contracts with top sponsors and media partners.

According to David Owen, the deal between the IOC and the largest US media company, NBC, amounted to 4.38 billion USD. It is worth noting that NBC has invested more than 1.25 billion USD in advertising TV broadcasts of Games in Tokyo. Consequently, changes to existing contracts with media partners became another challenge for the IOC.

However, the foregoing difficulties are not the only ones that the IOC faced in its activities due to the COVID-19 pandemic.

Thus, the IOC should support the central figure of the International Olympic Movement, the athletes, in every possible way. The Olympic Charter clearly sets out the tasks of the IOC to support athletes [48].

For that, paragraph 10 among these tasks of the IOC is devoted to the promotion and support of measures for medical care and the health of athletes. In the context of the COVID-19 pandemic, this task has become one of the crucial ones.

It should be noted that according to a number of authors, such as providing conditions for maintaining a normal level of mental health became an important component of the fight against the COVID-19 pandemic. Therefore, in order to disseminate information about maintaining a normal level of physical and mental health, a large number of articles and videos on the Athletes 365 platform are devoted to ways of protection against this particular issue [64, 75].

So, according to the official website of the IOC, the Athletes 365 platform was used to disseminate information on maintaining physical and mental health in the context of a pandemic for athletes.

On the other hand, experts such as Potts and McKenna in their works noted that now the social value of sports is higher than ever before [76].

According to the position paper on the impact of the COVID-19 crisis on the European Union sports sector, Sport seeks to contribute to the revival of the usual way of life. Sports can help individuals and society as a whole mitigate the negative impact of the pandemic on life through mechanisms that contribute to improving people's health, socialization, and overall sense of well-being [30].

In addition to catastrophic short-and medium-term health consequences (including psychological instability, inactivity, increased feelings of loneliness, and anxiety), the pandemic also has long-term consequences for people's daily lives, their health, and many areas of life, such as the economy, services, transport, and others.

The fourth fundamental principle of Olympism is listed in the Preamble of the Olympic Charter, which states that playing sports is a human right and everyone should be able to play sports. To successfully implement this principle in the context of the COVID-19 pandemic, the International Olympic Committee, and the World Health Organization, together with the United Nations, have launched a partnership called #HEALTHYTogether. The main goal of the project is to encourage people and society to play sports and become healthier together. All three partner organizations tried to attract more people to play sports in the context of the pandemic, improve public health and reduce the spread and impact of COVID-19 through international cooperation [53].

The project involved Olympic athletes who, at the local level, together with representatives of medical institutions conveyed important information to people experiencing different stages of the pandemic on taking care of mental health, preventing the development of secondary diseases, and maintaining the level of fitness by exercising, through digital platforms.

The impact of the COVID-19 pandemic on the activities of International Sports Federations

International Sports Federations are leading international non-governmental organizations recognized by the International Olympic Committee (IOC) that are responsible for the development of one or more sports in the world.

The main goal of each international sports federation is to guide, develop and popularize the relevant sport at the international level.

As of 2021, there are 185 International Sports Federations in the world.

The activities and cooperation between all International Sports Federations are carried out by associations. So, there are three main associations of International Sports Federations. The first is ASOIF, which unites 33 International Summer Olympic sports federations – 28 of which are permanent members of the association, and 5 are temporary. The second is AIOWF, which unites 7 International Sports Federations in Winter Olympic sports. The third association is ARISF, which unites 42 International Sports Federations recognized by the IOC.

The COVID-19 pandemic has undoubtedly affected the activities of every international sports federation, but Summer Olympic sports federations have been affected the most.

First of all, all International Sports Federations whose sports are included in the Olympic program receive subsidies after each Olympic Games. Therefore, many of the permanent members of ASOIF and AIOWF are significantly dependent on the financial support of the IOC.

Therefore, according to the IOC financial report for 2013-2016, after the Games of the XXXI Olympiad in 2016 in Rio de Janeiro, the IOC distributed about \$540 million among International Sports Federations for Summer Olympic sports.

However, it should be noted that only 28 federations, which are permanent members of the association, receive such financial support from the IOC.

According to a study by Jens Weinreich, all ASOIF members are divided into five groups, each of which receives different funds from the IOC [92].

Group A includes International Sports Federations that receive \$40 million each in subsidies from the IOC, among them: FIG, FINA, World Athletics.

Group B includes FIBA, FIVB, FIFA, FIVB, UCI, which receive \$25.95 million each.

International Sports Federations such as AIBA, BWT, FISA, IJF, ISSF, ITTF, IWF, World Archery belong to Group C and receive about \$18.6 million.

The group D includes international federations that receive up to \$16.3 million each in subsidies from the IOC, among them: FEI, FIE, FIH, ICF, IHF, ISA, World Taekwondo, World Triathlon.

Group E consists of International Sports Federations that receive the lowest subsidies from the IOC, namely \$14.1 million each, and these include: IGF, UIPM, World Rugby.

In 2020, after the planned Olympic Games in Tokyo, all International Sports Federations and ASOIF members counted on the financial support of the IOC. However, due to the postponement of the Olympic Games to 2021, international federations did not receive the funds they expected.

According to Jens Weinreich, 15 of the 28 federations rely heavily on IOC funding [92].

Thus, 6 of the 28 federations that are members of ASOIF receive financial support from the IOC, which is less than 10 percent of their own profits. These federations include FIFA, which has an average annual turnover of \$1.6 billion and receives only 0.38% from the IOC. Another federation that is financially independent is World Rugby. The share of funds that it receives from the IOC is less than 3% of the average annual profit of the organization. Also, the personal income of such federations as FIBA, FIVB, FEI, and ITF is quite high too.

At the same time, 7 out of 28 International Sports Federations including BWT, FINA, IHF, IJF, ITTF, UCI, World Athletics receive about 25 percent of their income through financial support from the IOC. Therefore, the federations listed above are considered relatively independent.

However, the vast majority of ASOIF member federations, namely 15 out of 28, are highly dependent on the financial support of the International Olympic Committee, because IOC subsidies 35 to 96 percent of the total profit of organizations.

The most difficult situation has developed for FIE, ICF, ISSF, UIPM, and IWF, because the financial support of the IOC stands at more than 90% of the income of each of these International Sports Federations.

In addition to the financial difficulties faced by International Sports Federations, a number of other problems should be noted.

First, International Sports Federations are responsible for managing and organizing sports competitions based on their sport, attracting and developing athletes involved in the chosen sport at all levels.

ISFs could not fully fulfil the mission assigned to them, listed in Rule 26 of the Olympic Charter, namely, ensuring the development of their sport around the world.

For example, the first Federation affected by the COVID-19 pandemic was World Athletics. It was IFF that became the first of many others to announce the postponement of the World Cup indoors due to the spread of coronavirus. This decision was made by World Athletics back in January 2020, because the competition was supposed to be held in Nanjing, China in March.

As noted by NBC Sport, the 2020 World Indoor Championships were supposed to be one of the largest track and field competitions, but due to its cancellation, World Athletics lost a significant part of its profits from sponsors and the media [93].

In addition to the cancelled world championships, World Athletics faced difficulties in hosting the most prestigious professional athletics competition: The Diamond League. So, in March 2020, the federation announced the postponement of the first three rounds of the Diamond League which were scheduled for April–May and were to be held in Qatar and China, respectively. Also, further competitions of the Diamond League in Stockholm, scheduled for May 24, 2020, Naples and Rome, scheduled for May 28, and Rabat, scheduled for May 31, were decided to be postponed. This is why, the competition was held in August-September 2020, but the venues of most of them were changed. As a result of the global COVID-19 pandemic, only 7 of the Diamond League's planned 15 World rounds were held in 2020.

Another problem that caused significant financial losses was the postponement and cancellation of World marathons organized by Abbott World Marathon Majors. The first event that the organization postponed was the marathon in London, which was scheduled for April 29, 2020, but the competition was held in October with the admission of only professional athletes. At the same time, the annual marathon in Berlin, scheduled for September 27, 2020, was cancelled due to the German government's ban on holding any events involving more than 5 thousand people. The next marathons in Chicago and New York, USA, were scheduled for fall 2020 but were postponed to 2021.

Another international sports federation whose activities will be reviewed as part of the impact of the COVID-19 pandemic is World Rugby. As noted above, this ISF is financially independent of the IOC's expenses, so the impact of the coronavirus on the activities of this federation will be discussed below.

World Rugby is an international organization that includes Rugby Afrique/Africa, Asia Rugby, Rugby Americas North, Rugby Europe, Oceania Rugby, Sudamerica Rugby and coordinates the activities of these organizations.

The first statements of the World Rugby management regarding the impact of the COVID-19 pandemic on the organization's activities were made on March 20, 2020 and concerned the regulation of competitions in spring.

According to the official website of World Rugby, after careful research and detailed negotiations with all parties, it was decided to postpone a number of sports competitions. So, the statement noted that the men's Tournament of the HSBC World Rugby Sevens Series, which was supposed to be held in London and Paris, was postponed to September 2020.

Also, it should be noted that World Rugby was forced to cancel the U20 Rugby World Cup, which was supposed to be held in Italy at the end of June and in July 2020, but after long negotiations with Federazione Italiana, it was decided to cancel the competition.

At that exact time (June 2020), the planned qualification tournament for the Olympic Games was supposed to take place, but it was also postponed due to the outbreak of coronavirus in the host country.

As Sedeaud A. notes in his research., De Laroche Lambert Q. et. Rugby Union (RFU), the world's largest national sports governing body, announced in the summer of 2020 that it predicts losses of \$53.6 million to \$59.6 million over the next 18 months due to the impact of the COVID-19 pandemic. Rugby Football Union (RFU) suffered significant losses from the forced closure of Twickenham Stadium, which led to a reduction in payments to the national team and coaching staff, and a reduction in general board meetings.

As noted above, the UCI is one of the federations that receives up to 25% of its revenue from supporting the IOC, so it is relatively independent. However, the vast majority of UCI profits come from the sale of broadcast rights, tickets and sponsorship during UCI World Tour races. Between March and November, cycling competitions were severely affected by the effects of COVID-19. In total, the UCI had to postpone or cancel more than 650 races during this period, which is about 30 percent of all annual events. It should be taken into account that the road and mountain bike disciplines suffered the most from the pandemic.

Also, a number of authors, including Alexandros N., Tsigdinos S. noted the lack of sufficient financial reserves of the Federation, which led to the fact that the UCI cut its budget for 2020. The UCI's most serious move was to partially cut or lay off more than 130 employees and significantly cut the salaries of the organization's top management. Thanks to these decisions, the UCI was able to provide financial support to more national federations around the world [67].

Although almost all UCI competitions have been affected by the global pandemic, the biggest losses are due to the postponement of the three largest tournaments – the Giro d'Italia, Tour de France and Vuelta Espana. So, the Giro d'Italia, which was supposed to be held in May (May 9-31, 2020), was postponed to October (October 3-25, 2020). For the first time in history, the Tour de France race was not traditionally held in June–July, as planned, but was postponed to August 29–September 20, 2020, after the French Prime Minister banned all mass gatherings until September due to the deterioration of the epidemiological situation in the country. It should be noted that the event was held without an audience. The UCI's first decision was to hold the Vuelta Espana from August 14 to September 6, 2020. However, following the decision to postpone the Tour de France to August–September, the UCI announced that the Vuelta Espana race would be held in the fall after the 2020 UCI Road World Championships. For the first time since 1985, the

race lasted 18 stages, not the usual 21, due to the cancellation of races in the Dutch regions of Utrecht and North Brabant.

As of 2021 the UCI has contracts with 13 official sponsors and suppliers. The UCI has contracts with 13 official sponsors and suppliers. According to the official website, the federation's revenue from sponsorship contracts totals \$ 4.3 million a year. Due to the cancellation of about 30 percent of the competition in 2020, UCI suffered losses of approximately \$1.3 million.

According to Alexandros N., Tsigdinos S., in 2018, UCI's two largest sources of revenue were hosting fees and marketing rights; they generated \$11,200,600 and \$9,799,540 respectively. The cancellation of competitions and a reduction in the number of races led to the fact that the organization suffered financial losses, which together reach 34% compared to 2018 and 2019. And they amount to about \$7,600,042.

At the same time, the main competitions for representatives of International Sports Federations in Olympic sports were and still are the Olympic Games. One of the tasks assigned to ISFs, in accordance with Rule 26, paragraph 1.5 of the Olympic Charter, is responsibility for organizing, monitoring, and directing its sports at the Olympic Games.

ISFs develops selection criteria and organizes qualification competitions where licenses for future games are awarded to select the best athletes to participate in the Olympic Games. For the vast majority of ISFs, qualifying competitions are world championships and regional championships, which are usually held 3-9 months before the start of the Olympic Games.

Due to the COVID-19 pandemic, ISFs faced a serious problem of not being able to hold qualification competitions.

For example, FINA postponed the qualifying competitions in men's water polo three times. The tournament was originally scheduled for March 22-29, 2020, then postponed to May 31–June 7, 2020, but FINA's final decision was to postpone the competition to February 2021.

A similar situation has developed for holding qualifying handball tournaments. So, according to the IHF competition calendar, the tournaments were planned to be held in April 2020. Subsequently, due to the COVID-19 pandemic, the launch was postponed to June 2020. However, after the announcement of the IOC's decision to postpone the Games of the XXXIII Olympiad to the summer of 2021 IHF decided to hold the qualifying tournaments in March 2021. The IHF has decided to hold qualifying tournaments in March 2021.

According to George Ramsay, as of March 2020, only 57 percent of athletes were licensed to participate in the 2020 Tokyo Olympics. The remaining 43 percent of licensed places were supposed to be awarded in March-June 2020. However, due to the COVID-19 pandemic, it was decided that the IOC together with representatives of ISFs for Summer Olympic sports will make

forced amendments to the qualification system for the Tokyo Games. Still, representatives of both organizations noted compliance with the following principles:

1. All quota places that have already been won by athletes remain assigned to the NOCs and the athletes who received them.
2. Conduct qualifying competitions for drawing the remaining licenses for the Olympic Games, with equal opportunities for all participants to take part in them.
3. Make adjustments to the existing qualification system to create the possibility of distributing the remaining licenses for the Olympic Games in Tokyo, namely:
 - a. Use of current ISFs ratings.
 - b. Use the results of continental or regional competitions where possible.

According to the IOC resolution, each ISF could make adjustments to the qualification system for the Olympic Games, but any proposals had to be considered and approved by the end of April 2020 and distributed to all interested parties, namely representatives of the NOC, NSF, athletes.

The impact of the COVID-19 pandemic on the activities of National Olympic Committees

The National Olympic Committee is a non-governmental non-profit organization that reports to the IOC and is responsible for promoting Olympism, developing, promoting and protecting the Olympic Movement in the country [50].

As of 2021, 206 NOCs have been recognized by the International Olympic Committee. The impact of the COVID-19 pandemic on National Olympic Committees has been addressed more effectively through NOC associations, namely the European Olympic Committees (EOC), the Pan American Sports Organization (PASO), the Olympic Council of Asia (OCA), and the Association of National Olympic Committees of Africa. ANOCA) and The Oceania National Olympic Committees (ONOC).

In 2020, the European Olympic Committees conducted a study on the impact of the COVID-19 pandemic on the National Olympic Committees that are members of the EOC. 45 out of 50 European National Olympic Committees took part in the survey. According to a survey of NOCs, about 93% of all NOCs have had to radically review their work to meet recommended international and mandatory national health measures and help reduce the spread of Covid-19 in their countries. At the same time, more than two-thirds (67%) of NOCs said that during the COVID-19 pandemic, elite athletes had no opportunity to train, even in closed training facilities. Also, less than one third (29%) said that national team athletes could continue training at closed

Olympic bases, but subject to certain circumstances, such as social distancing, limited number of athletes, lack of unnecessary contacts outside the base, and so on [27].

As the Tokyo 2020 Olympic Games have been postponed to 2021, the main operational decisions that EOC representatives were ready to take included restoring the balance of budgets, negotiating with sponsors and suppliers, and providing athletes with the necessary support. The vast majority of NOC representatives (about 78%) expressed the opinion that local and national authorities are helping elite and grassroots sports to get out of the crisis. The main ways of support highlighted by the NOC representatives were: the introduction of financial assistance and tax cuts, allowing athletes to train in accordance with social distancing measures, and protecting the health of the population through sports [29, 50, 63].

CHAPTER III

METHODOLOGY

Organization of research

At the first stage (2020) a theoretical analysis of the scientific, scientific, and methodological literature on the problem of the spread of coronavirus disease in the world. The selection of informative and reliable methods for analysis and interpretation, evaluation of the results of literary analysis were performed. The influence of coronavirus disease on the activities of various international and national sports organizations was analysed.

The urgency of the problem was determined, the structural components of the study were formulated, the WHO regulations were analysed, and they had a direct impact on the activities of sports organizations in the world. Possible options for conducting chatting, interviews and surveys of sports experts on the impact of the COVID-19 pandemic on the activities of sports organizations were considered.

The study of the impact of the COVID-19 pandemic on the activities of sports organizations took into account quantitative and qualitative indicators related to the number of competitions held and cancelled, staff reductions, financial losses due to problems and more.

In the second stage (2021), a survey of sports experts was conducted on the impact of the COVID-19 pandemic on the effectiveness of various international and sports organizations. The study involved 92 sports professionals from different countries, including 14 representatives of International Sports Federations, 52 representatives of National Sports Federations, 15 representatives of National Olympic Committees and 11 representatives of other sports organizations.

The survey identified and analysed the problems faced by international and national sports organizations in connection with the COVID-19 pandemic. On the basis of the conducted questionnaire the model ways of the decision of the arisen problems by each sports organization have been defined.

Using the methods of mathematical statistics, the research results were processed, the obtained results were analysed and recommended for implementation.

The Sample

The study involved 92 experts in the field of sports. Among the experts were representatives of ISFs, NSFs, NOCs and other sports organizations. The study involved 49

women and 43 men. The average age of the respondents was 42 years, and the average professional experience was 13 years.

Research methods

During the research on the topic of master's work to solve the formulated problems general pedagogical research methods and methods of mathematical data processing were used. Among the methods used in the master's study were the following:

1. Analysis and generalization of data from scientific and methodological literature sources, data from the Internet.
2. Analysis of WHO regulations.
3. Analysis of the international competitions' protocols in various sports.
4. Polls.
5. Methods of mathematical statistics.

Analysis and generalization of data from scientific and methodological literature sources, data from the Internet.

The study, analysis and generalization of data from scientific and methodological literature sources, data from the Internet were conducted to determine the peculiarities of the functioning and state of international and national sports organizations during the COVID-19 pandemic. The focus was on the analysis of problems faced by the International Olympic Committee, International Sports Federations, as well as specific issues faced by National Olympic Committees and National Sports Federations due to specific local constraints.

The analysis of scientific and methodological literature on the development and preservation of sports in the context of the COVID-19 pandemic has identified the leading problems faced by international sports organizations in 2019-2021.

Thanks to the use of this method, the state of the researched problem was determined, the purpose and tasks of the master's research were formulated, the research methods were determined to achieve the set tasks.

Analysis of WHO regulations.

WHO regulations have become one of the main governing documents governing any competition during the COVID-19 pandemic. In the period from 2019 to 2021, the development and approval of international protocols for the organization of competitions in various sports were based on the recommendations of the WHO and national health authorities. It should be noted that all regulations and decisions of individual governments on the preservation of sports in the countries are based on WHO recommendations.

The analysis of WHO regulations was carried out for the period from 2019 to 2021 in order to identify the main decisions on the preservation of sports and innovations in the organization of international and national competitions.

Also, on the basis of WHO regulations, an analysis of the guidebooks developed by various international sports organizations, including the International Olympic Committee, the Organizing Committees of the Olympic Games and International Sports Federations was performed.

Analysis of the international competitions' protocols in various sports.

The analysis of the protocols included the elaboration of the main components of the athletes' competitive activities, the quantitative characteristics of each competition, namely the number of participants, the number of countries, the number of officials and support staff, the number of spectators.

The registration of indicators was carried out according to official documents of international and National Sports Federations, including FIG, FINA, UIMP, UCI, UFG and others. The study analysed the stages of the world series, world championships, professional meetings and national championships. Data processing included a comparative analysis between the number of participants and countries during the COVID-19 pandemic with previous releases of these competitions, as well as the number of competitions held for the period 2019-2021 in general. The obtained data allowed to reveal the problems faced by sports organizations during the organization of competitions and to determine the leading ways of holding competitions in the conditions of a COVID-19 pandemic.

Survey of specialists.

The survey of leading experts in the field of sports was conducted to supplement the data obtained from the analysis of literature sources, WHO regulations and protocols of international competitions in various sports, as well as to identify problems faced by international sports organizations in 2019-2021 associated with the COVID-19 pandemic.

The survey was conducted based on the results of interviews with experts. Based on the interlocutions and interviews, a questionnaire, which consisted of two blocks, was developed. The first block consisted of 8 questions aimed at identifying the age, gender, national and professional affiliation of the interviewed professionals. The second block consisted of 12 questions aimed at identifying quantitative and qualitative information, problems faced by organizations in connection with the COVID-19 pandemic. A total of 92 experts took part in the final survey, including representatives of International Sports Federations, National Sports Federations and National Olympic Committees.

A survey of sports experts highlighted the main problems with the functioning of International Sports Federations during the COVID-19 pandemic.

Methods of mathematical statistics.

Processing and analysis of the results of the questionnaire and pedagogical testing were carried out using a set of methods of mathematical statistics, which are widely used in the research in physical education and sports.

Descriptive statistics, sampling method, parametric criteria, correlation and factor analyses (principal components method) were performed to solve the problems related to the analysis of the obtained data.

The following statistical characteristics were calculated: arithmetic mean. For the absolute indicator of variation of features, which characterizes the magnitude and nature of variation, the selected standard deviation is S and the standard error of the arithmetic mean is m .

The arithmetic mean (\bar{x}), determined by the formula:

$$\sum_{i=1}^n - \text{determining the sum of } n \text{ numbers } x_i;$$

where:

n is the sample size.

x_i - sampling options.

The sum of the squares of the deviation from the mean (S), which is determined by the formula:

$$S = \sum_{i=1}^n \left(\left(\sum_{j=1}^m x_{ij} \right) - \bar{x} \right)^2$$

where:

n - the number of objects of examination.

m - number of experts.

\bar{x} - the average score given by m experts on all n objects of examination, which is determined by the formula:

$$\bar{x} = m(n + 1)/2$$

The reliability of differences in the basic statistical characteristics (sample averages) was determined by Student's t-test (because the samples met the law of normal distribution, which was checked using the Wilkie-Shapiro test, and sample variances did not differ statistically significantly, $p > 0.05$).

The consistency of the experts' opinions was determined on the basis of the Kendall concordance coefficient, which was determined by the formula:

$$W = \frac{12S}{m^2(n^3 - n)}$$

where:

S is the sum of the squares of the deviation from the mean.

n - the number of objects of examination.

m - number of experts.

The statistical processing used a significance level of $p = 0.05$. Some results were obtained at higher levels of significance $p = 0.01$ and $p = 0.001$.

Mathematical and statistical processing and further analysis of the obtained data were performed using the computational and graphical capabilities of the computer program "Statistica".

CHATER IV

RESULTS OF THE RESEARCH

Problems faced by sports organizations because of the COVID-19 pandemic

Common problems faced by sports organizations because of the COVID-19 pandemic

The synthesis and generalization of these literature sources revealed that the COVID-19 pandemic has affected all areas of human activity. Sports, as a specially organized activity of people, which consists in the interaction of people with each other, have suffered the most from the consequences of the COVID-19 pandemic [4, 16, 73, 85].

Summarizing the existing material, it can be noted that the COVID-19 pandemic has affected all components of the Olympic system, such as the IOC, ISFs, NOCs, athletes, and official representatives [27, 84, 97]. International and national organizations faced similar problems during the COVID-19 pandemic, but each of them tried to solve problems in different ways. Therefore, the first step in conducting our research was to organize conversations with representatives of various sports organizations to identify the problems they faced during the COVID-19 pandemic.

In the course of the study, conversations were conducted with specialists in the field of sports. Based on the conducted conversations and interviews, a questionnaire was developed. In total, the final data set included the results of a survey of 92 specialists, including representatives of International Sports Federations, National Sports Federations, and National Olympic Committees. A comparison of representatives of all organizations is shown in Table 1. It should be noted that there were no significant differences between the qualitative composition of the descriptive data. For example, the average age of respondents was 42 years, and the average professional experience was 13 years.

Table 1. Descriptive data of the specialists who took part in the survey.

Variable	ISFs	NSFs	NOCs	Other sport organization
n	14	52	15	11
Age (y)	45±7.4	42±15.3	35±4.8	38±6.2
Professional experience (y)	12±5.1	18±4.3	15±7.2	8±2.4

The number of men and women representing each of the sports organizations is shown in Table 2. National Sports Federations and National Olympic Committees had the largest number of participants. Collectively, they accounted for fifty-six percent of the total number of respondents. The lowest number of participants was represented among other sports organizations with a total of 11 participants. However, despite the small representation, the survey of these specialists allowed us to work more extensively on the problem of the impact of coronavirus on the components of the Olympic system.

Table 2. Gender indicator of the specialists who took part in the survey.

Variable	ISFs	NSFs	NOCs	Other sport organisation
n	14	52	15	11
Male (n)	6	25	8	4
Female (n)	8	27	7	7

In Figure 2 the opinion of the interviewed experts on the COVID-19 pandemic impact on the activities of sports organizations is reflected. So, according to the results of the survey, the overwhelming majority of experts agreed that sports organizations were significantly affected by the COVID-19 pandemic, which affected the effectiveness of their work, and took urgent and subsequently moderate steps to maintain the effective functioning of each organization.

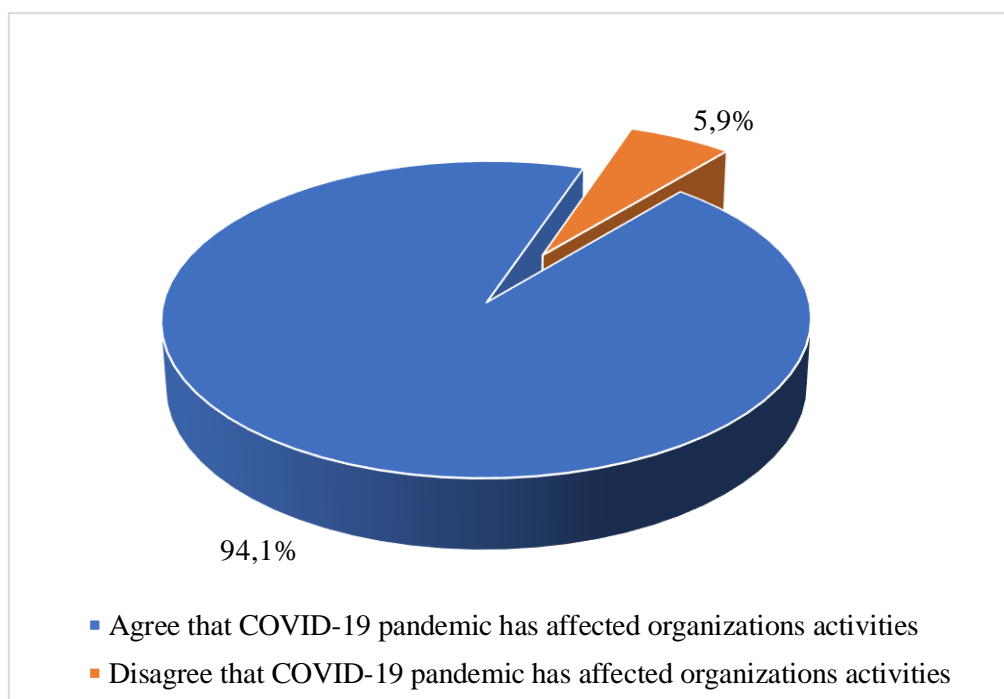


Figure 2. Expert opinion on the impact of the COVID-19 pandemic on the activities of sports organizations.

After the synthesis and generalization of the survey data of national and international sports organizations representatives, the main challenges faced by these organizations during the COVID-19 pandemic were identified and they are shown in Figure 2. Among the main problems, experts distinguish the following:

1. lack of possibility to hold sports competitions, including qualifiers for the Olympic Games;
2. deterioration of communication between representatives of the organization in the first months of the pandemic due to improper online cooperation;
3. closure of Organization headquarters due to lockdowns in countries;
4. lack of developed and effective online platforms;
5. reduction of wages and staff;
6. deterioration of the regularity of educational training and conferences.

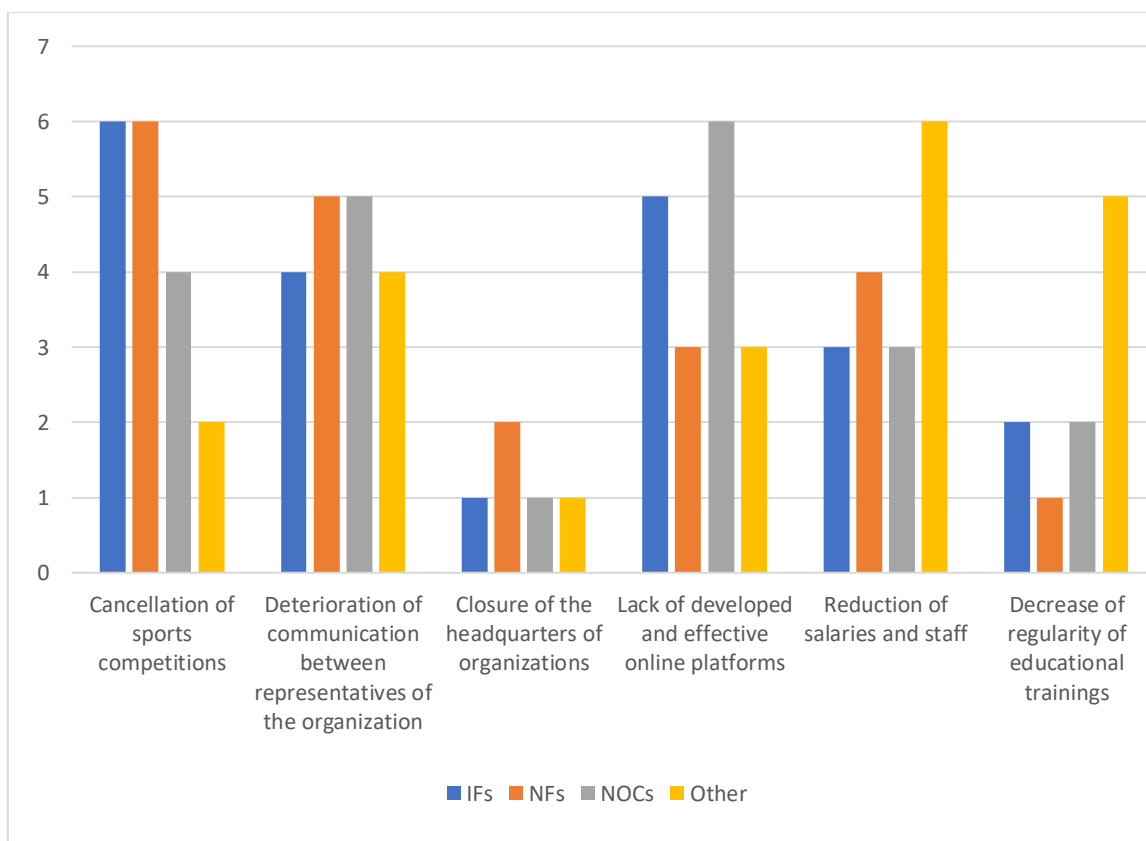


Figure 3. Problems of organizations during the COVID-19 pandemic (according to the opinion of surveyed experts).

As can be seen from the figure, there was a tendency to increase the importance of the problem of cancelling competitions for International Sports Federations. The second important problem for these organizations was the lack of developed and effective online platforms, as well

as the deterioration of communication between representatives of the organization in the first months of the pandemic due to poor online cooperation. At the same time, ISFs specialists attached less importance to the problem of reducing wages and staff and the deterioration of the regularity of educational training and conferences. The problem of closing the headquarters of organizations due to lockdowns in countries took the last place, which showed the importance of online communication within organizations.

Similar trends are reflected in the results of a survey of representatives of National Sports Federations. The most significant problem was the cancellation of competitions. However, the second and third places in the rating of problems were taken by the deterioration of communication between representatives of the organization in the first months of the pandemic due to poor online cooperation and reduced wages and staff. The lack of developed and effective online platforms and the closure of Organization headquarters due to lockdowns in countries were noted as less significant. The problem of deterioration of the regularity of educational trainings and conferences took the last place according to representatives of National Sports Federations.

On the other hand, completely different trends are observed in the results of a survey of representatives of National Olympic Committees. So, they identified the lack of developed and effective online platforms as the primary problem. The second most important problem was the deterioration of communication between representatives of the organization in the first months of the pandemic due to improper online cooperation. Next in the rating were problems with the lack of opportunities to hold sports competitions, including qualifiers for the Olympic Games, reduced wages and staff, and the deterioration of the regularity of educational training and conferences. The least significant problem was the closure of Organization headquarters due to lockdowns in countries.

At the same time, representatives of other sports organizations noted that the key problem is the reduction of wages and staff and the deterioration of the regularity of educational training and conferences. Experts attached less importance to the lack of developed and effective online platforms, the deterioration of communication between representatives of the organization in the first months of the pandemic due to poor online cooperation, and the cancellation of competitions. It is worth noting that the opinion of experts on the importance of closing the headquarters of organizations due to lockdowns in countries was identical with representatives of international and National Sports Federations and National Olympic Committees.

The data obtained during the survey was analysed and calculated using the Kendall concordance coefficient (consistency). Thus, this indicator was $t_1=0.92$ among representatives of International Sports Federations, $t_2 = 0.89$ among representatives of National Sports Federations, $t_3=0.85$ among representatives of National Olympic Committees, and $t_4=0.86$ among

representatives of other sports organizations. This allows us to talk about the reliability of the research results.

The results also show that the opinion of representatives of International Sports Federations, National Sports Federations, and National Olympic Committees coincides with the most significant problems in connection with the COVID-19 pandemic. The most significant among all the problems, according to experts, are the lack of opportunities to hold sports competitions, including qualifiers for the Olympic Games; the deterioration of communication between representatives of the organization in the first months of the pandemic due to poor online cooperation, and the lack of developed and effective online platforms.

Problems faced by International Sports Federations in connection with the COVID-19 pandemic

In the course of the study, the main components of the Olympic system were identified, and International Sports Federations play a key role among those. Taking into account the fact that in the course of conducting research, general trends that all sports organizations faced during the COVID-19 pandemic were identified, at the second stage of the study, special attention was paid to specific problems that International Sports Federations faced in 2020-2021. Therefore, the main task was to identify the main problems of the functioning of International Sports Federations during the COVID-19 pandemic.

For this purpose, we conducted interviews and surveys of 14 specialists from different countries, such as Belgium, Greece, Italy, Germany, New Zealand, USA, Hungary, Ukraine, Switzerland, who represented eight International Sports Federations.

So, as noted above, one of the central positions in the International Olympic system is occupied by International Sports Federations. According to official information, as of 2020, 40 International Sports Federations in Olympic sports, 33 in summer and 7 in winter are officially recognized in the world [48, 71, 72].

According to the experts, International Sports Federations for summer sports were more affected by the COVID-19 pandemic, because the COVID-19 pandemic occurred in the year of the Olympic Games [48, 76, 100]. It is worth noting that International Sports Federations were affected not only by Olympic sports, because, due to the postponement of the Olympic Games in Tokyo for 2021, the 11th World Game, which was scheduled for the summer of 2021 in Birmingham, USA, was postponed to 2022 after negotiations between the IOC and the International Association of world games.

A summary of the existing statistical material allows us to note that the vast majority of International Sports Federations were forced to cancel or postpone competitions due to the

COVID-19 pandemic. However, it is worth mentioning that 57.9% of the total number of International Sports Federations in Summer Olympic sports were unable to hold qualifying competitions for drawing licenses for the Olympic Games in Tokyo due to the COVID-19 pandemic (Figure 3).

Thus, according to the IOC, more than six thousand athletes were not licensed for the Olympic Games in Tokyo as of March 2020. [43, 51, 53].

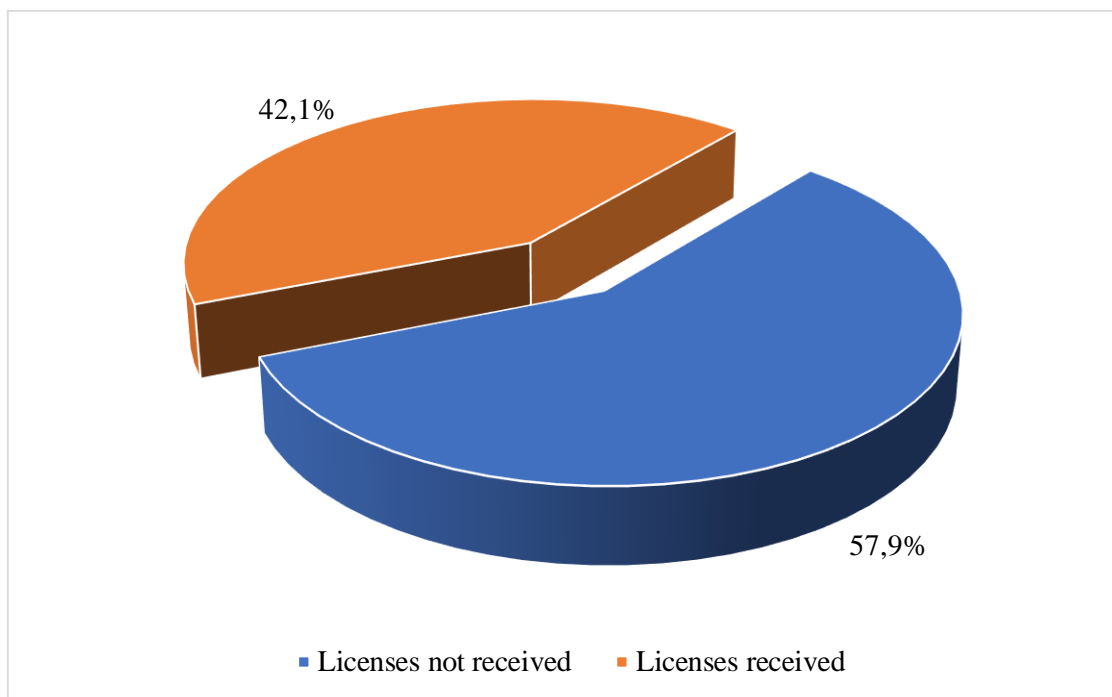


Figure 4. Distribution of licenses for the Olympic Games in Tokyo as of March 2020.

As a survey of specialists in the course of our research showed, this information was confirmed. According to the interviewed representatives of International Sports Federations, the problem of the impossibility of holding competitions due to the COVID-19 pandemic has become one of the key problems of the functioning of organizations in 2020-2021. As the experts themselves shared, the main goal of the International Sports Federations is to develop one or more sports in the world. Due to the COVID-19 pandemic, this function was almost impossible to perform.

During scientific research, we made a statistical analysis of the competition calendars of International Sports Federations in Summer Olympic sports. According to the analysis, on average, 63% of competitions were cancelled and 24% of competitions were postponed by decisions of International Sports Federations in Summer Olympic sports.

Figures 4 and 5 show that the problem of cancelling and postponing competitions, as well as the inability to hold qualifying competitions for the Olympic Games in Tokyo, significantly affected the activities of International Sports Federations.

During the survey of Representatives, eight International Sports Federations that participated in the study found that from 64 to 78% of all competitions were cancelled by these organizations, and 82% of qualifying competitions were postponed to spring 2021 (Figure 7).

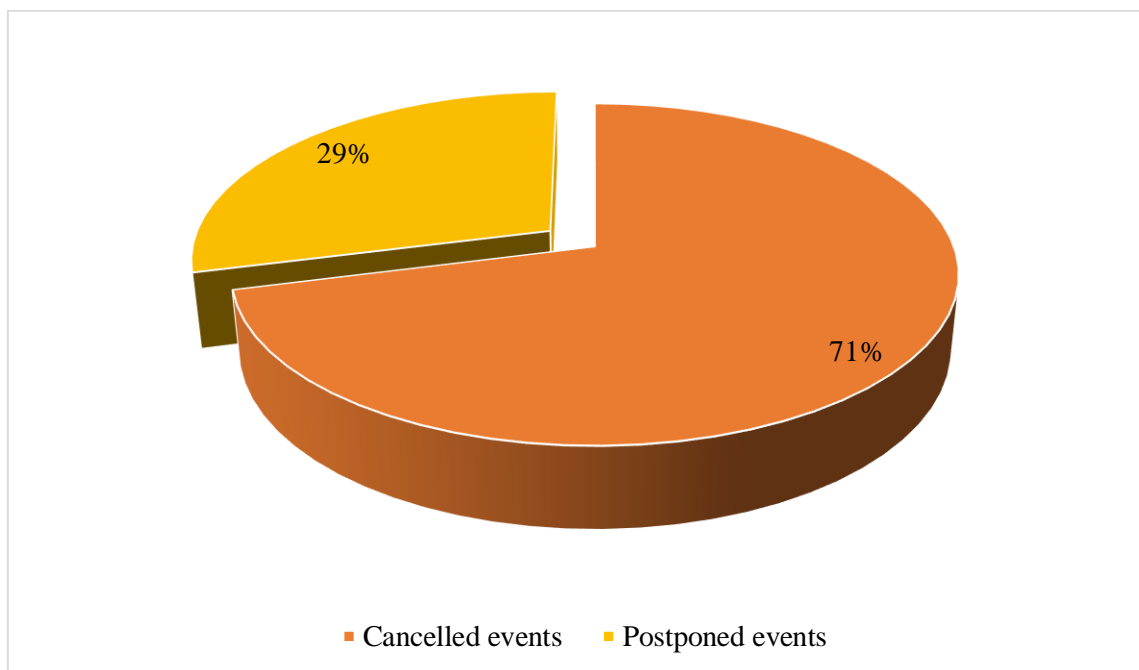


Figure 5. Results of a survey of representatives of International Sports Federations on the cancellation and postponement of competitions in connection with the COVID-19 pandemic.

In addition to the problems with the impossibility of holding competitions, there was a problem of developing requirements for holding any sporting events in accordance with the conditions of the pandemic. According to the interviewed experts, specially created divisions or commissions were engaged in the development of protocols for all further competitions. These structures of International Sports Federations, in cooperation with WHO and the ministries of health of the countries where their headquarters are located, have developed recommendations for the safe organization and conduction of competitions in the context of the COVID-19 pandemic.

The second significant problem noted by the interviewed representatives of International Sports Federations was the lack of developed and effective online platforms.

Figure 7 shows that 45% of respondents considered the existing online platforms at the time of the outbreak of the pandemic ineffective and uninformative. In their conversations,

representatives of International Sports Federations noted that online platforms most often displayed general, historical-logical, and overview information, but had a small number of practical applications.

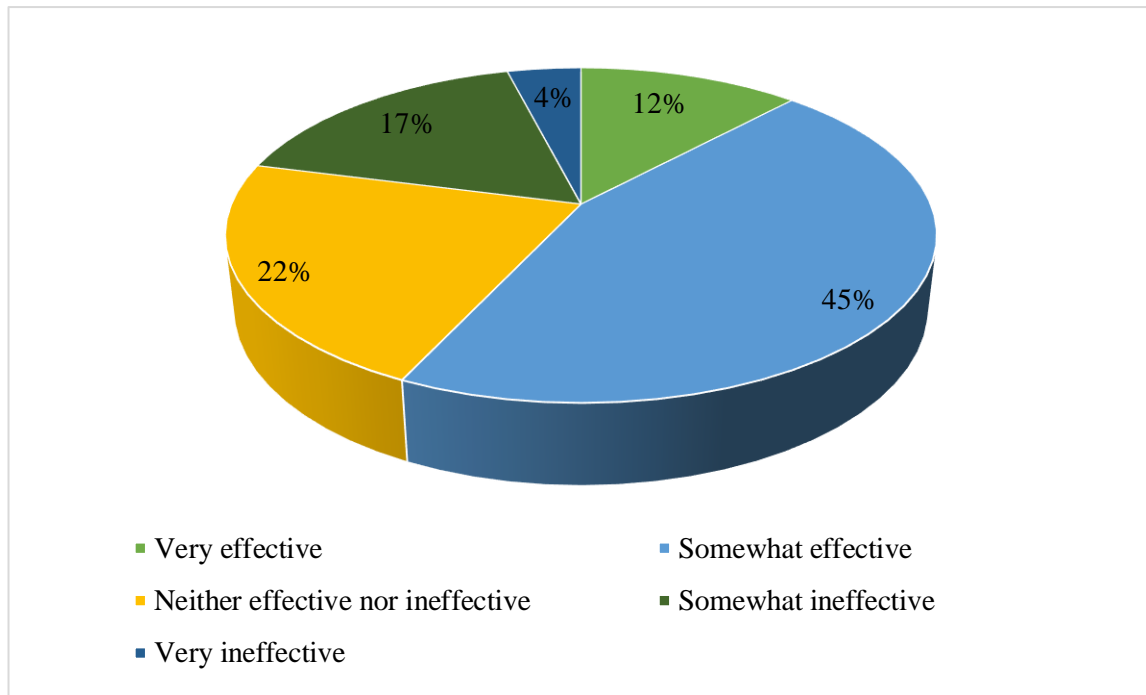


Figure 6. The results of a survey of representatives of International Sports Federations on the effectiveness of online platforms during the COVID-19 pandemic.

Representatives of International Sports Federations also noted the deterioration of communication between representatives of the organization in the first months of the pandemic due to poor online cooperation and the problem of reducing wages and staff. Experts stressed that their annual salary decreased by more than 20% during the pandemic.

Problems faced by National Sports Federations in connection with the COVID-19 pandemic

The study surveyed 52 representatives of National Sports Federations representing Germany, Russia, the United States, Ukraine, Sweden, and Switzerland in 7 sports. Like representatives of International Sports Federations, representatives of the NSF noted the priority problem of cancelling competitions. In Figure 8 data shows that in 2020, due to the COVID-19 pandemic, an average of 87% of all national competitions were cancelled and 6% postponed.

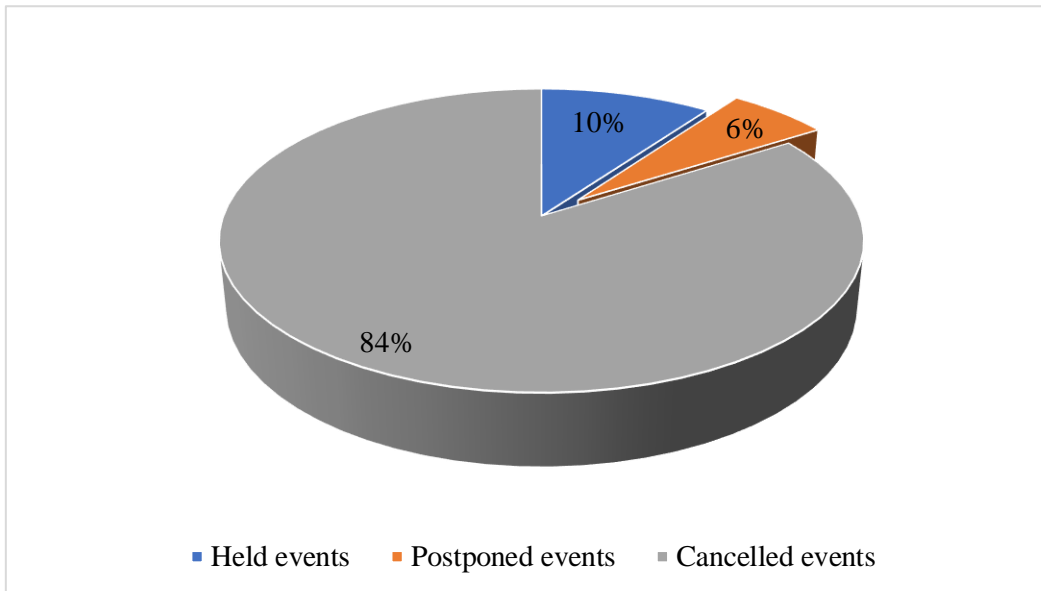


Figure 7. Results of a survey of representatives of National Sports Federations on the cancellation and postponement of competitions in connection with the COVID-19 pandemic.

At the same time, representatives of National Sports Federations noted a deterioration in the relationship within the organization in the first months of the pandemic due to the lack of effective online platforms. According to the survey results, only 5% of representatives of National Sports Federations considered existing online platforms effective. However, the vast majority of specialists, namely 42%, consider online platforms ineffective (figure 9).

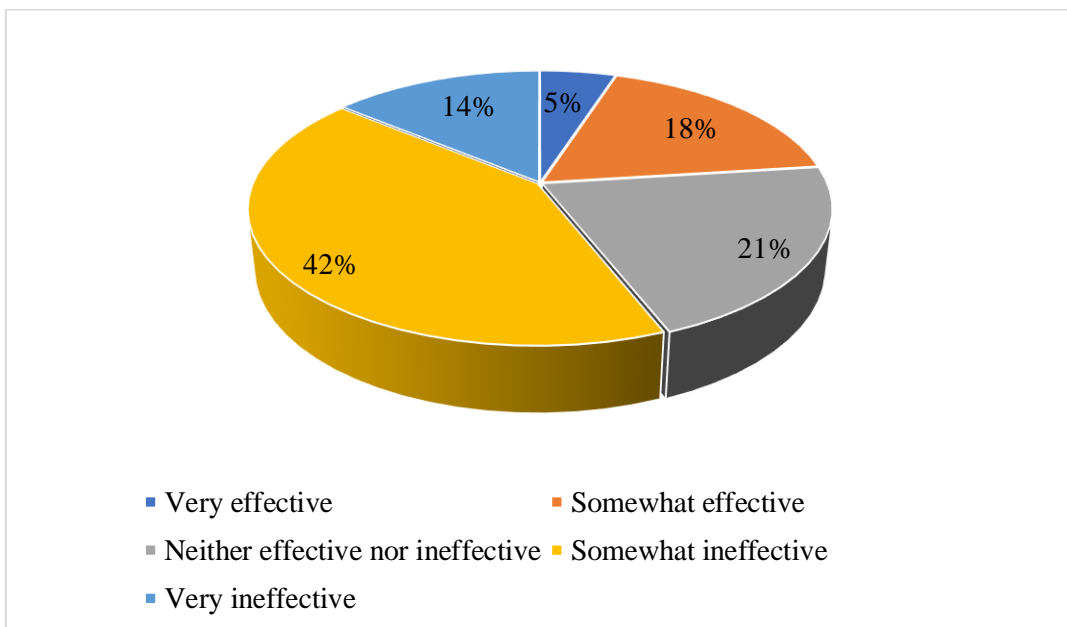


Figure 8. Results of a survey of representatives of National Sports Federations on the effectiveness of online platforms during the COVID-19 pandemic

It is worth emphasizing that 14% of representatives of National Sports Federations consider the operation of online platforms very inefficient. In addition, they noted that before the start of the COVID-19 pandemic, their organizations did not even have a functioning website with all the necessary information, which became an additional challenge in the work of the federation in the first months of the pandemic.

The next problems faced by National Sports Federations and highlighted in the survey by their representatives are the reduction in wages and staff, as well as the deterioration of the regularity of educational training and conferences. Due to the COVID-19 pandemic, the salary of representatives of National Sports Federations has decreased up to 50%, depending on the country.

At the same time, there is a new problem of reducing the number of athletes during the COVID-19 pandemic. According to research by the technical committee for trampoline jumping of the Ukrainian Gymnastics Federation, the number of participants in each of the age categories decreased from 11 to 27% of the total number of athletes as of 2019. Figure 10 shows in detail the decline in the number of athletes in each age category, according to the results of the Ukrainian Championships held in 2021.

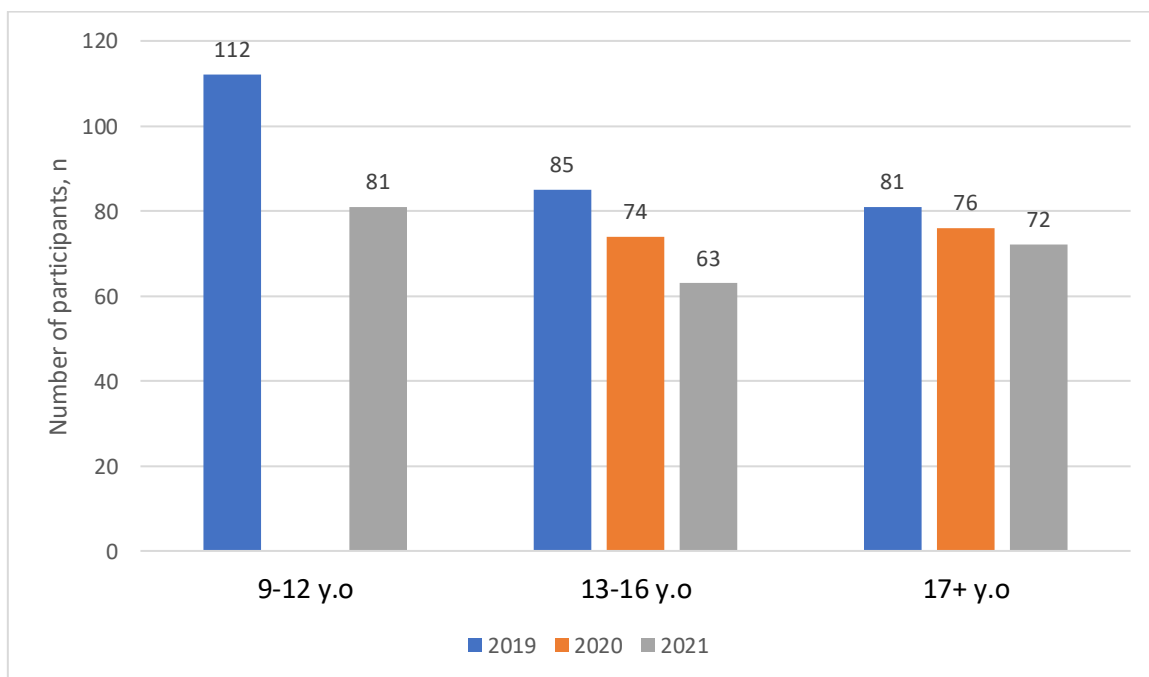


Figure 9. Number of participants in each age category at the Championships of Ukraine in trampoline jumping in 2019 and 2021.

So, such results of the questionnaire survey are explained by the fact that the COVID-19 pandemic has affected the effectiveness of National Sports Federations around the world and separately from the problems common to all federations, during the Pandemic there were also local

problems specific to a particular country. Such problems include a decrease in the number of athletes in all age categories, a decrease in the number of coaches and additional staff, outbreaks of morbidity and quarantine closure of training centres, a reduction in the number of training bases, and the inability to conduct high-quality coaching and judging seminars.

Problems faced by National Olympic Committees in connection with the COVID-19 pandemic

National Olympic Committees are one of the most important structural elements of the International Olympic system. NOC is a non-governmental public organization recognized by the International Olympic Committee, which has its own charter, acts in accordance with the principles and rules of the Olympic Charter. According to the Olympic Charter, the main tasks of the NOC include promoting the fundamental principles and values of Olympism in their countries, promoting the development of high-performance sports and sports for all, countering any form of discrimination, observing the Olympic Charter in their countries, and others.

Currently, 206 National Olympic Committees are officially recognized by the IOC in the world.

As noted above the research revealed general trends that all sports organizations faced during the COVID-19 pandemic, and which are reflected in Figure 2.

Among the most significant common problems of the National Olympic Committees, experts attributed the lack of developed and effective online platforms and the deterioration of communication between representatives of the organization in the first months of the pandemic due to poor online cooperation. Another significant problem faced by representatives of the NOC was the reduction of wages and staff.

For a more detailed review of the problems faced by the NOC during the COVID-19 pandemic, a survey of representatives of National Olympic Committees was conducted. 15 representatives of the NOC of five countries, including Ecuador, Germany, Poland, Russia, and Ukraine, took part in this survey.

In the course of a survey of experts, it became known that on average 89% of all employees of National Olympic Committees received reduced wages (Figure 11).

At the same time, interviews with specialists showed that the percentage of wage cuts varied depending on the country. Thus, on average, 48% of all NOC employees received a salary 10-25% lower than usual. At the same time, a reduction of 25 to 50% of wages was observed in more than a quarter of all respondents (27%), and a reduction of more than 50% - in 14% of the surveyed specialists. It should be noted that the largest percentage of wage cuts among respondents

was 65%. However, it should be emphasized that among the respondents there were 11% of Representatives of the NOC who did not reduce their wages during the COVID-19 pandemic.

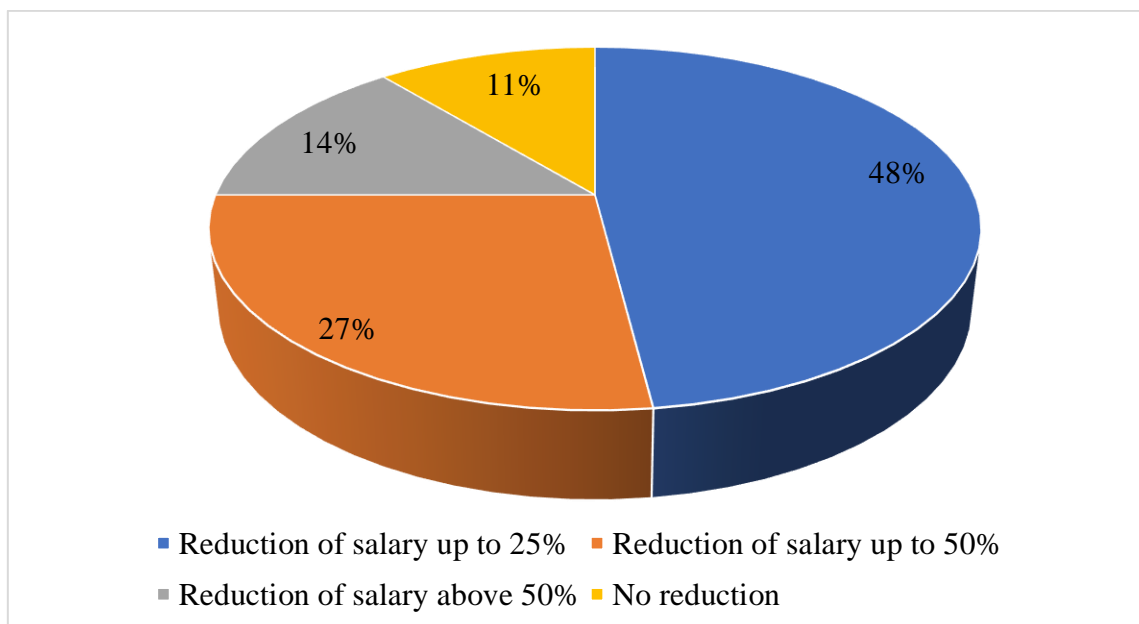


Figure 10. Number of NOC staff receiving reduced wages during the COVID-19 pandemic

The results obtained provided the basis for further conversations with specialists. Discussion of the problems of wage cuts in the context of the COVID-19 pandemic revealed a number of frequent problems faced by representatives of the NOC, which were considered in the course of further research.

Problems faced by other sports organizations in connection with the COVID-19 pandemic

Studies have revealed a significant impact of the COVID-19 pandemic on the main components of the international Olympic system. However, the study also involved representatives of other sports organizations, including the National Association of Sports Journalists and sports clubs in various sports. Representatives of these organizations were 11 of the 92 surveyed sports professionals involved in the study. However, the results of the survey of representatives of other sports organizations are also very important, because their activities affect the efficiency of the main components of the international Olympic system.

Thus, according to representatives of other sports organizations, the main problem they faced during the COVID-19 pandemic was the reduction or absence of wages. For representatives of sports clubs, this situation is due to the direct dependence of staff salaries on the income of

clubs. According to the survey, about 74% of all employees of other sports organizations received reduced wages, and 26% left their main job (Figure 11).

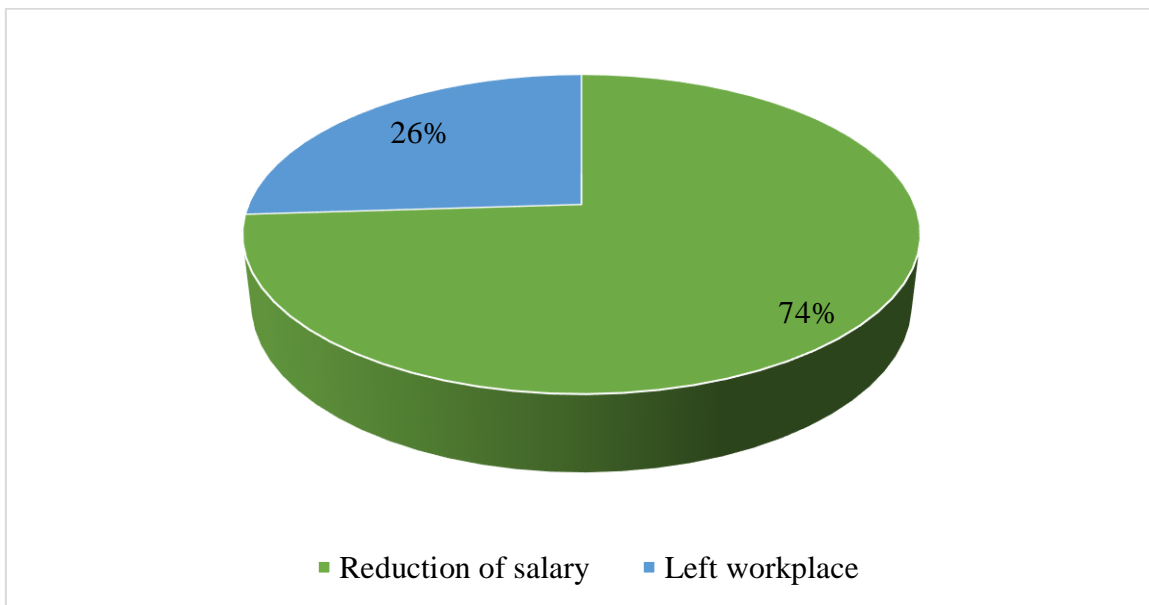


Figure 11. Number of employees of other sports organizations who received reduced wages during the COVID-19 pandemic or left their jobs.

The second most important problem faced by representatives of other sports organizations was the deterioration of the regularity of educational trainings and conferences. About 58% of respondents noted that during 2020-2021 the number of professional training events decreased. Experts said that the vast majority of such events were held in person in previous years and that online events would be ineffective.

The next most influential issues were the deterioration of communication between representatives of the organization in the first months of the pandemic due to poor online cooperation and the lack of developed and effective online platforms. However, respondents said that the above issues were given sufficient attention during the first year of the pandemic, so 78% of respondents said that in 2021, communication between various organizations and representatives has improved significantly.

WAYS TO SOLVE THE PROBLEMS ENCOUNTERED BY SPORTS ORGANIZATIONS DURING THE COVID-19 PANDEMIC

Common ways to solve the problems of sports organizations during the COVID-19 pandemic

The third stage of our research was to determine the main ways to solve the problems identified in the analysis of the functioning of sports organizations during the COVID-19 pandemic. A questionnaire survey of representatives of international and national sports organizations (n = 92) provided an opportunity to identify ways to solve problems that have been used in the work of organizations:

1. improvement of existing and creation of new additional online platforms;
2. establishment of cooperation with representatives of the WHO and medical institutions to develop and provide the necessary conditions for training and competitions;
3. creation of commissions and departments for the development and approval of common criteria and requirements for sports competitions;
4. creation of new formats for national and international competitions;
5. holding congresses, summits and all meetings online;
6. creation and conduction of new trainings for athletes, coaches, officials and other staff;
7. expansion of cooperation with other national and international institutions to improve the functioning of the organization during the COVID-19 pandemic;
8. development of guidebooks for all stakeholders including athletes, coaches, officials, journalists and others with clear requirements and recommendations for behaviour, movement and all activities before, during and after competitions and training.

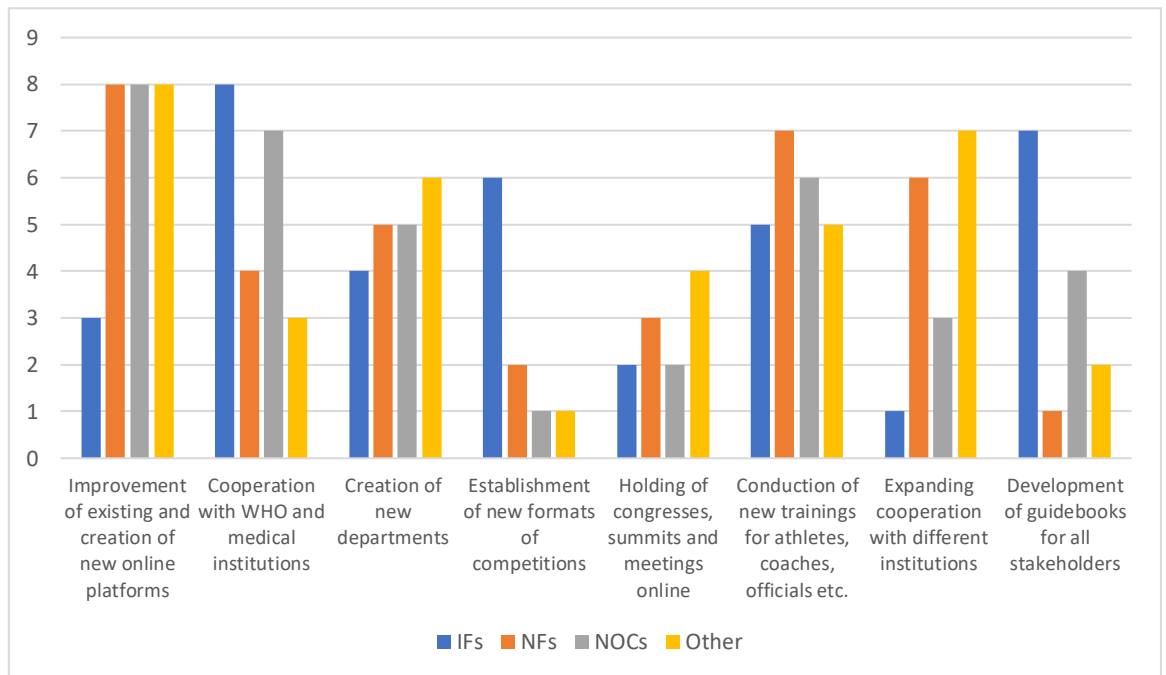


Figure 12. Ways to solve the problems of functioning of organizations during the COVID-19 pandemic (according to surveyed experts).

As can be seen from Figure 12, there was a tendency for significant differences between the significance and rank of each of the ways in which sports organizations faced the COVID-19 pandemic. According to representatives of National Sports Federations, National Olympic Committees and other sports organizations, the first priority was to improve existing and create new additional online platforms. However, according to representatives of International Sports Federations, this solution is not a priority, because during the talks, experts noted that the online platforms of their organizations were quite modern and informative and did not require urgent changes at the beginning of the pandemic. However, the representatives identified establishing cooperation with WHO and medical institutions to develop and provide the necessary conditions for training and competitions and develop guidebooks for all stakeholders, including athletes, coaches, officials, journalists and others with clear requirements and recommendations for behaviour, movement and all activities before, during and after competitions and training to be priority steps in solving the problems of International Sports Federations. According to the interviewed experts, this path was chosen taking into account the fundamental task of the existence of International Sports Federations, namely the development of one or more sports in the world. Thus, experts noted that the organizations were able to develop the necessary recommendations for the safe and effective conduct of training sessions and competitions in the first months of the pandemic.

The second priority way to solve existing problems differed significantly for each of the organizations. For example, ISFs have identified the development of guidebooks for all stakeholders, including athletes, coaches, officials, journalists and others, with clear requirements and guidelines for behaviour, movement and all activities before, during and after competitions and training as their priority. According to the results of interviews with representatives of International Sports Federations, the developed guidebooks helped reassure representatives of National Sports Federations, athletes, coaches and provided a foundation for further action to preserve sports in the world. However, the second most important way for the National Olympic Committees was to establish cooperation with representatives of the WHO and medical institutions to develop and provide the necessary conditions for training and competition. According to the representatives of the National Olympic Committees, thanks to the rapid steps of the IOC and the developed recommendations, the NOCs were able to adapt these documents to the requirements of their countries and thus offer effective programs for sports at the national level in a pandemic. At the same time, representatives of National Sports Federations emphasized the importance of creating and conducting new trainings for athletes, coaches, officials and other staff, which were aimed at continuing training and studying in a pandemic. According to the survey, all NSF representatives used guidebooks and supporting documents developed by International Sports Federations, which facilitated the work of organizations during the pandemic.

For representatives of other sports organizations, the second priority was to establish cooperation with various national and international institutions to support the functioning of the organization during the COVID-19 pandemic.

The results of the expert survey show that the next most important area of problem solving for ISFs was the creation of new formats for national and international competitions. Since the main task of ISFs is the development of sports in the world, to preserve their sports it was necessary to develop the latest formats of competitions that could be used both nationally and internationally. At the same time, ISFs experts gave less importance to problem-solving areas such as improving existing and creating new additional online platforms, because, as experts noted, the quality of existing platforms at the time of the pandemic was quite high. Also of little popularity was the expansion of cooperation with other national and international institutions to improve the functioning of the organization during the COVID-19 pandemic. According to experts, this is due to the fact that the vast majority of International Sports Federations have contacted directly with the WHO, so the main task was to keep existing partners, rather than looking for new ones.

Similar trends are reflected in the results of a survey of representatives of National Sports Federations. The most important way to solve the problems was to improve existing and create new additional online platforms. The second and third places in the ranking of ways to solve

problems were the creation and conduct of new trainings for athletes, coaches, officials and other staff, as well as expanding cooperation with other national and international institutions to improve the organization during the COVID-19 pandemic.

According to experts, the creation of new formats for national and international competitions, as well as congresses, summits and all online meetings has become less effective. Developing guidebooks for all stakeholders, including athletes, coaches, officials, journalists, and others, with clear requirements and guidelines for behaviour, movement, and all activities before, during, and after competitions and training has been the least important solution to pandemic problems. coronavirus, because according to representatives of National Sports Federations, the above documents were developed by International Sports Federations and not always adapted to national quarantine requirements.

On the other hand, completely different trends are observed in the results of the survey of representatives of the National Olympic Committees. Thus, experts consider the improvement of existing and creation of new additional online platforms to be the primary solution to the problems. The second most important solution was to work with WHO and medical institutions to develop and provide the necessary conditions for training and competitions, as well as to create and conduct new trainings for athletes, coaches, officials and other staff. According to experts, cooperation with the WHO has greatly facilitated further work with representatives of national sports institutions to develop and implement a training plan for professional athletes of national teams. Next in the ranking were solutions including the development of guidebooks for all stakeholders, including athletes, coaches, officials, journalists and others with clear requirements and recommendations for behaviour, movement and all activities before, during and after competitions and training, expanding cooperation with other national and international agencies to improve the functioning of the organization during a COVID-19 pandemic. The least effective way to overcome the problems associated with the COVID-19 pandemic was to create new formats for national and international competitions. At the same time, representatives of other sports organizations noted that the key solution to the problems was to improve existing and create new additional online platforms. Specialists attached less importance to expanding cooperation with other national and international institutions to improve the functioning of the organization during the COVID-19 pandemic and the establishment of commissions and departments to develop and approve common criteria and requirements for sports competitions. It is worth noting that the opinion of experts on the importance of creating new formats for national and international competitions was identical with the representatives of National Olympic Committees.

The data obtained during the survey were analysed and calculated according to the Kendall concordance coefficient (consistency). Thus, this figure was $t^1 = 0.94$ among representatives of

International Sports Federations, $t^2 = 0.93$ among representatives of National Sports Federations, $t^3 = 0.90$ among representatives of National Olympic Committees and $t^4 = 0.85$ among representatives of other sports organizations. This allows us to judge the reliability of the study results. The results also suggest that the views of representatives of International Sports Federations, National Sports Federations and National Olympic Committees coincide on the most effective ways to overcome the crisis during the COVID-19 pandemic.

The most important of all ways, according to experts, are improving existing and creating new additional online platforms, creating and conducting new trainings for athletes, coaches, officials and other staff, and to establish cooperation with WHO and medical institutions to develop and provide the necessary conditions for trainings and competitions.

Examples of emerging problems solutions by International Sports Organisations

1. Guidebooks and development of new competition procedures in the context of a pandemic.

Since the end of 2020, positive developments in the fight against the COVID-19 pandemic have begun all over the world. With the beginning of the decline in the number of reported cases and the reduction in deaths from COVID-19, as well as the spread of the vaccination campaign, the expansion of testing and contact tracing capabilities, and the creation of a new treatment regimen, governments of countries with representatives of international sports organizations began to develop rules and recommendations for resuming sports training and competitions in safe conditions during the COVID-19 pandemic.

Sporting events usually attract a large number of local and foreign participants who gather at limited-area sports facilities, such as stadiums, gyms, and fan zones. There might be a large crowd of people during, before, and after sports competitions. Also, the organizers should take care of the safety of participants when arriving in the country of the competition, because airports, buses, trains, and other places of increased crowding of people are an additional risk for participants.

To ensure a higher level of protection for spectators, athletes, delegates, and volunteers from the COVID-19, and to provide assistance to the National Health System of the country hosting sporting events, WHO has developed a number of recommendations, including:

1. Mutual process of coordinating decisions on the organization and conduction of sports events with all interested parties, in particular with international and national sports organizations, the government of countries, health institutions, and public organizations.

2. Analysis of the epidemic situation within the country before starting preparations for national or international competitions.

3. Taking into account all risks associated with holding national or international competitions. The chance of the possibility of changing, rescheduling, or cancelling mass sporting events based on an actual assessment of the overall risk associated with the sporting event.

4. Strengthening control over public health and social activities during national or international competitions. These measures apply not only to the venues of competitions, but also outside their territory, in crowded places, transport, and so on.

Risk assessment and preparation for competitions. Each International Sports Federation, based on a number of documents created by WHO, has developed a risk assessment procedure in preparation for international competitions. It is worth noting that before making a decision on how to hold a sports event, the International Sports Federation, together with representatives of regional and world medical organizations, assess the risks of holding it. In particular, the main issue is the possibility of holding a sports event in a particular country safely taking the location, health system, and conditions of the planned event into account. It should be noted that national sports organizations should consult with local health authorities and local authorities to ensure that the host city's health system has sufficient resources to deal with a crisis situation if it occurs during competition.

Risk assessment is a continuous process that must take place throughout the entire preparation period before and during the competition. Also, several characteristics of sports competitions should be taken into account, including the number of participants and officials, the type of the venue, the duration, place, and format of the event. However, the following factors should be taken into account:

- changes in the COVID - 19 spreading patterns in the country of the competition and the countries from which participants and spectators will come;
- number of vaccinated populations in the country that organizes the competition;
- availability of medical care facilities for treatment in case of detection of a positive result for the COVID-19;
- planning, implementation, and compliance with public health and social security measures.

Based on the developed WHO criteria, a risk assessment procedure for international sports competitions was formulated for International Sports Federations.

First of all, the organizers of sports events should use the list of questions below as one of the tools for assessing the risk of future sports competitions (Table 3). These questions are intended

to help organizers understand the level of risk and to better adjust the further assessment of additional risks from COVID-19.

Table 3. Risk assessment score that incorporates factors specific to mass gathering sporting events

Additional risk of COVID-19 to the mass gathering sporting event	Yes (1)/No (0)	Score
Will the event be held in a country that has documented active local transmission of COVID-19 (community spread)?		0
Will the event be held in multiple venues/cities/countries?		0
Will the event include international participants (athletes and spectators) from countries that have documented active local transmission of COVID-19 (community spread)?		0
Will the event include a significant number of participants (athletes or spectators) at higher risk of severe COVID-19 disease (e.g., people over 65 years of age or people with underlying health conditions)?		0
Will the event include sports that are considered at higher risk of spread for COVID-19 (eg, contact sports)?		0
Will the event be held indoors?		0
Total COVID-19 risk score		0

(Source: <https://www.who.int/publications/m/item/guidance-for-the-use-of-the-who-mass-gatherings-sports-addendum-risk-assessment-tools-in-the-context-of-covid-19>)

It should also be ensured that the risk assessment is carried out with the participation of local health authorities and that the city has a sufficient number of qualified staffs who have experience in organizing mass events, risk assessment, epidemiology and infectious disease control measures and is involved in preparing for holding competitions from the very beginning.

For the general definition of a risk rock include factors such as:

- the current stage of the COVID-19 outbreak and the known dynamics of transmission in the country that organizes sports competitions
- geographical distribution and number of participants
- individual risk profile of participants
- mitigation measures currently in place or implemented

An additional method of risk assessment is the use of a risk assessment and mitigation survey (Annex 3) to prevent an increase in coronavirus infections during sporting events. The list of questions helps to determine the overall risk of transmission and further spread of COVID-19 in connection with sporting events.

The assessment of the overall risk will depend not only on the results of the survey, but also on the mitigation measures that may affect the further spread of COVID-19 in connection with mass gatherings.

After calculating the results of the survey, you need to use Table 4 to determine the level of risk of sports competitions in terms of the spread of COVID-19.

Table 4. Risk Vs. Mitigation Matrix

Total Risk Assessment Score	Very Prepared to Mitigate COVID-19 Impacts (76-100)	Somewhat Prepared to Mitigate COVID-19 Impacts (51-75)	Somewhat Unprepared to Mitigate COVID-19 Impacts (26-50)	Very Unprepared to Mitigate COVID-19 Impacts (0-25)
0 - Negligible	Very low	Very low	Very low	Very low
1 - Very Low Risk	Very low	Very low	Low	Low
2 - Low Risk	Low	Low	Low	Moderate
3 - Moderate Risk (low-moderate)	Low	Moderate	Moderate	Moderate
4 - Moderate Risk (high-moderate)	Moderate	Moderate	High	Very High

5 - High Risk	High	High	Very High	Very High
6 - Very High Risk	Very High	Very High	Very High	Very High

To determine the colour of each of the questions, you must use the key shown in Table 5.

Table 5. Key for colour determination of overall risk

Very low	Overall risk of transmission and further spread of COVID-19 in relation to the mass gathering is considered <u>very low</u> .
Low	Overall risk of transmission and further spread of COVID-19 in relation to the mass gathering is considered <u>low</u> . Recommend checking whether mitigation measures can be strengthened.
Moderate	Overall risk of transmission and further spread of COVID-19 in relation to the mass gathering is considered <u>moderate</u> . Recommend <u>significant</u> efforts to improve mitigation measures or reduce risk of transmission (decrease risk assessment score).
High	Overall risk of transmission and further spread of COVID-19 in relation to the mass gathering is considered <u>high</u> . Recommend <u>significant</u> efforts to improve <u>both</u> mitigation measures and reduce risk of transmission (decrease risk assessment score).
Very high	Overall risk of transmission and further spread of COVID-19 in relation to the mass gathering is considered <u>very high</u> .

Based on the developed WHO criteria, a risk assessment procedure for international sports competitions was formulated for International Sports Federations.

1. Assessment of the level of risk in the sport. According to the WHO, low-risk sports include sports where physical distance is possible. For example, archery, shooting, rowing, some athletics. Sports with an increased risk of transmission of COVID-19 include all contact and game sports, such as wrestling, boxing, gymnastics, basketball, football and others.

2. Mass sports competitions. The size of sports competitions directly affects the level of risk of coronavirus spread. First of all, it is necessary to calculate the actual number of participants (including officials), coaches, judges, officials and support staff. The possibility of the presence of spectators on the sports ground will depend on the number of listed persons. If their presence is possible, then you need to monitor the physical distance among the audience. Also, when assessing the massiveness of a sporting event, the organizers must take into account the

country and transport features of the arrival of participants from other countries, because all this will affect the level of risk of sporting events.

3. Venue of the competition. According to WHO guidelines, outdoor sports carry a lower risk of spreading and contracting coronavirus infection. However, even for outdoor sports, it is necessary to ensure the distance of participants and spectators, especially for sports with non-designated places, such as horse racing, golf.

4. Necessary security measures. Mandatory contract of the host organization with medical education institutions that guarantee the provision of medical care in case of coronavirus infection. Compliance with all WHO and national guidelines during the COVID-19 pandemic. It is also mandatory to create an isolation room in which you can keep any symptomatic person found at the venue while waiting for the patient to be transported to a medical facility.

5. Age restrictions. Competitors are usually younger and healthier than spectators. Therefore, the WHO recommends health checks immediately before the competition for all participants, including coaches, officials and staff involved. In order to reduce the risks to vulnerable populations, the WHO recommends that, if possible, do not involve older people and people with co-morbidities in the competition. Also, attending competitions by these groups of people as spectators may also be limited at the discretion of the organizers.

6. Advisory groups. Establishment of groups responsible for the accessibility and informativeness of health consultations before and during the event for all participants, officials, staff and spectators.

Strengthening public health measures and social activities during the competition. In addition to risk assessments during the preparation and conduct of sports competitions, the organizers are forced to strengthen and maintain compliance with health and social activities not only directly at the venues, but also outside, on the streets, public transport, hotels and restaurants, etc. To strengthen measures, the WHO recommends frequent hand washing, respiratory etiquette, wearing a mask, keeping distance, good ventilation and avoiding crowded places or indoors. The organizers must apply such requirements to all participants, coaches, officials, volunteers, staff and spectators. It should also be noted that the requirements apply to all people, including those who have been vaccinated, infected and who know their current status after receiving a negative COVID-19 test. Also, the list of activities used by the organizers for the safe conduction of sports competitions include:

1. ***Intensified testing.*** According to WHO recommendations, national health authorities in countries hosting international sporting events should consider accelerated testing in host cities before, during and after their activities to detect early increases in COVID-19

transmission and possible outbreaks. Scanning and information sharing should be expanded to provide a clearer picture of the possible spread of coronavirus.

Based on the analysis of guidebooks, a general scheme for testing participants, coaches and officials was developed, which is used by the vast majority of International Sports Federations (Figure 13).

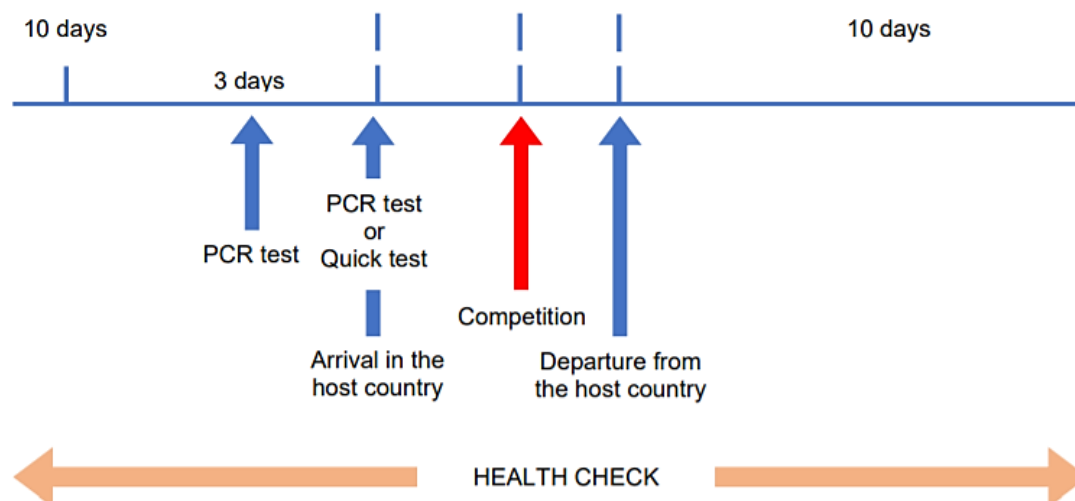


Figure 13. The scheme of testing during international sporting events

2. **Coordinated contact tracking.** The local organizing committee should establish national coordination commissions, which will consist of representatives of the host country and the countries participating in international sports competitions. Coordination commissions are designed to monitor the contacts of all participants in the sporting event through questionnaires for passengers arriving from abroad. According to the WHO guidelines for contact tracking, contact persons should be identified between two days before and 14 days after the onset of symptoms

3. **Vaccination.** The WHO welcomes any efforts to increase the overall coverage of vaccines. However, the WHO does not recommend giving priority to the deployment of vaccination in host cities or for certain groups of people, such as athletes or spectators, as this may lead to a shortage of vaccines for high-risk groups.

4. **Purposeful information about risks.** The health authorities of the host country and the countries participating in the sport must provide accurate, accessible and up-to-date information to the persons making the trip so that they can decide on the trip and adjust their behavior in order to minimize the risks.

2. Conducting competitions and sports festivals online

The COVID-19 pandemic has become one of the challenges for the modern world community. Many experts, including Grixia J., Westmattelmann D., Brannagan P., and others noted the importance of sports for all segments of the population [32]. However, there were no forms of practicing traditional sports during the lockdown period as of spring 2020.

Closed due to the COVID-19 pandemic, traditional sports are trying to find a way out of the current conditions. First of all, they try to provide athletes with the opportunity to continue training. Secondly, an important task was to preserve the audience. Equally important was the task of settling existing contracts with sponsors in order to mitigate the impact on profits associated with the termination of traditional competitions. One of the solutions to the problem of the lack of traditional sports competitions and the conditions of the COVID-19 pandemic was to hold virtual competitions and increase the role of e-sport in 2020-2021.

UNITED THROUGH SPORTS WORLD VIRTUAL YOUTH FESTIVAL. The first major international sports tournament to be held in a virtual format was the United Through Sports (UTS) World Virtual Youth Festival. This sports festival was created by United Through Sports (UTS). United Through Sports (UTS) is an international institution established in 2017 under the leadership of the Alliance of Independent recognized members of Sport (AIMS). AIMS is one of 5 organizations recognized by the International Olympic Committee (IOC) and the Global Association of International Sports Federations (GAISF). First of all, the United Through Sports was created as an organization that will promote the creation of exciting and equal opportunities for young people in mass, non-Olympic, Olympic and Paralympic sports and Special Olympics.

The main goal of the United Through Sports is to unite the international community through sports and provide young people with equal rights to play sports and further self-realization. Establishing strong and friendly relationships with international sports organizations, the United Through Sports hosts a variety of sporting events, including sports festivals, tournaments, and educational events that promote health, healthy lifestyle, and sports among children and young people.

Also, one of the important tasks of the organization is to unite people, sports organizations, non-governmental and governmental organizations to expand the rights and freedoms of young people in the field of sports, involve them in various sports and educational programs to meet their needs for sports and self-realization.

In the context of the pandemic, the United Through Sports has repeatedly stressed the importance of sports for the mental and physical health of children and youth and as a result, created the first tournament in a completely new format – virtual.

The United Through Sports World Virtual Youth Festival was the first sports event held in a virtual format in the context of the COVID-19 pandemic. The first festival was held during 2020. The final stage of the competition was held from September to November 2020 in Thailand and ended on the UN World Children's Day.

The United Through Sports was able to bring together more than 80 international sports and non-governmental organizations to conduct a high-quality virtual festival and achieve the set goals (Figure 14). Among the organizations involved in the competition were the International Olympic Committee, the International Paralympic Committee, the Special Olympics, the Alliance of Independent recognized members of Sport (AIMS), and the Global Association of International Sports Federations (GAISF).

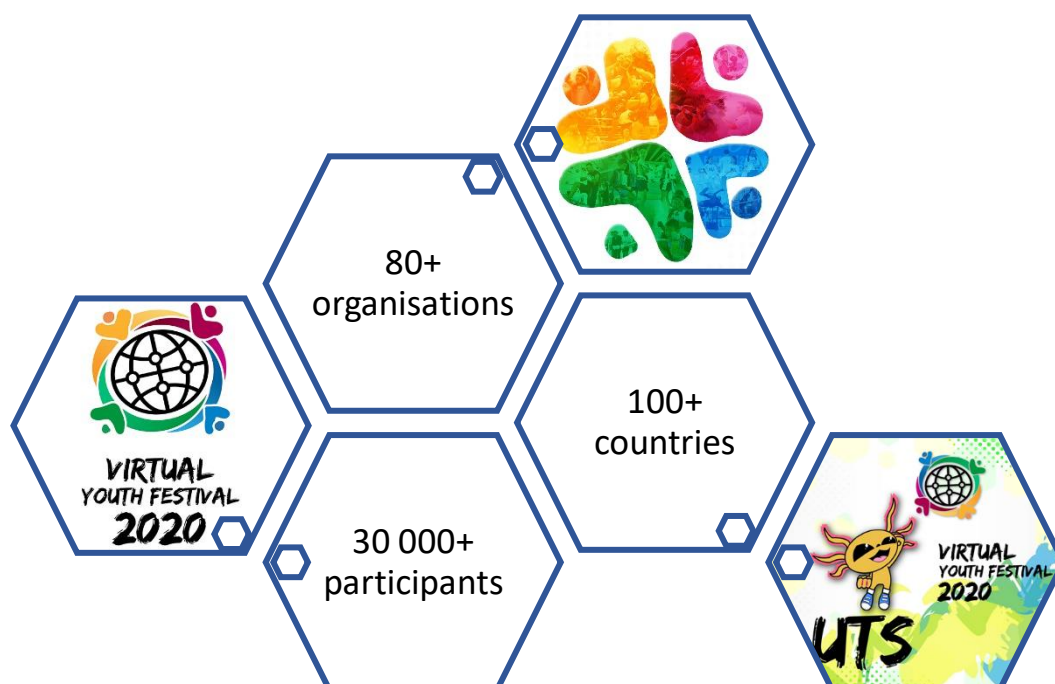


Figure 14. Facts about the United Through Sports World Virtual Youth Festival held in 2020

The festival was attended by children and young people aged 10-18 years. The competition was attended not only by representatives of international and National Sports Federations but also by everyone who wanted to. Thanks to the active support of the International Paralympic Committee, Special Olympiads, and public organizations, people with disabilities, refugees, migrants, and representatives of vulnerable segments of society took part in the competition. The United Through Sports developed several ways to participate in the festival. The first is through a sports federation that independently selected participants from its organization or organized qualifying competitions to attract even more participants. The second is the way to register directly through the official page of the festival for everyone, especially children and young people who took part in the Talent program.

Competitions were held in five directions – Max Fit, Aero Fit, Talent, Inclusive Sports, and Special Olympics. In addition to the sports component of the competition, the organizers also included a mandatory educational component. An educational platform was developed specifically for the festival participants, where conferences, panel discussions, and seminars were held throughout the entire time. The main topics that were revealed through the educational component of the festival were the promotion of peaceful coexistence through sports, inclusion and the fight against all forms of discrimination, the roles, rights, and responsibilities of athletes, the protection and protection of children, sustainable development and others. It should be noted that a significant contribution to the popularization of the festival and attracting a large audience was the broadcasting of competitions and seminars on the Olympic Channel. This decision made it possible to attract Olympians and famous athletes from all over the world to participate in the festival as speakers and role models who inspired children and young people to play sports and promote a healthy lifestyle.

The second festival, the United Through Sports World Virtual Youth Festival, was held in 2021 in the capital of Saudi Arabia, Riyadh. Just like the previous festival, the second one included a sports and educational components (Figure 16). In 2021, more than 100 organizations took part in the event. It should be noted that the number of participants in the second festival increased by 28%. Also, in 2021, more than 50 thousand participants took part in the educational events of the festival.



Figure 15. Facts about the United Through Sports World Virtual Youth Festival held in 2021

One of the main themes of this year's festival was the value of sports in the context of the COVID-19 pandemic, as well as the importance of positive life skills and values, encouraging sports, and expanding the participation of young people in sports events. As noted by the chairman of the IOC Ethics Commission and former UN Secretary-General Ban Kimoon, in the modern world it is important to unite the sports community to jointly fight the health crisis, as well as to overcome the long-term challenges caused by the COVID-19 pandemic. [11, 19, 28, 66].

However, the United Through Sports was not the only organization that chose the format of virtual competitions as one of the ways to solve the emerging crisis during the COVID-19 pandemic. A similar path has been adopted by a number of International Sports Federations, including UIPM, FINA, FIG, UCI, and others. Therefore, we will continue to analyse particular cases of virtual competitions held by these international sports organizations.

UIPM LASERHOMERUN. In the spring of 2020, the International Union of modern pentathlon (UIPM) introduced the first international virtual pentathlon tournament. The main goal of these competitions was to support athletes during the coronavirus crisis.

Among the tasks that were set for these competitions were to encourage athletes to maintain a training regime, maintain their skills and abilities during the COVID-19 pandemic, as well as to forge the connection between athletes of different ages by participating in joint competitions.

The competition was attended by athletes in six age categories – from up to 11 years to masters over 60 years old (Figure 17).

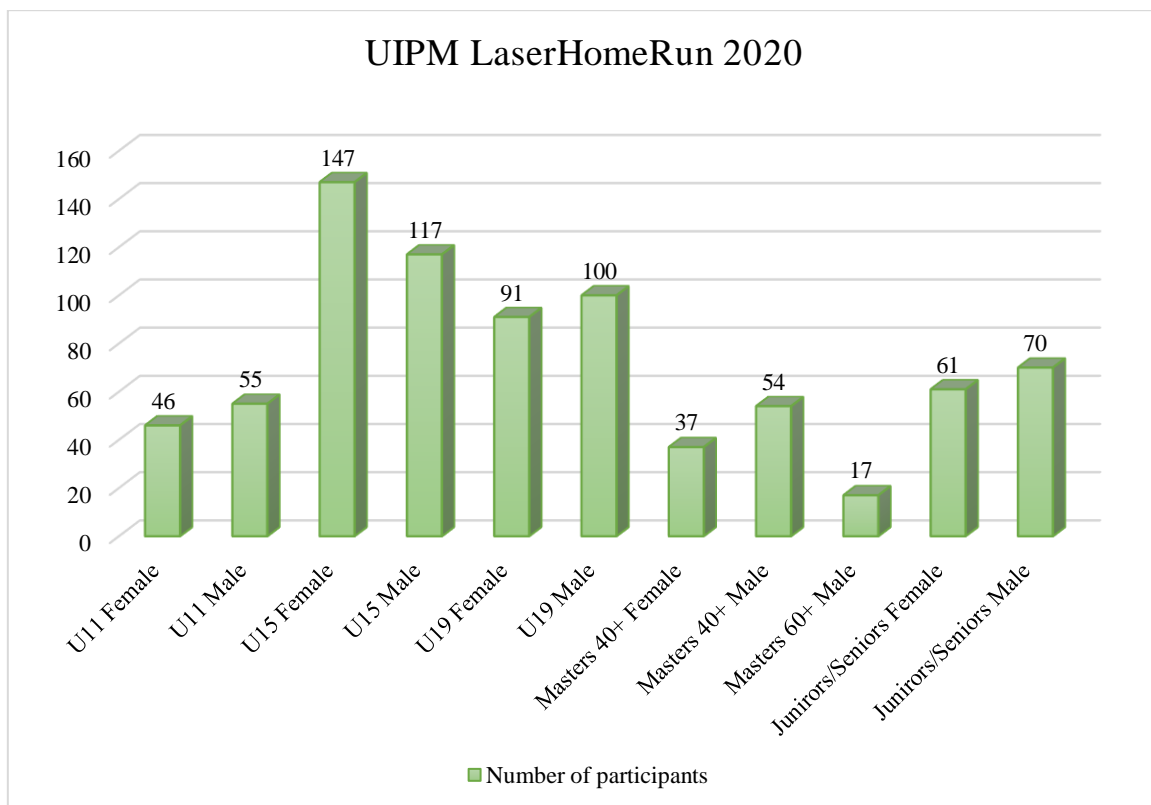


Figure 16. The participants first UIPM LaserHomeRun held in 2020

As the president of the International Union of modern pentathlon notes, Laser Run is a UIPM discipline that is developing very quickly. At the same time, the features of laser Run competitions make it possible to conduct them virtually, which became an effective way to organize international pentathlon competitions during the COVID-19 pandemic.

To attract more participants and take into account the limited living conditions during the COVID-19 pandemic, UIPM has made the LaserHomeRun format as simple as possible. In each round of the competition, participants must perform a series of exercises and then hit the target five times with a laser pistol in the fastest time.

In total, the competition attracted more than 700 athletes from 80 countries of the world. It is worth noting that the final LaserHomeRun competitions were broadcast live on the official portal of the Federation via UIPM TV and gathered more than 2 thousand viewers.

FINA ARTISTIC SWIMMING WORLD SERIES 2021. The FINA World Series is one of the key annual sporting events in artistic swimming. First of all, the World Series is designed to popularize artistic swimming in the world, increase the prestige and structure the international competition calendar for national federations.

Usually, the World Series consists of 6 competitions organized by national federations around the world under the auspices of FINA and the final competitions. In 2021, the World Series was supposed to be held in 6 countries on 2 continents. The first stage was held in the United States, the second in Hungary, the third in Russia, the fourth was planned to be held in France, but was cancelled due to the ban on sports competitions, the fifth stage was held in Canada and the sixth stage was also cancelled due to the Coronavirus outbreak, although it was supposed to take place in Greece.

It is worth mentioning that before the start of the World Series, FINA was presented with a variant of the virtual format for holding the stages of the World Series – Virtual Artistic Swimming World Series.

Virtual Artistic Swimming World Series was offered to the FINA technical committee for artistic swimming as one of the ways to host all World Series competitions, despite the difficulties created by the COVID-19 pandemic.

According to the members of the technical committee for artistic swimming FINA, such a proposal caused great concern among representatives of national federations. The main issue was the objectivity of the organization and evaluation of such competitions and their impact on the overall ranking of the World Series. However, it was decided that only two of the six World Series events would be held online in 2021. So, the World Series stages in the USA and Canada had a virtual format.

The concept of holding competitions was to present virtual competitions through an official web platform, which would resemble the style of traditional broadcasting of competitions. Each national federation that participated in virtual competitions had to send a video of their athletes' competitions in accordance with the application deadline. It should be noted that standardized requirements for video shooting parameters, pool size, shooting duration, and so on were prepared for all participants to conduct competitions in equal conditions. The athletes' performances were evaluated by a group of judges of the international FINA category prior to the start of the online broadcast.

According to the analysis of the competition protocols, 58 athletes from 11 countries took part in the first virtual competitions of the World Series in Artistic Swimming, which took place in February 2021. The second virtual competitions of the World Series, held in May 2021, were attended by 95 athletes from 18 countries (figure 18).

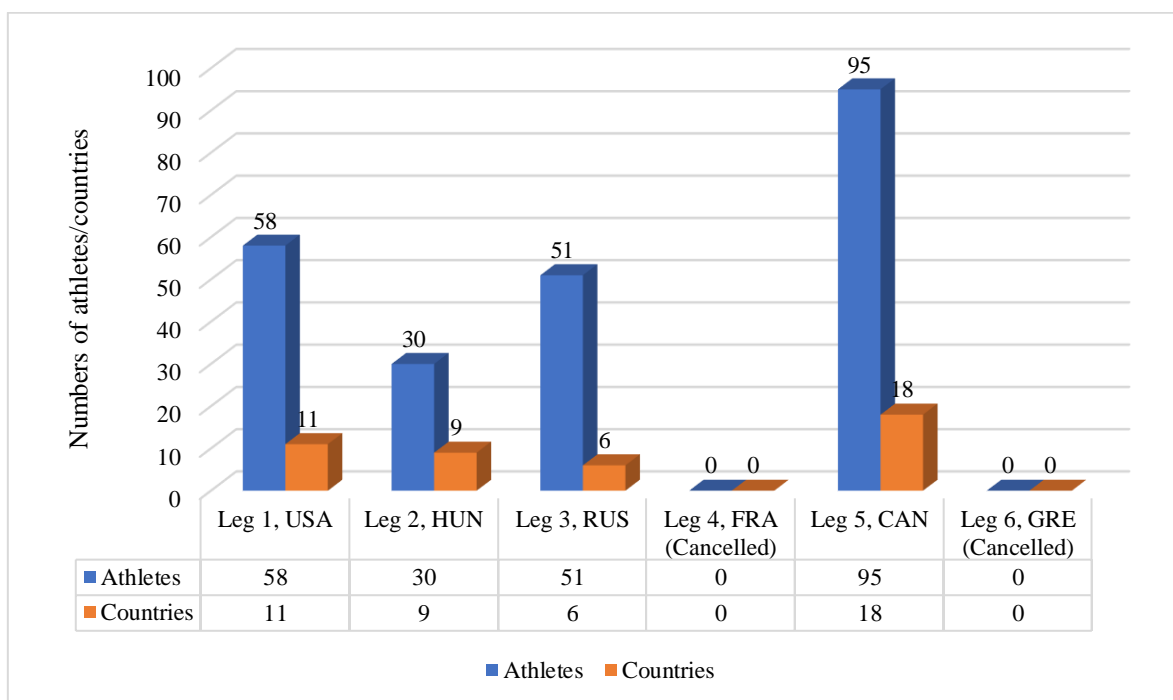


Figure 17. Artistic Swimming World Series statistics 2021

Analysis of the competition protocols showed that the number of participants and countries that took part in the series of virtual competitions in artistic swimming significantly exceeded the number of participants in full-time competitions that took place in April 2021 in Budapest and Russia. Based on the results of conversations with representatives of the FINA Technical Committee on artistic swimming, judges, and coaches in this sport, this situation developed as a result of repeated lockdowns in different countries, the lack of vaccination opportunities in early 2021, and fear of international travel.

Therefore, experts noted that the launch and holding of a virtual series of competitions in artistic swimming were crucial for maintaining competitive activities and one of the ways to develop the sport in the context of the COVID-19 pandemic.

FIDE Online Olympiad 2021. Chess gradually became part of the world computer age and became a commercially attractive sport (in terms of interaction with major business partners). In recent years, chess has changed significantly as a sport. FIDE has progressively started using computerization in its tournaments. Thus, leading chess players, including world champions, began to play matches with computers. The chess training process has changed a lot, as computer programs have almost completely replaced chess textbooks and books, where you can watch any debuts, endgames and endings of chess games played before.

The COVID-19 pandemic has become one of the additional stimuli for further innovations in the process of chess competitions. Thus, in the summer of 2020, FIDE organized and successfully held the first World Chess Olympiad online, which replaced the postponed to 2021 44th World Chess Olympiad. Athletes from 163 countries took part in the above-mentioned competitions. The teams consisted of men and women juniors. First there were qualifying rounds, and then a series of playoffs. These competitions become an online analogue of the World Chess Olympiad. Broadcasts of the games were conducted on the official website of the International Federation with comments in several languages (English, Russian, Spanish, German, French, Chinese).

IOC President Thomas Bach said in a congratulatory letter to participants and organizers that "FIDE provides an example of how to organize competitions in innovative and safe ways during the current global crisis" [32, 47].

3. Educational and training online programs

The global COVID-19 pandemics led to severe quarantine restrictions leading to lockdowns and self-isolation, which restricts the movement of people outside their own apartment (house). Due to the closure of sports facilities and the inability to continue active sports training by athletes and sports teams, which could certainly lead to a local decline in results in all sports. Therefore, a number of experts stressed the need to develop and implement modern and effective sets of training exercises that athletes can perform independently in isolation [3, 26, 30, 91].

A number of researchers, including Damian Ryan, Dr Chris Mackintosh, Michael L. Naraine, Dr Leanne Staniford emphasize the importance of maintaining high physical activity even in a pandemic. Experts believe that physical activity is not only a factor in the prevention of chronic non-communicable diseases, but also in maintaining mental health. Therefore, during the

pandemic period, a number of virtual training exercises in various sports were created and put into practice.

A striking example of online training is the Playmaker School sports platform. This sports school specializes in basketball and is aimed at students who study extracurricular activities. During the pandemic, Playmaker School education became very relevant, as the format of online classes became the only possible option for the vast majority of students [11, 20, 36, 80].

Another example of online training is the Irina Wiener International Sports Academy. The above-mentioned sports academy in rhythmic gymnastics organized a virtual gym for children and adolescents. Everyone learns to perform basic gymnastic exercises at home with the help of telecommunication technologies. Video lessons are grouped by age categories of students: a set of exercises for pre-schoolers is designed to form the correct posture and musculoskeletal system, sets of exercises to develop flexibility, exercises for general physical development, dance exercises and others [5, 13, 17].

Thus, according to experts, including Clemente-Suárez, V., Carol Pollack, Gretchen Reynolds, the COVID-19 pandemic may be a motivation to review existing approaches to training athletes, develop and implement completely new principles of training, which will remain effective in sports after the restrictive measures [4, 14, 23].

At the same time, educational programs for key figures in the entire international sports movement, namely athletes, coaches and judges, have been equally important during the COVID-19 pandemic.

For example, the National Olympic Committee of Ukraine together with the Ministry of Youth and Sports of Ukraine and the Olympic Institute of the National University of Physical Education and Sport of Ukraine in 2020 launched online scientific and educational seminars for athletes, coaches and specialists in organizing and managing sports [2, 29, 35].

During 2020-2021, more than 30 online events were held during which participants gained important and useful knowledge about Olympic training, basics of nutrition, psychological support, Olympic education and history and much more. At the invitation of the NOC of Ukraine, about 5,000 athletes, coaches and sports specialists from 11 countries joined the online meetings, namely representatives of Ukraine, Azerbaijan, Belarus, Armenia, Georgia, Kazakhstan, Latvia, Lithuania, Moldova, Uzbekistan and Estonia [6, 27, 93].

A relevant example of the transition of educational programs to a virtual format is the Sport Event Management program of the Russian International Olympic University. The above program is aimed at the staff of The Association For International Sport for All (TAFISA) and was to begin on November 23, 2020 at the University in full-time format. However, due to the beginning of the COVID-19 pandemic, the program was quickly reorganized and turned it into specialized online

courses. The initiators of the establishment and implementation of this program were the Olympic Committee of Russia and the Russian International Olympic University. The program is timed to the TAFIS World Games in Nizhny Novgorod in 2024. The program was attended by representatives of 25 countries, who for two weeks attended a course of lectures on sports management, marketing and organization of sporting events [16, 22, 93].

4. The growing importance of e-sports.

Marketing in the XXI century is developing on the basis of three key trends: integration, individualization and informatization, among which the main place is occupied by the latter. It is thanks to digital informatization that the world continues to change rapidly. To maintain competitive advantage, sports organizations are forced to adapt their marketing to the new digital reality. Another challenge to civilization - the COVID-19 pandemic shook sports marketing, reaffirmed the importance of these trends and left no chance for those who were not ready for quick and adequate solutions based on digital technologies.

According to literature sources, the COVID-19 pandemic has become a driving force not only for the development of services for remote work, communication, online commerce, but also the video game industry. This sector has been actively developing even before the introduction of quarantine measures in various countries, and is now growing even faster and attracting more and more attention from large investors. For example, in 2017, BMW became the official partner of the final of the European tournament League of Legends 5 in Paris [10, 57, 64].

Intel invests \$ 10 million annually in the e-sports league of Overwatch players, and sportswear maker Nike has allocated \$ 8 million to partner with the Chinese league in the game League of Legends [12, 17, 58].

The gradual growth in the popularity of e-sports became rapid during the COVID-19 pandemic. The boundaries between live broadcasting, marketing, governance and e-sports have disappeared. The pandemic has led to an increase in the number of views on all platforms for live eSports broadcasts. People were forced to spend time at home during quarantine, so they turned to live broadcasts to waste the time. Thus, according to official data from Newzoo, the total time of watching video games on the streaming platform Twitch increased by an average of 6.5% per month in the first months of the pandemic [13, 18, 55, 64]. As of July 2021, the viewing time of eSports broadcasts increased by 8.7% compared to 2020 and by 17.4% compared to 2019 [88]

Newzoo defines eSports as "professional or semi-professional competitive games in an organized format (tournament or league) to achieve the goal." The eSports statistics provided by Newzoo include only official, specially organized competitions. Newzoo separates the eSports market from the live broadcast market (aka the gaming market) [46, 54, 87].

Cooperation with influential international organizations shows the growing importance of e-sports in the world. So, in March 2020, more than 10 video game developers, including Activision Blizzard, Riot Games, Zynga, Twitch, YouTube Gaming, launched a #PlayApartTogether campaign at the suggestion of WHO. As part of the above campaign people were encouraged to stay at home, follow the recommendations of the WHO social distancing, hygiene measures and instead of going outside to play computer games, which can also fill the lack of real communication between quarantine, during a pandemic [3, 75, 90].

According to The Verge, in the conditions of self-isolation and postponement of sports events, the e-sports industry is much easier to cope with challenges than traditional forms of competition. During quarantine, people began not only to play computer games more often, but also to watch e-sports competitions, which now partially replace activities in traditional sports. Due to the impossibility of holding traditional face-to-face competitions, professional athletes and teams have temporarily switched to online.

As a result, instead of the planned series of competitions, Formula 1 created a virtual Grand Prix: cars on the track were driven by real people, including real pilots Lander Norris, Nicolas Latifi, Charles Leclerc, Alex Elbon [31, 66]. According to Julian Tan, head of digital business initiatives and eSports in Formula 1, Formula 1 racing cannot be replaced by eSports, but the use of new technologies can create new platforms for sports development and communication with fans. For example, groups in social messengers were created for all participants of the virtual Grand Prix, where the leading Formula 1 drivers could actively communicate with ordinary fans who decided to take part in virtual competitions [32, 65]. For example, Lander Norris, the youngest British Formula One driver for McLaren, said that thanks to the virtual Grand Prix, he was able to communicate with fans on a whole new level.

The Nascar car racing series held a virtual tournament with current and former riders, as well as gamers. The race was watched by 1.3 million people and broadcast on the American channels Fox and FS1 [15, 27, 100].

In Australia, the National Rugby League clubs Canterbury-Bankstown Bulldogs and West Tigers met in the third round of the season, but instead of competing on the rugby field, players competed virtually and the broadcast was on Facebook [7, 11, 58].

Instead of cancelling the playoffs of the Finnish Hockey League, it was decided to transfer them to the NHL 20 computer game by organizing broadcasts on national television [9, 23, 70, 97].

Another striking example of the organization of e-sports competitions is the bicycle game organized by ZWIFT. According to research, due to the high risk of spreading COVID-19, the vast

majority of cycling competitions have been cancelled. However, fitness and profit remained important issues for many professional athletes and amateurs.

ZWIFT has found a solution to this problem by using virtually mediated sports competitions that resemble traditional sports competitions [76].

According to a study by Fincoeur, B., Bongiovanni, S., Gesbert, V. in a short period of time, the COVID-19 pandemic has dramatically changed the daily lives of people around the world. According to the authors, sport began to play a dual role. On the one hand, sport is important for maintaining good health, on the other hand, mass sports activities pose a great threat to the spread of coronavirus disease. The COVID-19 pandemic has shown that there is a significant lack of experience in adapting classic sports to the new digital reality. Therefore, an important step towards preserving the sport is to adapt it to the conditions of the new reality. The ZWIFT Online Bike Game (Delaney & Bromley, 2020) allows all users to connect their bike to the ZWIFT program using two sensors. Thanks to the use of several sensors, the main vital and physical indicators of the user are transferred to the virtual world and allow you to interact with other participants. Yes, any user can train on a regular basis, monitor their progress, interact with other users, participate in competitions and regular races [3, 18, 56, 87].

To increase the popularity and significance of the program, ZWIFT signed an agreement with UCI to officially hold the first "Virtual Tour de France", which took place in July 2020.

Thus, given the fact that the COVID-19 pandemic has a long-term impact on training and sports competitions, the new virtual programs developed by companies such as ZWIFT, allow you to continue playing sports in digital format. Thus, ZWIFT and similar supplements can play an important role in reducing the effects of the COVID-19 pandemic and the physical, emotional and mental health of people.

CONCLUSIONS

Analysis and generalization of the results of the study showed that as of 2021 in the world there is a small amount of scientific work on the relationship between sport and the COVID-19 pandemic.

The vast majority of scientists, including Ludvigsen J., Spiers A., Hayton W., Alexandros N, have studied aspects of sports competitions in the COVID-19 pandemic. Specialists such as Siljak V., Platonov V., Brannagan P. considered the social and political aspects of the pandemic's impact on sports.

A number of experts studied the peculiarities of the training processes of elite athletes during the pandemic and their return to normal training. Among such specialists are Clemente-Suárez V., Leng H., Hull J. and others.

However, the analysis of the problems of functioning of sports organizations and ways to overcome the problems is a topical issue of research.

Research suggests that as of 2021, sport is one of the areas most affected by the COVID-19 pandemic. At the same time, a number of researchers note that the components of the international Olympic system have been more influential, especially International Sports Federations.

Analysis of scientific and methodological literature, analysis and generalization of best international practice shows that today sports organizations have faced a number of problems that significantly affect the effectiveness of their work.

Thus, the main problems include financial instability, loss of sponsors, reduced state support, cancellation of educational and sporting events.

The results of our own research based on a survey of experts show that among the common problems of sports organizations in a pandemic are the deterioration of communication between representatives in the first months of the pandemic, lack of developed and effective online platforms, lack of opportunities for sports and pay and staff reductions.

The paper confirms that representatives of International Sports Federations, National Sports Federations, National Olympic Committees, and other sports organizations have the same opinion on this issue.

Further research identified the main ways to overcome the problems of representatives of all sports organizations that participated in the survey. According to experts, effective solutions to the problems faced by organizations during the COVID-19 pandemic include establishing cooperation with WHO and other agencies, improving existing and creating new additional online platforms and creating new formats for national and international competitions.

Moreover, an important step can be to provide the sports industry with financial resources aimed at protecting jobs and employees. Encouraging the creation of public and private solidarity funds for sports clubs and organizations can be an additional protection and motivation to overcome the problems of the COVID-19 pandemic and bring together all stakeholders to find effective solutions.

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APPENDIX I

Questionnaire for specialists in the field of sports

Research of experts' opinion on the impact of the COVID-19 pandemic on the activities of various sports organizations

The purpose of the study is to reflect the information, knowledge and attitudes of leading experts in the field of sports on the peculiarities of the functioning of sports organizations during the COVID-19 pandemic.

We would like to ask you to take part in the survey. The survey has 20 questions, the answers to which will not take more than 10 minutes.

The results of the survey will be presented in a generalized form and completely anonymously.

Thank you in advance for your cooperation

1. Your name:

2. Your age:

3. *Your place of :*

4. *Your gender:*

Female Male Prefer not to answer

5. *Do you currently work in the field of sports (choose one of the options)?*

yes no

6. *In which sport organization do you currently work (choose one of the options)?*

IOC

ISF

NOC

NSF

Sport club

- closure of Organization headquarters due to lockdowns in countries;
- lack of developed and effective online platforms;
- reduction of wages and staff;
- deterioration of the regularity of educational training and conferences.

12. *Do you think there is a problem of reducing of employees of the organization in which you work during the COVID-19 pandemic? (choose one of the options)?*

- yes no difficult to answer

13. *Do you think there is a problem of reducing the salaries of employees of the organization in which you work during the COVID-19 pandemic? (choose one of the options)?*

- yes no difficult to answer

14. *If you answered yes to the previous question, how much has your salary decreased?*

- up to 25% above 50%
 up to 50%

15. *In your opinion, what are the key ways to overcome the problems faced by sports organizations during the COVID-19 pandemic (choose one or more options)?*

- improvement of existing and creation of new additional online platforms;
- establishment of cooperation with representatives of the WHO and medical institutions to develop and provide the necessary conditions for training and competitions;
- creation of commissions and departments for the development and approval of common criteria and requirements for sports competitions;
- creation of new formats for national and international competitions;
- holding congresses, summits and all meetings online;
- creation and conduction of new trainings for athletes, coaches, officials and other staff;
- expansion of cooperation with other national and international institutions to improve the functioning of the organization during the COVID-19 pandemic;
- development of guidebooks for all stakeholders including athletes, coaches, officials, journalists and others with clear requirements and recommendations for behavior, movement and all activities before, during and after competitions and training.

16. *Evaluate the importance of the proposed solutions to the problems that appeared during the COVID-19 pandemic for your sports organization? (5 - the greatest impact, 1 - the*

least impact).

- improvement of existing and creation of new additional online platforms;
- establishment of cooperation with representatives of the WHO and medical institutions to develop and provide the necessary conditions for training and competitions;
- creation of commissions and departments for the development and approval of common criteria and requirements for sports competitions;
- creation of new formats for national and international competitions;
- holding congresses, summits and all meetings online;
- creation and conduction of new trainings for athletes, coaches, officials and other staff;
- expansion of cooperation with other national and international institutions to improve the functioning of the organization during the COVID-19 pandemic;
- development of guidebooks for all stakeholders including athletes, coaches, officials, journalists and others with clear requirements and recommendations for behavior, movement and all activities before, during and after competitions and training.

17. *Were the new directions of activities developed for your sports organization during the COVID-19 pandemic? (choose one of the options)*

- yes no difficult to answer

18. *If you answered yes to the previous question, please write examples of new activities of your sport organization.*

Thank you for your cooperation