







Implication of COVID-19 pandemic and lockdown on sport activities

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ABSTRACT

Background: The world witnessed a sudden outbreak of a new strand of a deadly disease that rapidly spread throughout the globe. The spread of coronavirus (COVID-19) first originated in Wuhan, Hubei province of China in December 2019. This virus strain extended quickly throughout China and became a pandemic in the country. On March 11, 2020, the World Health Organisation (WHO) confirmed the COVID-19 novel coronavirus as a universal pandemic. **Methods:** Appropriate keywords were included in Scopus, PubMed, and Google Scholar to identify the available data. **Result:** Due to the rapid spread and fatality of the COVID-19, the 2020 Olympic Games formally slated for July 24 until August 9, 2020, will commence on July 23 to August 8, 2021. In March 2020, most of the European professional sports leagues, including football, were discontinued for the predictable future. **Conclusion:** Football resumption after the lockdown was challenging because of the inability to affirm the health status of the players when they return to their clubs. Every measure must be clear to reduce the risk of the disease and to clarify the response strategy about self-protection to the public. The sport organizing-bodies control-outlines for sports events should be strategized based on the laydown sports rules and quarantine protocols. National public health organizations and sports associations should work together to protect every level of human health and sport all over the world.

Keywords: COVID-19 novel coronavirus, World Health Organization, WHO, Sports activities, Football, Obesity.

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INTRODUCTION

Since December 2019, SARS COV 2 disease was declared as a pandemic by the World Health Organization (WHO) on March 11, 2020 and has spread quickly around the world (Zuccaro et al., 2021). The spread of coronavirus (COVID-19) first originated in Wuhan, Hubei province of China in December 2019 (Isaifan, 2020). After the virus identification via sequencing, the pathogen for this respiratory-presenting disorder was primarily called 2019 novel coronavirus (2019- nCoV) (Wu et al., 2020). The strand was officially called severe acute respiratory syndrome coronavirus 2 (SARS- CoV-2) by the WHO (Zhou et al., 2020). As the number of confirmed cases was rapidly increasing, the prevention and control of COVID-19 became highly challenging. Acute cardiovascular disease was high with some patients requiring respiratory support (mechanical ventilator), and consequently causing acute respiratory failure crisis and increased risk of death due to COVID-19 (Huang et al., 2020).

Although the disease targeting young people, the elderly were the most affected with acute respiratory conditions (Corsini et al., 2020). On March 11, 2020, the WHO confirmed the COVID-19 novel coronavirus as a universal pandemic (Reade and Singleton, 2020). Nevertheless, no pathology was propagated due to barely accessible autopsy or biopsy (Huang et al., 2020, Chan et al., 2020). As of March 1 2020, health systems in many countries have been overwhelmed by the effect of this outbreak, 79 968 cases of coronavirus have been reported in China and 7169 outside of China, with a death number of 2873 in Chinese patients, and 104 deaths from outside of China (Baud et al., 2020). By March 12, 2020, coronavirus disease has been proven in 125048 people all over the world, carrying a death – rate of nearly 3.7% compared with a mortality of less than 1% from influenza (Mehta et al., 2020).

The spread of coronavirus became extremely serious and has already touched the necessary epidemiological criteria for it to be confirmed a pandemic having infected more than 100 000 people in 100 countries (Remuzzi and Remuzzi, 2020). In the United Kingdom, the government decided that people should work from their homes if it is doable, and those older than 70 years should avoid nonessential societal contact (Hunter, 2020). At this outbreak, the government and health authorities warned people from undue gathering and strictly prohibit free movement. Therefore, the government closed all the schools, universities and stopped all sports event, hoping to reduce the spread of COVID-19 (Hunter, 2020).

EFFECTS OF COVID-19 ON OLYMPIC GAMES 2020

The potential impact of COVID-19 in Japan was hard-felt in the context of the upcoming Tokyo Olympic game in summer 2020. The Olympic and Paralympics game was initially scheduled for July 24 to August 9, 2020, and August 25 to September 6, 2020, respectively in Tokyo (Gallego et al., 2020). Japan is one of the most impacted countries with the outbreak because of the budget on the Olympic Games which is the biggest sports event in the world, involving the participation of 204 countries and 164 at the Paralympic (Ishikawa and Shimogawara, 2019, Gallego et al., 2020, Yanagisawa et al., 2018). During these events, Tokyo expects 11,090 and 4400 participants for the Olympic and the Paralympic respectively and about 20 million visitors under the auspices of 70,000 volunteers for the sports event and 8000 for the city patrol (Nakamura et al., 2018). During the Olympic games, a vast estimated delivery of 14 million food dishes is planned for the players (Nakamura et al., 2018).

Due to the ongoing global outbreak, all sports events were adversely halted or postponed indefinitely, and the 2020 Olympic Games in Japan were not left out. Due to the rapid spread and fatality of the COVID-19, the 2020 Olympic Games formally slated for July 24 until August 9, 2020, will commence from July 23 to

August 8 2021 (CLNET, 2020). As a result of the latter reason, the Paralympic Games were also cancelled and postponed from August 24 until September 5, 2021. Moreover, all countries' sports leagues and competitions dates were also shifted or changed.

The game of football is one of the most popular and most-watched lucrative sports events on earth with the international FIFA world cup competition been the most glamorous (Reade and Singleton, 2020), especially when it involves the participation of the top world footballing countries such as Brazil, France, Belgium, Spain, Germany, Portugal, Italy and England. Following the early outbreak period of COVID-19 in March 2020, most of the European professional sports leagues, including football, were discontinued for the predictable future (Reade and Singleton, 2020). The European football matches in France and Italy stadiums were the foremost affected as the country reported increasing confirmed cases and fatalities. Spectator attendances were negatively affected by the previous day, the first confirmed domestic cases or passing away were announced (Remuzzi and Remuzzi, 2020). Initially, in England and Germany, there was little or no attending response to the initial stages of the domestic outbreaks, however, in Spain, it poses a puzzle; as audiences seem to have increased considerably in response to the first domestic cases to opt from going to watch the matches in fear for the virus transmission. In these countries, there was a negative attendance response to the number of worldwide cases or deaths as the outbreak was advancing (Reade and Singleton, 2020).

From March 8, 2020, the Italian ministry carried out exceptional procedures to decrease the pathogen spread, by implementing movement control order between the individuals. The government and sports authorities decided to limit the sports activities as well as reducing the opportunity for social gatherings. On March 11, the first Italian and Juventus football club player, Daniel Rugani, tested positive for COVID-19, and days later, another five more players (four from Sampdoria FC and one from Fiorentina FC) and a club doctor were confirmed positive for COVID-19 (Corsini et al., 2020). The Italian professional league (Serie A) and some European sports leagues were suspended, and teams were requested to resume their training activities privately to maintain physical fitness (Corsini et al., 2020). The desperate reason for the suspension was due to the vulnerable mode of spread resulting from aero drop or droplet, and since football is a contact sport, it would significantly increase the chances of transmission. Even though the majority of the players playing in the Serie-A league were said to be young (Corsini et al., 2020), and younger age group has a good prognosis. For these former causes, the footballers were not allowed to continue the matches despite there is compliance with the standard protection rules recommended by WHO, hence all countries' leagues were halt (Corsini et al., 2020). Seeing how the scenario played in Italy, the authorities in Spain decided to stop the nation's professional football league (La Liga), the commissioner of the Spain National Basketball Association reiterated the decision to postpone the rest of the National Basketball season. Subsequently, many sports activities around the world were postponed or cancelled, including the 2020 Tokyo Olympics (Gilat and Cole).

The epidemic scenario in the United Kingdom was met with reluctance-to shut down the most lucrative and televised football league in the world. However, the authority was wary of the rapid spread and had to take a stand as many people would be at risk of contracting the virus (Reade and Singleton, 2020). Besides football, many other sporting events were suspended because it usually involves extensive travel of fans across the nation. Over 250,000 people gather at the annual horseracing festival in Cheltenham, England, approximately 10000 Scottish supporters about to travel to Wales using different transportation such as train, car, and bus through England for the Scotland– Wales rugby match, and more than 10000 fans usually travel around the UK to show up for soccer matches in the absenteeism of a government policy (Reade and Singleton, 2020). However, due to the sudden COVID 19 pandemic outbreak, the government and football authorities decided to postpone the rugby and soccer league despite monetary losses and these further led to the cancellation of all other sporting activities in the country and the world until further notice (Corsini et al., 2020).

Although these setbacks are damaging to the game of football, the football world will quickly try as much as possible to resume activities to complete the ongoing season to restructure the next season's league, by that, less damage and financial loss will be minimized, and total recession can be managed in the world of the sports.

RESUMPTION OF SUSPENDED FOOTBALL GAMES

Football resumption after the lockdown was challenging because of the inability to affirm the health status of the players when they return to their clubs (Vessella et al., 2020). Hence, the football medicine community tried to establish a stable and safe condition to continue sports events temporarily. The authority decided that anyone with signs and symptoms should self-isolate him or herself for fourteen days; they must avoid pubs and contact with people before being allowed to resume (Hunter, 2020).

In Europe, the German Bundesliga league was the first league to resumed behind-closed-door on May 16 since it stopped on March 13 2020 (BBCSport, 2020a). The league resumes after a 2-month break due to the coronavirus pandemic but will not be as usual when it resumes. The rest of the league matches will be played in an empty stadium without spectators, interpersonal contact between rivals in the tunnel will not be allowed, as well as FIFA Fair play and welfare support displayed by children walking alongside the players when entering the field will be suspended. Also, there will be no hand-shaking with a fellow player, referee, match officials or any staff. Referees will also be subjected to medical hygiene regulations (BBCSport, 2020a). The matches were to be played without fans and a maximum of 300 staff only in attendance.

There were other rules: players were informed not to spit, have fun in groups or touch hands with each other during goal jublations, not permitted to take pictures before the start, and substituted players will have to sanitize their hands before joining an ongoing game. However, coaches are allowed to remove their masks to guide players. Playing behind closed doors and all these procedures are meant to avoid the spread of coronavirus in the Bundesliga (ALJAZZRA, 2020).

In England, the Professional football league (English Premier League EPL) had been halted since March 13, 2020, due to COVID-19. All clubs discussed to resume training in small groups with an expectation to play again on June 12 (Roaa Dan, 2020) but, it later resumes on June 17, 2020, with the first match between Manchester United and Tottenham Hotspur. In Italy, Serie A professional league was slated to resume on June 18, 2020 (ESPNSport, 2020b). In Spain, La Liga recommenced on June 19, 2020, after suspension since March 12, 2020 (BBCSport, 2020b). In France, the French Ligue1 professional football was suspended in March 2020 (MirrorSport, 2020).

Table 1. Summary of resumption dates for European professional football leagues.

League name	Date stopped	Present decision	Source
Bundesliga	13 March2020	May 16 2020	(BBCSport, 2020a)
Premier League	March 13 2020	June 17 2020	(Williams, 2020)
La Liga	12 March 2020	June 11 2020	(BBCSport, 2020b)
Serie A	March 2020	June 13 2020	(ESPNSport, 2020b)
Ligue 1 & Ligue 2	March 2020	Voted to end their seasons	(MirrorSport, 2020)
Holland Leagues	March 2020	Voted to end their seasons	(MirrorSport, 2020)
Belgium Leagues	March 2020	Voted to end their seasons	(MirrorSport, 2020)

Table 2. European Champions League Matches not played due to COVID-19 (ESPNSport, 2020a).

Teams	Date announced for the match
Manchester City vs Real Madrid	August 7 or 8, 2020
Juventus vs Lyon	August 8, 2020
Barcelona vs Napoli	August 7 or 8, 2020
Bayern Munich vs Chelsea	August 7, 2020

RECOMMENDATIONS FOR SPORTS HEALTH DURING THE COVID-19 PANDEMIC

Governments and organizations have to improve their pandemic response strategy to help players, coaches, referees, and citizens to adhere strictly to the regulations and recommendations issued by the government and national public health agency (Timpka, 2020).

The sport organizing-bodies control-outlines for sports events should be strategized based on the laydown sports rules and quarantine protocols. It is also crucial that frameworks for sports activities must be carried out diligently and carefully in small groups and following all medical protocols (Timpka, 2020). The Norwegian Football Association stated that the rules after COVID-19, contact sport players should not be more than 5-person/ group, the distance has to be around 2m to avoid physical contact among non-participants, and regular washing of the ball to control the spread of the virus. Lastly, it advised that individual sports, virtual competitions can be organized via Internet resources (Timpka, 2020).

Dieticians recommend that people should continually consume hygienic food containing high amounts of fibre, whole grains, unsaturated fats, and antioxidants to boost immune function (Connaughton et al., 2016) and abstain from eating foods high in saturated fats and sugar. Not only should consuming healthy food take the highest priority, but individuals and sports-persons should also be mindful of healthy eating habits to reduce susceptibility to and long-term complications from COVID-19 (Butler and Barrientos, 2020). As reported in a study by Walsh (2018), improving the immune system and maintain a healthy lifestyle requires eating a well-balanced diet and staying well hydrated. Maintaining and sustaining a robust immune system is a plus against the impact of COVID-19. Hence, it is encouraging to consume a considerable amount of vegetables and fruit (7–8 portions per day) because these foods contain polyphenols and flavonoids that maintain the immune system (Somerville et al., 2016). A daily intake of at least five portions of vegetables and fruit, 2 -3 portions of meat or equal (for vegetarians) is highly recommended (Somerville et al., 2016). In addition, pulses and additional appropriate protein-rich food and a significant quantity of starchy carbohydrates, preferably wholegrain should be taken regularly (Jayawardena et al., 2020). Another study on the immune boost by the UK dietician association also recommended that taking multi-vitamin-mineral can be supportive in enhancing people's health, especially during this outbreak period of COVID-19 (COVID, 2020). Vitamins and supplements are essential to enhance the immune system, as vitamin A and D have indicated a positive effect to improve the immunity towards viral infections (Wintergerst et al., 2007, Patel et al., 2019). High dose zinc, selenium supplementations have revealed an immune boost in patients with viral infections, i.e. Torque Teno virus (TTV), and have a positive response after an influenza vaccination challenge (Wu and Zha, 2020). Additionally, several nutraceuticals and probiotics have also revealed a supportive role in improving immunity towards viral infections including oily fish, garlic, cranberry juices and broccoli sprouts are relatively readily available options (Müller et al., 2016, McCarty and DiNicolantonio, 2020). Individuals with chronic comorbid, i.e. Diabetes mellitus need diverse and balanced food to sustain blood glucose and boost the immune functions (Jayawardena et al., 2020), these particular patients should consume food with a low glycaemic index and also reduce intake of food rich in fat or a high level of sugar (Jayawardena et al., 2020).

The world and the sport were affected negatively by the sudden outbreak of the COVID-19 pandemic, creating an uncondusive environment because of the high risk of the COVID-19 infection. This outbreak changed the tournament's objective and purpose in the footballing world, and changing the rules led to significant consequences in the timetable of the league, Champions League, Olympic Games and other sports activities, and the global economy at large (Simpson et al., 2020).

CONCLUSION

COVID-19 has affected the whole world with its sudden outbreak and high infection rate. It resulted in the closure of countries' borders: air, land and sea. It resulted in immediate suspension of all sports tournaments including the 2020 Tokyo Olympic and compulsory self-quarantine of players. COVID-19 brought the countries to the world's grave financial deficits, and this negative setback led to millions of job losses all over the world. The sports world faced an unprecedented attack due to the spread of COVID-19. It recorded heavy losses from cancelled or suspended competitions in addition to paying high dues to players. Besides, clubs find themselves denied tickets revenues and proceeds from the television broadcast. This led to the suggestion by club owners to cut the players' salaries to maintain the club debts.

Following the impact of the COVID-19 outbreak sports experts believe that sports events will be affected for an extended period. Therefore, national public health organizations and sports associations should work together to protect every level of human health and sport all over the world.

AUTHOR CONTRIBUTIONS

Conceptualization; S.B.A.-M., W.S.W.G. and M.M.; Data curation, M.G, S.B.A.-M., H.A.A. and B.D.A.; Methodology, K.S., M.G., H.A.A. and B.D.A.; Supervision, W.S.W.G., K.S and M.G; Validation, B.D.A; Visualization.; S.B.A.-M. and H.A.A.; Writing—original draft, S.B.A.-M., H.A.A., M.G., K.S. and B.D.A; Writing—review and editing, W.S.W.G., and M.M. All authors have read and agreed to the published version of the manuscript.

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