Original Article

Designing a Model of Sports Leisure during the COVID-19 Pandemic: A Meta-Synthesis

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Abstract: The worldwide coronavirus pandemic has led to the emergence of different patterns of behavior in different contexts; one of the most important of these contexts is leisure. The aim of this study was to identify the concepts and categories of leisure during the coronavirus pandemic (emphasis on sports-related studies) and using a qualitative meta-synthesis method. For this purpose, after searching for resources related to the field of leisure (emphasis on sports-related studies) during the coronavirus pandemic, 169 primary sources were found and among them 36 sources were selected and analyzed. The results of a meta-synthesis of leisure studies during the coronavirus pandemic (emphasis on sports-related research) was classified into 7 main categories physical, cognitive (mental), emotional, sociocultural, economic, technology, and environmental conditions and a sports leisure model was presented during the coronavirus pandemic. According to the results of this study, if proper planning and monitoring by sports-related organizations and the media is considered, sports leisure time during the coronavirus pandemic can bring physical, cognitive (mental), emotional and sociocultural benefits for individuals and reduce the negative effects of coronavirus disease in communities. On the other the coronavirus pandemic has revolutionized leisure conditions, and in particular sports leisure, by revolutionizing technology, economics, and conditions environment.

Keywords: Meta-synthesis; leisure; coronavirus; sport;
1. Introduction

The coronavirus (COVID-19) pandemic began in December 2019 in Wuhan, China. In pursuit of the crisis of coronavirus in different parts of the world, its pandemic in Iran was officially confirmed on February 19, 2020. After that, the government gradually closed many public places and events, including schools, higher education centers and universities, Cinematic Screenings, concerts and theater performances, sports clubs, competitions and national sports leagues in Tehran and other cities and asked citizens to stay at home as long as possible. Social distance was enforced throughout the country, and people were required to maintain a distance of 2 meters from each other and to avoid being in crowded places and unnecessary gatherings. According to these conditions, people's lifestyles have been changed and different behavioral patterns have been appeared in different contexts; one of the most important of these contexts is leisure.

Leisure is a behavior that occurs separately from the needs of life or in leisure time (Purrrington & Hickerson, 2013) and it is a need that exists in every society and its members and is strongly integrated with today's life (Ghafoori et al., 2016). It is also known for its inherent freedom, choice and satisfaction, and provides opportunities for relaxation, fun, and contemplation. The existential nature of leisure, previously recognized by Plato and Aristotle as a fundamental necessity for human beings to understand their potential ability (Samaras, 2017), Today leisure is registered in the Declaration of Human Rights in Several national constitutions and in the Leisure Charter of the World Leisure Organization (World Leisure Organization, 2020). Leisure includes a wide range of activities that in this research subcategories related to sports include active physical leisure and sports tourism. Physically active leisure includes aspects of active leisure (Activities that require some physical effort, including physical activity such as running and cycling, rather than sedentary physical activity such as fishing and photography) and physical activity (Any type of body movement that consumes energy due to skeletal muscle contractions) (Wu, Chen & Meyer, 2020). Sports tourism is also a leisure-based journey in which people temporarily leave their place of residence to play or watch physical activities or to see the attractions related to these activities (Gibson, 1998). In fact, the main goal of a sports tourist is to participate in a sports event and at the same time, there may be secondary attractions for them (Honarvar & Ghafouri, 2000).

During the coronavirus pandemic, several questions were raised about its impact on leisure and researches have been done to answer these questions. In this regard, twelve members of the board of the World Leisure Organization and their colleagues have shared their observations and contemplations on the impact of coronavirus on leisure in five continents; Their various analyzes have revealed seven important issues that deserve special attention at this time; these include: change in home activities, expansion of online activities and online use, increased need to communicate with each other, prominent structural inequalities, survival of the leisure industry, increased demand for psychological support and increased voluntary activities (Sivan, 2020). According to Cheval & et al. (2020), an increase in potential leisure time during an outbreak may be an opportunity to cultivate a more active lifestyle; on the other hand, sedentary activities may be more welcome; So that Fitbit Fitness Company has estimated 38% reduction in physical activity during coronavirus pandemic worldwide (Benton, 2020). However, based on research by Constandt & et al. (2020) during quarantine, although sedentary time increased, but in places where outdoor individual physical activity promoted, more people exercised than before the pandemic. Evans & et al. (2020) also said about facing sports with coronavirus which has had similar epidemics in the past, such as Influenza, Ebola, SARS, the Black Death (In the years 1967-1974), or the Cocolitzli Epidemics (Sixteenth century) but today's situation is unusual because it has led to massive closures of industry, travel and borders, as well as a wide range of discussions about the crisis in the form of social and traditional media. During the global Influenza pandemic, two major sporting events were held in the South Africa, including the Vancouver Winter Olympics and the FIFA World Cup. During the Ebola virus epidemic, the 2015 African Cup of Nations, and during the Zika virus epidemic, the Rio Olympics in Brazil were held (Although some athletes, especially golfers, did not participate due to the risk of infection). Despite holding these events simultaneously with the mentioned infectious diseases, no particular problem arose (Parnell et al., 2020). However, the current situation is so extraordinary and different (Gössling & et al., 2020) that it has delayed many sporting events, including the 2020 Tokyo Summer Olympics, and has had many
negative effects on various sectors of the sports industry, particularly sports tourism. Increasing public health crisis has put society in an unknown position which creates deep barriers and challenges for individuals in choosing a sensible lifestyle for active leisure during a crisis. In addition, strict measures such as "social distance", "staying at home", instructions, curfews and temporary stops have disrupted individual leisure patterns (Mervosh & et al., 2020). Mandatory instructions are designed to reduce the risk of the disease and protect people's health, but these mandatory strategies create a domino effect that forces people to deal with the transaction when making active leisure decisions (If they participate in the activity and use its benefits, they may get sick); The probable result of these cases is a decrease in participation in physical activity and an increase in sedentary behavior (Yamada & et al., 2020); These behavioral changes can lead to a host of physiological and mental health problems, such as loneliness, depression, and anxiety (Kim, 2020). However, physical activity in leisure time can play a vital role in coping with stressors (Boberska & et al., 2018; Hamilton & et al., 2007).

On the other hand, according to forecasts futurists, human life after coronavirus will never be the same as in the past (Anderson, 2020) and lifestyle changes and the development of new habits during the epidemic and quarantine will continue in leisure activities after it ends; However, we are confident that sports and related activities will continue to play an important role in people's leisure time in the future. Therefore, in order to adapt to the new situation, Pernell & et al. (2020) have rightly emphasized the importance of "rethinking" in sports and related activities from their traditional form. Young (2020) also believes that policies and methods of leisure, tourism, culture, sports, events and social occupations should be developed, especially in cases where large number of people are involved.

Thus, due to the importance of leisure time during the pandemic, the present study was conducted with the aim of combining the analysis and findings of various studies and an attempt to collect, classify and analyze internal and external studies conducted in the context of sports leisure during the coronavirus pandemic using the meta-synthesis method and finally offers a model of sports leisure during the coronavirus pandemic.

Given the importance and role of sports leisure in the lives of all people in society, the requirements of this research can be said that one of the useful features of managerial research, in addition to helping to expand the frontiers of knowledge, is to help improve management actions (Eskandari & et al., 2019); The results of this study can help the theoretical foundations of sports leisure in times of uncertainty and in addition, it will lead to the improvement of the actions of sports managers as well as all members of the community in the field of sports leisure in the continuation of this pandemic and in the face of future pandemics (which are likely); In the following suggestions are offered for improving sports leisure time during the coronavirus pandemic and after that. Accordingly, this study seeks to answer these questions that what aspects of the issue have been studied and analyzed in the field of sports leisure during the coronavirus pandemic? And what is the model of sports leisure during the coronavirus pandemic?

2. Methodology

This research is a qualitative research and has been done using meta-synthesis method. Meta-synthesis is a type of meta-study method and is an integrated approach that aims to understand and describe the key points and themes in the literature related to a particular topic (Townsend & et al., 2017). Its nature is qualitative and originates from the interpretive model of naturalistic research and seeks to describe and understand phenomena as a whole; In other words, meta-synthesis is the unification of a group of qualitative studies in order to discover the basic points and translate them into a single final product (Refaie Shirpak, Guruge& Chinichian, 2010). Unlike quantitative analysis (e.g., meta-analysis), which works to evaluate or estimate the effectiveness of interventions through the integration of statistical numerical data, qualitative synthesis (e.g., meta-synthesis) tends to be exploratory in the nature of the phenomenon and expands the understanding of the subject through the integration of several related qualitative studies (Ring, Mandava& Jepson, 2010). Thus, synthesis data goes beyond what is provided by early qualitative studies and beyond other systematic and meta-analytic surveys; In other words, the use of meta-synthesis produces a result that is larger than the sum of its parts (Sohrabi, Azami& Yazdani, 2011). The result of the synthesis may include the development of new theories, the development of conceptual models, the identification of gaps in research, the extension of understanding to existing knowledge, the presentation of evidence to evaluate or implement a service, and assistance with evidence-
based decision making (Britten et al., 2002, quoting Jafari and Amiri, 2019).

The steps of this research are based on the seven-step model of Sandelowski and Barroso (2007) in meta-synthesis, which are shown in Figure 1:

1. **Design research questions**: The first step in the meta-combination method is to ask the questions that the researcher seeks to answer in his research. Accordingly, in the present study, the main questions are: "What are the concepts and categories of sports leisure at the time of coronavirus outbreak?" And "What is the pattern of sports leisure during a coronavirus pandemic?"

2. **Review of structured literature**: In this study, studies that examined sports leisure from different aspects and perspectives at the time of coronavirus outbreak were reviewed. Accordingly, secondary data called past documents have been used to collect research data; These documents refer to articles that have been reviewed and selected in the field of sports leisure during the outbreak of coronavirus and for access to authoritative articles, Taylor & Francis, Science Direct, Emerald, Wiley, Sage Journal, Springer, Scopus, and Web of Science and also published articles related to sports during the coronavirus from December 2019 to February 2021 Journal of Leisure Research, Leisure Studies, Leisure Sciences, Managing Sport and Leisure, World Leisure Journal and Internal Scientific Databases Noor Specialized Journals, Information Center University Jihad Scientific and Comprehensive Humanities Portal were searched. In addition, the first 100 Google Scholar records were searched for stains. To search for studies, keywords such as "leisure in coronavirus (COVID-19)", "recreation in coronavirus (COVID-19)", "sports in coronavirus (COVID-19)", "physical activity in coronavirus (COVID-19)", "sports tourism in coronavirus (COVID-19)" and "Lifestyle in coronavirus (COVID-19)" were considered.

3. **Search and select suitable articles**: after searching various databases, 179 related articles were identified. To select appropriate and usable research in the meta-synthesis method, articles were evaluated based on various parameters such as title, abstract, accessibility, content and quality of research methods. Finally, 36 articles were selected for the meta-synthesis method. Figure 2 shows the process of searching and selecting articles.
Figure 2. Flow diagram of studies selection

Table 1 shows the selected final sources information for the data extraction.

Table 1. Selected sources

| Number | Language | Authors (year) | Country       | Number | Language | Authors (year) | Country          |
|--------|----------|----------------|---------------|--------|----------|----------------|------------------|
| 1      | English  | Parnell et al. (2020) | United Kingdom | 19     | English  | Son et al. (2020) | United State     |
| 2      | English  | Begović (2020) | Montenegro    | 20     | English  | Pérez et al. (2021) | Spain            |
| 3      | English  | Hammami et al. (2020) | Global       | 21     | English  | Cheval et al. (2020) | France and Switzerland |
| 4      | English  | Fitzgerald et al. (2020) | United Kingdom | 22     | English  | Kim & Kang (2021) | South Korea     |
| 5      | English  | Anderson (2020) | United State  | 23     | English  | Kaushal et al. (2020) | United State |
| 6      | English  | Hammond (2020) | United Kingdom | 24     | English  | Slater et al. (2020) | United State     |
| 7      | English  | Sivan (2020) | Hong Kong     | 25     | English  | Lawanson et al. (2020) | Nigeria |
| 8      | English  | Bramante (2020) | Brazil        | 26     | English  | Rodriguez et al. (2021) | Spain |
| 9      | English  | Bánhidi & Lacza (2020) | Hungary     | 27     | English  | Zuo et al. (2021) | China |
| 10     | English  | Slendia & Hadrya (2020) | Morocco    | 28     | English  | Rhodes et al. (2020) | Canada |
| 11     | English  | Suzuki et al. (2020) | Japan        | 29     | English  | Leng & Phua (2020) | United State     |
| 12     | English  | Young (2020) | South Africa  | 30     | English  | Payne (2020) | Denmark |
| 13     | English  | Freeman & Eykelbosh (2020) | Canada | 31     | English  | Evans et al. (2020) | Global |
| 14     | English  | Metzl et al. (2020) | United State | 32     | Persian  | Alavi et al. (2020) | Iran |
| 15     | English  | Roberts (2020) | Britain       | 33     | English  | Nunes & Cooke (2020) | Global |
| 16     | English  | Du et al. (2020) | United State  | 34     | English  | Lamond & Lashua (2021) | United Kingdom |
4. Extract article information: after selecting the articles, it is time to extract the codes from the texts. For the extraction of the codes, the research questions have been considered. At this stage, the selected studies for meta-synthesis were reviewed in content and the themes and concepts related to sports leisure time during the outbreak of coronavirus were extracted as the main codes.

5. Analysis and synthesis of qualitative findings: The aim of meta-synthesis is to achieve an integrated and new interpretation of the findings. In order to achieve an integrated interpretation, it is necessary to analyze and synthesize the concepts of the researched studies. In the present study, first, all factors extracted from the studies were considered as code; then, considering the concept of each of the codes, they were classified into a similar concept, and finally the main categories were obtained from the combination of concepts.

6. Quality Control: This stage focuses on maintaining and controlling the quality of research. In this level, the researcher considers the following procedures to maintain the quality of selected studies:

a) Throughout the research, it tries to take the steps adopted by providing clear explanations and descriptions for the options available in the research.

b) The researcher uses both manual and electronic search methods to find related articles.

c) The researcher uses the quality control methods used in the study of the main qualitative researches.

d) For qualitative evaluation of the main studies of qualitative research, the researcher uses the CASP tool to evaluate meta-studies.

In the present study, all these methods were used to evaluate the quality. Also based on the views of Sandelowski and Barroso (2007), in qualitative meta-synthesis research, descriptive validity means identifying all research reports related to the subject and identifying and describing the information of each of the reports in the study. Interpretive validity in qualitative meta-synthesis research is related to secondary researchers who summarize and write the reports in the study. They differ from the authors of the research studies themselves. In this method, secondary researchers must have access to all available data and primary analyzes in order to examine all stages of meta-synthesis (ie, study selection, study evaluation, data preparation, and data analysis). Theoretical validity in meta-synthesis primarily refers to the validity of the methods used to create the integrity of the results, and then to the integration of the results themselves, or in other words, the researcher's interpretation of the findings of previous researchers.

In the present study, for descriptive validity, an attempt has been made to identify and collect as many related articles as possible. For interpretive validity, two researchers were used as coders and interpreters, and the final agreement on the codes was reached in the coordination meetings. For theoretical validity, it has been tried to use researches that have high scientific validity. Content Validity Ratio (CVR) was used to assess content validity. In this regard, 10 professors of sports management were asked to examine each issue based on a three-part spectrum of "necessary", "useful but not necessary", and "not necessary"; then the answers were calculated according to the following formula:

\[
CVR = \frac{\frac{n}{e} \cdot \frac{N}{2}}{N}
\]

In this formula \(n.e\) indicates the number of specialists who have selected the necessary option and \(N\) represents the total number of specialists; if the calculated value is greater than the value of the CVR table, the content validity of that item is accepted. Considering that the number of specialists in this section were 10, the minimum acceptable content coefficient is 0.62, which is confirmed according to the Table 2 of the content validity of this research.

| Category | Physical | Cognitive (Mental) | Emotional | Sociocultural | Economic | Technology | Environmental conditions |
|----------|----------|--------------------|-----------|---------------|----------|------------|------------------------|
| CVR      | 1        | 0/8                | 0/8       | 1             | 0/8      | 1          | confirmed             |

**Table 2. Content Validity Ratio (CVR)**
3. Results

At this stage, the results of the meta-synthesis of research are presented. The results of the present study indicate the presentation of 200 codices identified from the research review, which in a more abstract stage were classified into 23 concepts and finally seven general categories; tables 3-9 show the codes, concepts, and categories extracted from the sports leisure literature at the time of coronavirus outbreak.

| References | Initial codes | Final concepts | Category |
|------------|---------------|----------------|----------|
| 1-2-3-7-8-14-21-35-36 | Potential threat of exercise for sustained disease pandemic, limitation of normal physical activity in a public place, The negative impact of quarantine on physical activity, Overweight and obesity pandemic, Adverse health status of people, Rest the body, Increased Sedentary and immobility leisure | limitations | Physical |
| 3-4-5-9-20-23-36 | An opportunity to correct sports movements at home, Increase walking, Cycling and jogging as education or recreation, Positive effects of regular and moderate physical activity on the immune system response to respiratory infections, Inversely related the level of physical activity with the feeling of fatigue, Less severe symptoms in physically active people, exercise based on rhythmic movements and active play, Emphasis on the importance of the required training load, the positive effects of implementing a proper physical training program at home, aerobic exercise using a stationary bike or rowing counter, strength training with body weight, The concept of functional ability, Less mortality in physically active citizens | opportunities | Cognitive |
| 4-15-19-26-31 | In the margins of sports for the disabled, The need for gender-appropriate physical activity during quarantine, Less impact of quarantine on women's physical activity than men, Better adaptation of women's physical activity pattern to quarantine conditions, Women enjoy more physical activity at home than men | Highlighting differences | Cognitive |
| 4-15-16-19-30-33-36 | Innovative solutions sports clubs, Provide remote applications to members, Online personal trainers, Virtual sports competitions, Using household items such as chairs, etc. for physical activity | innovation | Cognitive |

| References | Initial codes | Final concepts | Category |
|------------|---------------|----------------|----------|
| 3-4-5-11-12-15-19-27 | Positive online self-learning, Invention of recreational activities compatible with Covid-19, Health literacy training to help people make good health decisions, Holding an online tourism festival, Positive self-examination, Spend more time watching screens, Rhythmic movements are a valuable exercise intervention in the elderly, Self-awareness | discovery of activities in the house | Cognitive (Mental) |
| 4-5-7-12 | Re-broadcast of memorable competitions and events on dedicated sports channels, Review and revisit leisure activities, including old hobbies that were abandoned due to a closed lifestyle | re-review | Cognitive (Mental) |
| 5-8-10-19-22-23-28-35 | Opportunity to learn how to provide services to municipalities and professionals to provide more online recreational opportunities for seniors, Integrated behavior change model, Habit formation techniques, Action control theories (intent and behavior gap), Changes in people's | Changes in Traditional Models | Cognitive (Mental) |
perceptions of leisure experiences, Formation of new goals, Cognitive behavioral therapy

Table 5. Classification of codes, Emotional Category

| References | Initial codes | concepts | Category |
|------------|---------------|----------|----------|
| 2-3-7-10-11-12-16-21-22-28-29-30-35 | Psychological distress (psychological anxiety), Loss of relatives or separation from others, Decreased psychological health, The effect of staying home on stress, paranoia, Compulsory isolation, Work-related stress that limits leisure time, Neuroticism (tendency to vulnerability), Frustration of canceled games, Psychological limitations, Negative effect of depression on motivation, mobility and fitness, Creating a sense of fear of travel among sports tourists, Turning exercise into a more individual activity, Mechanical and cautious | Psychological Impacts of Quarantine | Emotional |

| References | Initial codes | concepts | Category |
|------------|---------------|----------|----------|
| 2-3-5-10-11-20-27-28-30 | The positive effect of rhythmic movements on quality of life and reduction of depression, The positive effect of physical activity on reducing the risk of anxiety and depression, The effect of outdoor exercise on reducing feelings of tension, confusion and anger, Physical activity intervention in suppressing the stress response to severe COVID-19-induced severe mental stress, the effect of regular exercise on self-esteem and well-being, Positive, healthy and energetic personal image, Happiness, Individual well-being, Positive self-expression, Reduce the idea of suicide | Psychological Impacts of Physical Activity | Emotional |

Table 6. Classification of codes, Sociocultural Category

| References | Initial codes | concepts | Category |
|------------|---------------|----------|----------|
| 4-12-13-15-16-19-23-25-26-31-36 | In the margins of showing the matches of the disabled from the media, Increasing the gap between non-disabled and disabled people in sports, In the margins of the coverage of women's competitions from the media, Prioritize professional sports for media coverage, Increase the exclusion or distinction between young and old, healthy and unhealthy or high-risk and low-risk groups, Lack of online programs suitable for the disabled, Geographical gap (rural, marginal, etc.), Women are less dependent on the outside environment, Gender gap in leisure programs for men (fitness programs), Likely more likely to harm young people with disabilities than non-disabled, Unstable sport for all, The need for fair welfare | Inequality | Sociocultural |

| References | Initial codes | concepts | Category |
|------------|---------------|----------|----------|
| 4-7-19-20-31 | Creating new opportunities for older people to volunteer, Create a sense of integration when sharing physical activity online at home, Creating a sense of purpose and meaningful social interaction with volunteering, Improving self-esteem and self-efficacy by volunteering in active leisure (online coaching, etc.), increasing participation in volunteer work as a leisure activity, NGOs contribute to sports for the disabled | Volunteering | Sociocultural |
Social distance, Decreased Sociability in sports, The importance of social norms and behaviors, Health emergencies conditions and their consequences on social vitality, Less influence of formal organizations compared to new media, The need for change in social systems to control future outbreaks; Changing different social norms (compulsory, moral, descriptive), Changing the ability of athletes, Teachers and educators in sharing feedback, The power of citizen networks and corporate life structures to bring about change at the local level, The growing need to communicate with each other, Ignoring the social and health values of sports and physical activity, Lack of social participation due to not meeting teammates, The importance of a culture of health and fitness

The importance of physical activity for the elderly, especially to maintain a level of independence, Positive effect of online physical activity on students’ social health status during quarantine, Achieving social goals through leisure, Sharing fitness tips through social media, A positive social image, Online interaction, positive ostentation, Positive feedback from others online Maintain interpersonal communication, Satisfactory and ideal image, Positive effect on personal offline intimacy, Transfer your sports information, Athletes as a sample, Theory of social influence, Discussion about health status and preventive behaviors, Get rid of social anxiety, Positive interpersonal interaction, Joint fitness, Social Solidarity, Theory of social influence, Social satisfaction

Reduce pollution of natural sports environments, Creating opportunities for the restoration and revitalization of some natural sites (such as foothills, the sea, etc.), the essential role of culture in the landscape of active leisure, The world is on an effective path to tackling climate change, Encourage appropriate behaviors

| References | Initial codes | concepts | Category |
|------------|---------------|----------|----------|
| 2-12-15-31-32 | Loss of jobs of sports tour operators (sports travel agencies), The negative impact of COVID-19 on sports tourism occupations, Further harm to people working in the public service sector, Loss of jobs in the fitness industry, Non-guarantee of customer presence in case of opening gyms, Losses to leisure industries, Loss of tour guide jobs, Job change | Occupational Issues |
| 3-12-13-23-25-31 | Unfavorable welfare conditions for people who are unsure of contracts or have no savings, The Impact of COVID-19 on Access to Resources and Budget for People with Disabilities, Forcing parents to save money in times of crisis, | Financial Issues |
Economic inequalities, Lack of priority for leisure in poor areas

Modern monetary theory, The need for employment of sports education graduates to help the community to compensate for the problems created during the corona, Low public sector support for leisure, The need to increase the budget of the sports and recreation sector by the government to improve the situation, Rising General expenses in a recession, Caution in financing major events (such as the Olympics), Allocate public money to physical activity programs, cultural and sports complexes, media and physical education

Need for Government Assistance

Table 8. Classification of codes, Technology Category

| References | Initial codes | concepts | Category |
|------------|---------------|----------|----------|
| 4-15-16-19-27-31 | Progress from offline to online, Technology training classes, Submit digital content about sports, Online sports courses, Internet access and technology skills for the elderly, Daily online fitness sessions | Virtual Education | Technology |
| 16-19-25-31 | Lack of internet infrastructure in rural and marginal areas, Digital inequality and its greatest negative impact on the elderly, Older people do not have access to online resources, Lack of access to digital technologies for low-income and low-educated people, The effect of digital divide on health incompatibilities | Digital Gap | Technology |
| 3-4-9-12-15-16-19 | Capacity building for online Recreational services, Older people online and interested in staying online, Active video games, New online resources for people with disabilities as a new alternative to negative experiences when accessing sports programs, Increasing the frequency of exercise among users of fitness technology, "Smart" technologies to keep you motivated to continue active leisure | the new status of sports leisure | Technology |

Table 9. Classification of codes, Environmental conditions Category

| References | Initial codes | concepts | Category |
|------------|---------------|----------|----------|
| 2-8-12-16-20-23-24-28-31-34-36 | Using the home environment as a leisure space, training at home, Availability and use of sports equipment, Closure of fitness centers, Larger use of large sports equipment at home (e.g., treadmills) compared to smaller equipment (e.g., ropes), Limited access to beaches, closure of outdoor sports and recreation facilities, Risk reduction strategies, The interaction between innate capacity (i.e., a combination of all physical and mental capacities) and the environment, Economic inequality and deprivation of large sports equipment, Many people live in houses with limited space | The importance of the indoor environment | Environmental Conditions |
| 2-13-16-22-23-24-28 | The importance of outdoor spaces to prevent social isolation and physical activity, Crowding phenomenon in case of closure of open spaces, The effects of park | |

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and green space closures on mental health in pandemics, The need to provide people with access to public places and nature, Outdoor play, an important contribution of open recreational spaces in well-being, Dangerous options and health inequalities created by the closure of public spaces, The need to prioritize people who do not have access to private green space, Health injustice following the closure of parks and open spaces, The need to support local sports infrastructure

Create more routes to encourage active transportation (cycling and walking), Strengthen greener and more active transportation, Significant increase in park visits, The effect of expanding leisure experiences on changing the form of housing design (increasing equipment related to leisure at home), Use of limited resources at home to facilitate sports opportunities and physical activity

Finally, the results of the meta-synthesis of research are presented in the form of a conceptual model (Figure 3). In general, the model of sports leisure time during the coronavirus pandemic consists of 7 general aspects (categories): physical, cognitive, emotional, economic, socio-cultural, technological and environmental conditions.

Figure 3. Conceptual model extracted from the meta-synthesis method
4. Discussion
Leisure time is one of the basic needs of human and among the various activities in leisure time, participating in sports-related activities individually and in groups has many physiological, psychological and social benefits for individuals (Chang et al., 2018). However, with the onset of coronavirus epidemic worldwide, participation in these activities has faced many challenges and has undergone many changes. These challenges and changes are visible in all countries of the world and our country is no exception to this rule. Considering the importance of leisure, since the outbreak of coronavirus, many studies have examined the challenges and changes in leisure activities during this period. The aim of the present study was to study, analyze and synthesize the content of these studies using the meta-synthesis method to investigate the main concepts and components related to the issue of sports leisure during the outbreak of coronavirus. For this purpose, 36 articles on sports leisure during the outbreak of coronavirus were selected from all available and related articles in this context and analyzed. An attempt was made to provide a coherent model of this context by analyzing and synthesizing sports leisure studies at the time of coronavirus outbreak, and to consider more important and emphasized concepts. The results of a meta-synthesis of sports leisure studies at the time of coronavirus outbreak include seven main categories: physical, cognitive, emotional, economic, socio-cultural, technological, and environmental;

Physical categories include limitations, opportunities, highlighting differences, and innovation; in this category, the codes related to limitations have the most repetition in various studies, which indicates many limitations created by the coronavirus pandemic to participate in leisure sports activities. On the other hand, at this time, there were opportunities to improve sports movements at home, increase walking, etc., and the importance of physical activity became more and more apparent because, according to researches, communities with more active citizens had lower rates of coronavirus infection and mortality (Cunningham, 2021). Also, the marginalization of sports for the disabled and women, which existed before the disease, became more prominent at this time. According to research results, women adapted to quarantine situation faster than men and enjoyed physical activity at home more than men. Innovation is another concept identified in the physical sector. According to research results during the pandemic of the disease due to limitations on normal physical activity, sports clubs and coaches introduced innovative methods such as online and distance learning, and individuals used limited resources such as chairs and other household items to engage in physical activity.

The cognitive category includes the concepts of discovering indoor activities, re-review, and changing traditional models. According to research results, during the coronavirus pandemic, mental activities such as online self-learning physical activity and online tourism festivals were discovered that could be done indoors. Due to the fact that people could not attend in sports events during the pandemic, the media tried to show old and memorable events to entertain people and keep their attention on sports and old hobbies that had been forgotten because of their lifestyles, were also noticed. On the other hand, the situation has led to changes in traditional models of leisure planning, including the development of new habits as a result of repeated behavioral experiences.

Emotional categories include the psychological effects of quarantine and the psychological effects of physical activity. The results of the study indicate the negative effects of coronavirus pandemic and subsequent quarantine on the psyche of individuals, including psychological distress (psychological anxiety), paranoid and neuroticism. Among these, physical activity and leisure activities related to sports at home or outdoors in general have benefits such as reducing anxiety, stress and depression, reducing feelings of tension, confusion and anger, and reducing the idea of suicide.

In the economic category, there are occupational and financial issues and the need for government assistance; In this category, codes related to financial issues have the highest frequency among various studies, which shows the great impact of financial problems during the pandemic on leisure activities at this time, because at the time of financial problems, families have to frugality and leisure activities will not be a priority. Also, during the coronavirus pandemic, sports tour operators (sports travel agencies) and fitness industry workers lost their jobs, and on the other hand, due to fear and changes in lifestyle and education, the opening of gyms does not guarantee the existence of the customer and in general, a lot of damage has been inflicted to the leisure industry; According to the results of research, to compensate the problems in the leisure sector, governments must help this sector, and also the governments’ efforts to employ sports science graduates will help the
community compensate the problems created during the coronavirus pandemic.
Socio-cultural categories also include inequality, volunteering, social change, the social effects of physical activity, and the revival of natural places, among which codes related to inequality have had the most repetition in studies; Accordingly, during the coronavirus pandemic, inequality between men and women, healthy people versus people with disabilities, young people versus the elderly, professional sports versus public sports, etc. on social media and Various leisure programs were as significant as before the pandemic. During the pandemic, due to the formation of online classes, there was an opportunity for volunteering activities (such as free coaching) in this context for the elderly and other people, that these activities have for them many benefits, including improving self-esteem and self-efficacy. Also at this time, many social changes were made, including social distance, changing different social norms (mandatory, moral, descriptive), changing the ability of teachers and coaches to share feedback and the growing need to communicate with each other and according to the research results, online and shared physical activity had positive social effects such as maintaining the level of independence for the elderly, online positive feedback for others, maintaining interpersonal communication and positive ostentation for individuals. Among the concepts identified in the social sector, the revival of natural places during the coronavirus pandemic is of great contemplation; accordingly, the absence of humans in natural sports environments such as mountains, sea, etc. reduced pollution in these places. Also, less traffic of cars due to the closure of various jobs and places and more use of devices such as bicycles and walking to compensate inactivity played an effective role in countering climate change.

The concepts of virtual education, technology gap, and the new status of sports leisure are also sub-categories of technology, and among them, the codes related to the concept of the new status of sports leisure have had the most repetition in various studies, in which changes such as online older people and their interest in staying online, active video games and new online resources for people with disabilities have been cited as a new alternative to negative experiences when accessing sports programs. The concept of virtual education has also noticed the online sports classes and courses and the need to teach Internet access and technology skills to older people. Also research results, highlighted the lack of Internet infrastructure in rural and peripheral areas and inequalities in Internet access, that these issues lead to many problems due to new methods of education and leisure and the growing importance of digital technologies and if these problems are not addressed, people with technological gaps will be isolated.

The category of environmental conditions also includes the concepts of the importance of the indoor environment, outdoor spaces and environmental changes that among these concepts, codes related to the importance of the indoor environment have the most repetition in studies and show the great importance of home environment and space and appropriate equipment for leisure related to sport during the coronavirus pandemic. On the other hand, according to research results, the closure of outdoor spaces such as parks has many negative effects on mental health and may lead to dangerous phenomena such as congestion in the indoor environment; However, public places can be a good alternative for people who do not have enough space (living in small houses) and equipment in the house, and if these places are closed, health injustice will become more apparent. Accordingly, in order to reduce the population and open parks, people who do not have access to private green space and suitable conditions for Activities at home should be given priority. The results also showed that the coronavirus pandemic caused environmental changes such as creating more routes to encourage active transport (cycling and walking) and enhanced greener and more active transport, and due to the importance of home space at this time, the form Housing design has also changed and people have tried to provide a more suitable environment and more and better equipment for physical activity at home. Despite the importance of leisure time and especially sports leisure time during the coronavirus pandemic, research in this field has often examined the concepts individually and so far no comprehensive conceptual model has been presented in this context; For this reason, in the present study, using the meta-synthesis method and studying 36 studies, 200 primary codes, 23 concepts and 7 categories were identified and finally, a conceptual model of sports leisure time during coronavirus pandemic was presented (Figure 3). Therefore, in the continuation of this study, other researchers can examine the severity of the impact of coronavirus pandemic on each of the dimensions (categories) of sports leisure identified in this study. Considering that the pandemic of coronavirus in the world and especially in our country continues, and
according to the results of this study, some suggestions are presented:
1. Considering the role of physical activity in society and contributing to the well-being of citizens during the coronavirus crisis and in order to increase the motivation of individuals to perform these activities, Innovative, new and unique training methods must be identified and strengthened, especially through sports clubs, coaches and athletes.
2. Considering that during the coronavirus crisis, Social inequalities at the community level and the lack of access to some groups such as the disabled, the elderly, people who are not in good economic conditions, etc. have increased to sports venues and physical activity, it is necessary for public sports authorities to train sports movements and encourage people to perform these movements through the Various media, especially television, and according to proper planning... In this regard, the programs should be suitable for different people (disabled, elderly, etc.) and be separately for each group.
3. Considering that staying and activities at home, social distance and limited facilities for daily physical entertainment may be very dangerous for the public well-being of citizens, it is suggested that if the pandemic continues, the needful planning must be done for citizens to use outdoor sports venues. It is worth mentioning that these activities should be done in the current unfavorable conditions by carefully monitoring factors such as social distance, wearing a mask, weather conditions (humidity, wind direction, etc.), disinfection and proper ventilation of water closets and removal conditions that cause crowding (such as chairs, play equipment, etc.).
4. Due to the changing conditions of the community and intermittent and off-schedule holidays, in order to follow and not stop sports activities, it is better for club managers to use flexible programs and activities should be done in combination with face-to-face and distance (virtual) classes.
5. In the critical situation of the coronavirus pandemic, the coordination of various sectors of public, non-profit and private sports is necessary to get out of the problems and to have a vibrant and healthy society.
6. Due to the start of public vaccination in the community, it is necessary to reduce the special actions taken in the sports sector to prevent the spread of coronavirus, with caution and gradually so that people can engage in physical activity in a safe environment.
7. Due to the occupational and financial problems created for the citizens during the pandemic and the lack of priority for sports leisure activities in these conditions, it is suggested that the government and sports organizations help to meet the needs of people for leisure and compensate for the inactivity created in the community, and on the other hand to help the prosperity of sports occupations after the end of the pandemic, to consider "sports subsidies" for citizens.

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طرح‌های مدل‌سازی فراغت ورزشی در زمان شیوع کرونا/بروس به روش فراترکیب

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چکیده: همه‌گیری بیماری کرونا/بروس در سطح جهان، موجب ظاهر شدن تغییرات متعدد در baskı‌های رفتاری در حوزه‌های مختلف شد. است. بکار بردن ابزارهای مقیاس‌بندی و ارزیابی رفتاری، از میان در مطالعات علمی به کار آمده است. در فعالیت‌های ورزشی، از این ابزارها برای ارزیابی تغییرات اجتماعی و فرهنگی در زمینه‌های ورزشی استفاده شده است.

کلمات کلیدی: اوقات فراخت ورزش، کرونا/بروس، روش فراترکیب