



A Systematic Review of Digital Leisure in Iran

Seyed Arman Asadi¹ | Farzam Farzan² | Saeid Tabesh³

1. Department of Physical Education, Sport Management Faculty, University of Mazandaran, Babolsar, Iran.

Email: seyed.arman.asadi@gmail.com

2. Corresponding Author, Department of Physical Education, Sport Management Faculty, University of Mazandaran, Babolsar, Iran.

Email: f.farzan@umz.ac.ir

3. Department of Physical Education, Sport Management Faculty, University of Mazandaran, Babolsar, Iran.

Email: s.tabesh@umz.ac.ir

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ABSTRACT

This descriptive research was conducted using the systematic review method to investigate the position of digital leisure in Iran. The statistical population of this study consisted of all the theses, dissertations, and articles published in Iran. After searching, screening, and the qualitative evaluation of the research studies, 283 research were selected for the study. A researcher-developed data collection form was used to review the studies. The results indicate that the process of the production and publication of research studies in the area of digital leisure goes back to 2001, and it has been in progress since then. 84% of these research studies were conducted in the 2010s. The geographical distribution of these studies includes 25 provinces across Iran. 66% were journal articles and the remaining 34% were in the form of theses. 77% of the research studies adopted the quantitative approach, while 23% were qualitative and mixed method studies. The analysis and the interpretation of the findings showed that a large body of theoretical literature and the main concepts used in the research emphasizes the interdisciplinary nature of digital leisure and its special application in sports, education, culture, social sciences, economy, entertainment, and psychology. As a result, all three groups of managers, producers, and researchers must approach this area more than ever before from an applied perspective for the proper utilization of the cultural, economic, educational, and athletic aspects of digital leisure.

Introduction

Many people around the world rely on technology on a daily basis to fill their leisure time. Technology-based leisure dependence has brought about a new culture called digital leisure culture. The digital leisure culture offers an assortment of new opportunities for gaming, learning, and entertainment (Ho & Cho, 2021). Digital leisure, also called technological leisure, is a form of leisure

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filled by technological tools in online or offline platforms. The advantage of digital leisure doubles as a consequence of its capacity to allow the participants to overcome structural and interpersonal constraints (Adam, 2019). Digital leisure has a close interaction with leisure in the traditional sense (Chomynová & Kázmér, 2019). In other words, there is a two-way relationship between digital leisure and traditional leisure such that the former can be used to improve the planning for and the quality of the latter. On the other hand, traditional leisure experiences can be used as a basis for searching digital leisure experiences. For instance, in the first case, the tickets of a sport event may be digitally purchased online, but the leisure space to watch that sport event is that of traditional leisure. As for the second case, enjoying traditional board games such as chess, snooker, or ludo is likely to produce dependence and addiction, and therefore, the person will embark on looking for more difficult and complex versions in the virtual space (Keya, Rahman, Nur, & Pasa, 2020). Digital leisure captures a wide range of activities such as digital chat through messaging platforms such as WhatsApp, Telegram, IMO or SMS, social networks such as Facebook, Twitter, and Instagram, watching sport events (online or offline), listening to music (online or offline), playing video games, online shopping, etc. (López-Sintas, Rojas-DeFrancisco, & García-Álvarez, 2017). It is generally believed that the distinction between digital leisure activities and other activities is not always easy to make. As a result, the conceptualization of digital leisure activities for the sake of studying and pinning down the delicate distinctions between the two is essential. Therefore, it is argued that digital chat is a chat that is entirely carried out on the digital platform, the content of which includes voice, image, and text-based chats, conducted through online and offline platforms. Digital games refer to all the games played online or offline through digital platforms. Watching videos encompasses all activities related to sports, drama, documentaries, news, and any kind of videos on a digital device (online/offline). Listening to music covers all those activities concerned with the use of musical content, both audio and video. The use of social networks has to do with the widely used online electronic tools that provide information, interactions, and the possibility of sharing community-based content (Waititu, 2021).

As was mentioned above, individuals' dependence on digital leisure activities is growing rapidly, but in the meanwhile, there are several factors that predict their participation in such activities. One of the most important factors is socio-demographic constraints. Among the demographic characteristics, gender and age are likely to affect an individual's decision to spend digital leisure time. No doubt, there is a gender-based attitude about the activities performed in societies (Gallistl & Nimrod, 2020). For example, Lopez-Fernandez, Williams, Griffiths, and Kuss (2019), indicates that women were significantly less likely to play 'Sports related digital games' than men. Similar findings have been reported in other studies (Goswami & Dutta, 2015; Puerta-Cortés, Panova, Carbonell, & Chamarro, 2017; Rikkers, Lawrence, Hafekost, & Zubrick, 2016). In addition, men spend a greater proportion of their free time watching sporting events on TV than women do (Apostolou & Zacharia, 2015; Dietl, Özdemir, & Rendall, 2020; Dietz-Uhler, Harrick, End, & Jacquemotte, 2000; Gantz & Wenner, 1991; Lounassalo et al., 2021; Nicholson, Kerr, & Sherwood, 2015; Wenner, 2002).

Technological developments have been accompanied by some age restrictions on the use of technology (Renu, 2021). In this context, Valtchanov and Parry (2017) adopted the term "Internet generation" to describe the people born and living in the Internet age (from 1990 to the present). They argue that the Internet generation is not only characterized by their exposure to technological tools, but they also have practical technological knowledge and capability; therefore, their entire lives depend on digital tools, such that they carry these tools along wherever they go, for example, Tel (2021) investigated athletes, referees, and coaches' habits of playing digital game in the pandemic process, results showed that, these individuals, between the ages of 21 and 30, use sports video games the most in their leisure time. A similar conclusion was reached by Obaid and CK (2022), where researchers found that players on Iraqi soccer teams who are under the age of 30 use social media to a greater extent than other age groups. In the case of sports casting, the situation is similar to social media and sports video games. For example, Nicholson et al. (2015) showed that most viewers of sports casting are between 16 and 35 years old. Gratton and Solberg (2007) Also found that people under 34 spend a larger portion of their leisure time watching sports casting than other age groups. Based on the above examples, it can be said that young people are more willing to use digital leisure activities. Psychologically, the ability of young generation to engage in digital leisure activities is

considered to be a social norm. However, fairly elderly people who were born before the Internet age depend solely on technologies that necessarily fulfill their needs (Berdychevsky, 2018). Technology for this group of individuals is a means of sustaining the necessities of life, not a model on which life is based. Other factors such as availability play a key role in degree of participation in digital leisure. For instance, most activities in the developed societies are based on technology, the opposite of which is the case for the developing countries. In developed countries, the availability of and exposure to technology is very high, while the opposite holds for the developing countries. Consequently, access to technology and the extent to which people use it depend heavily on the level of development of societies (Rodrik, 2018).

On the other hand, participation in digital leisure is not also free of costs and concerns associated with the participation rate, type of activity, and experiences related to these activities in sports scope. Virtual maltreatment has been identified as one of the main concerns of the participants in digital leisure activities. Virtual maltreatment refers to a range of harmful, interpersonal behaviors experienced via the internet, as well as via mobile phone and other electronic communication devices. This type of harassment has become one of the most common social networking activities in Facebook, Twitter, and Instagram (Powell, Scott, & Henry, 2020). Virtual maltreatment in sport is becoming increasingly significant as a social problem (Kavanagh, Litchfield, & Osborne, 2022). An illustration of this can be seen in Twitter reactions to the 2013 Wimbledon tennis tournament. The male winner, Andy Murray, received overwhelmingly supportive and congratulatory tweets, yet the female champion, Marion Bartoli, was the subject of a barrage of hostile and abusive messages, demonstrating a clear example of maltreatment through social media, and Aston Villa Soccer player, Jack Grealish received threats following his decision to turn down an international call to the Irish squad (Kavanagh, Jones, & Sheppard-Marks, 2020). Unfortunately, instances such as these are becoming more common. In the daily social commentary surrounding major sporting events, we are continually witnessing significant negative online interaction and in many cases, such abusive and or/threatening discourse. McMahon, McGannon, and Palmer (2022) suggests, 'coaches, parents, administrators and athletes all represent both potential victims and perpetrators of virtual maltreatment'. We would go further and suggest that fans and followers of sport should also be added to this list, and that their role as potential perpetrators through the use of online environments on their leisure times should not be understated. Knowledge and understanding of this form of abuse, however, is lacking, and has yet to be subject to any systematic examination.

As mentioned earlier, digital leisure includes a wide range of activities. Sports are one of the main areas that include a wide range of digital leisure activities. In the following, we will mention five main and important areas of digital leisure related to sports, namely: A: Social media, B: E-sports, C: Sports casting, D: Virtual Fitness and, E: Exergames.

Sport and Digital leisure

A: Social media

In other leisure contexts such as sports, social media can be cited as one of key elements in the field. Over the new century, and especially during the last decade, social media presence has increased hugely, changing how we behave, communicate and spend our leisure (Abeza, O'Reilly, & Seguin, 2019; López-Carril, Herrera, & Sanz, 2019). These tools constantly accompany us, both in our personal and professional sphere, through the different technologies and devices such as tablets, smartphones or laptops, that facilitate their use (López-Carril, Escamilla-Fajardo, González-Serrano, Ratten, & González-García, 2020). By 2022, active monthly social media users across the globe are estimated to reach 3.96 billion, approximately half of the Earth's total population (Dixon, 2022). Both old and new generations have embraced the irruption of social media as well have been integrated into many and diverse socio-economic sectors (e.g., politics, tourism, advertising, health, music, or video games) revolutionizing them.

The sports sector is not an exception. Growth of social media, is transforming aspects of leisure behavior, so that social media users can fashion their own leisure selection and media-use patterns for the purposes of fulfilling various expectations. Fans, athletes, coaches and, referees can now show

and share their emotions and feelings through these new channels on their leisure times (López-Carril et al., 2020). Jong and Drummond (2020) showed that, using social media is a popular leisure activity for young people. Similar findings have been reported in other studies (Andreassen, Pallesen, & Griffiths, 2017; Gosal, Geijzendorffer, Václavík, Poulin, & Ziv, 2019; Hayes, 2022; Kircaburun, Demetrovics, & Tosuntaş, 2019). In the realm of sports consumption, we might expect the selection of these activities to be driven by underlying values about physical fitness, as well as sports leisure motivations (Brown, Billings, Murphy, & Pusan, 2018). Thanks to the rise of social media, consumers can develop now a more active role in the creation of content, before/during/after a sport event, across multiple platforms and markets on their leisure times (Billings, Broussard, Xu, & Xu, 2019; Li, Dittmore, Scott, Lo, & Stokowski, 2019). For instance, the Australian Olympic Committee launched the #TeamAUS and #LikeAnOlympian hashtag campaign focused on inspiring Australians to “train like an Olympian at home” and aimed to encourage the community to stay fit, healthy and inspired through home workouts, home skills sessions and healthy spending leisure time. People along with athletes from a range of sports contributed to the campaign by creating and disseminating a series of positive videos providing insights to their home workouts, skills training, and challenges against other athletes. The videos are being posted across several social media platforms, including Instagram, Facebook, and YouTube. Booker, Skew, Kelly, and Sacker (2015) investigated the relationship between social media use, sports participation, and markers of well-being in adolescence, the results showed that the use of social media in leisure time is more than physical activity during adolescence. results also found in other studies with similar age groups (Ogunleye, Voss, & Sandercock, 2012).

A significant amount of research to date has explored social media usage in the context of sport events (Filo, Lock, & Karg, 2015). For example, Yan, Pegoraro, and Watanabe (2018) examined how Twitter was used by male football players at the University of Missouri to draw attention to and resist racism on campus using the #ConcernedStudent1950 hashtag. Although some of these tweets, posts, comments and hashtags are by activists and media, a large portion are also by individuals engaging during their leisure time (Spencer Schultz & McKeown, 2018). Of note, the largest volumes of tweets in a year usually occur during sport events, such as the Olympics and World Cup, and awards celebrations, such as the Oscars (Wood, Hoerber, Snelgrove, & Hoerber, 2019). However, individuals posting during their leisure time have been an important collective voice that contributes to the conversation along with messages posted by activists.

B: e-Sport:

Another key element in the field of digital sports leisure is eSport. This leisure pursuit involves individuals playing video games (individual or team based) in an organized and competitive manner, mediated through computer networking technology. Much like traditional professional sport, competitive gaming events take place in front of live audiences and are broadcast for mass consumption, often via online streaming. While the degree of physicality has led some to question the legitimacy of eSport as a sport (Hallmann & Giel, 2018), it clearly falls under the umbrella of digital leisure and provides opportunities for the interdisciplinary study of digital leisure behaviors and experiences (Wood et al., 2019).

With competitions dating back to the 1980s, eSport's popularity has grown significantly in recent years, with a global fan base approaching 400 million in 2017 (Wood et al., 2019) and predictions that eSport viewership will soon surpass that of most traditional sport leagues (Fagen, 2018). Despite growth in participation numbers, viewership, and sponsorship, to date eSport has received scant attention from academics (Funk, Pizzo, & Baker, 2018). E-sport is one of the most rapidly growing branches of modern entertainment. Many factors influence this rapid progress such as easy access to the broadcast of matches, free eSport games, or enjoying the favorite match are just a few of them. Moreover, the regularly growing number of tournaments organized (both online and hosted in the largest sports halls in the world) makes people interested in this leisure activity (Lukowicz & Strzelecki, 2020).

E-sports is a phenomenon of mostly younger generations. An average player of eSports is between 15 and 25 years old and trains 3–4 times a week for 2–4 h (Martončík, 2015). Previous studies have shown that the majority of eSports players are male (Ratan, Taylor, Hogan, Kennedy, & Williams,

2015; Rogstad, 2022; Rudolf et al., 2020; Ruvalcaba, Shulze, Kim, Berzenski, & Otten, 2018; Taylor, 2012). This may be due to the more competitive character of eSports in comparison to regular gaming (Rudolf et al., 2020). The eSports scene in terms of community and game design is strongly influenced by men and a male perspective, respectively (Lopez-Fernandez et al., 2019). This may tend to predominantly attract male players and, in this way, lead to a vicious circle. Additionally, sexism, offensive language and online harassment are reoccurring problems in some eSports titles that might further deter female players (Lenhart et al., 2008; Lopez-Fernandez et al., 2019; Ruvalcaba et al., 2018; Witkowski, 2014). So far, there have been very few studies which have dealt with the playing style, identity or motivation of eSports players for playing

In a study by Seo (2016), the author focused on different perspectives of eSport definition, and examined whether eSport was leisure or work (or neither) by attending eSports tournaments in a number of countries and via in-depth interviews with 10 professional eSports players. Seo (2016) characterized professional eSport playing as a serious leisure activity, following Stebbins (1982) definition. Serious leisure can be defined as an intermediate activity between casual leisure and work with beneficial implications, such as gaining self-concept and identity development during the activity (e.g., amateur sport attendance). (Seo, 2016) identified three stages mapping onto Campbell (2008) hero's journey monomythic. According to the narratives of eSport players, in the first stage ("the call to adventure") players viewed games as casual leisure activity (playing for fun, knowing the mainstream gamer community). However, they started to form initial perceptions and gain interpersonal relationships in the social world of eSport. In the second phase ("the road of trials"), they begin the personal transformation to becoming an eSport player. In the final stage ("the master of two worlds"), professional players acquire a new eSport gamer identity. This means that eSports in the lower stages of this model are considered as leisure activity, and in the higher stages are considered as work rather than leisure.

In addition, several researchers have emphasized on the leisure function of eSports (Bányai, Griffiths, Király, & Demetrovics, 2019; Demetrovics et al., 2011; Jenny, Manning, Keiper, & Olrich, 2017; Lee, An, & Lee, 2014; Ma, Wu, & Wu, 2013; Rudolf et al., 2020). For example, Martončík (2015) suggests that e-Sports as a specific form of playing computer games can be a valuable way of spending leisure time and a means of expressing themselves for young people in the rapidly changing modern world. Also, Pizzo et al. (2018) stated that the development of eSport is undeniable; It is one of the fastest-growing branches of the digital leisure market.

C: Sports casting:

Today, television is an effective medium for family recreation and a powerful tool for developing the various aspects of sports. Families all over the world can watch their favorite sports programs on various television and radio stations. Live or non-live sports Broadcasting is one of the most popular digital leisure activities (Bryant & Raney, 2000; Cooper & Tang, 2012; Gantz, Wang, Paul, & Potter, 2006; Kaser & Oelkers, 2021; Raney, 2009, 2013; Sargent, 2003).

Sports broadcasting, often abbreviated as "sports casting," is a multi-million dollar industry in all over the world. Sports broadcasting is the distribution of sporting events and information via mass media, most prominently through the medium of television, but also through radio and internet avenues (Fuller, 2008) The first live television coverage of sports event, utilizing electronic cameras, is thought be the 1936 Berlin Olympics. The development of television broadcasting has had a major impact on the way sporting events are viewed around the world. While the stadium can host thousands of spectators in the stands, television broadcasts reach millions more who are unable to attend. Television provides a unique perspective unavailable to most spectators in the stands. Using advanced technology, specialty equipment, and production techniques, the sports broadcasting has become the best seat in the house (Owens, 2015). The sports events with the most TV viewers are: Tour de France 3.5 billion viewers, World Cup of Soccer 3.3 billion viewers, Cricket World Cup 2.6 billion viewers and Summer Games 2 billion viewers (Baker, 2022). Closed view, slow motion, replay and different angles of the television cameras double the pleasure and excitement of the game, and the television viewers are superior to the viewers who are present in the stadium. Due to the positive features of TV

coverage of sports events, some people prefer to spend their free time at home watching sports events on TV instead of going to stadiums (Owens, 2015).

Time use data from across the world show that employees predominantly spend their leisure time watching sports program on television (TV). For instance, in the United States, working adults spend over half of their leisure time on weekdays and weekends watching sport on TV (Statistics, 2021). Also, (Ryu & Heo, 2016) examined the relationship between relaxation and watching televised sports events among older adults; researchers suggested that, individuals watch televised sports events for four reasons consist of: entertainment function, surveillance function, correlation function and, socialization function. The entertainment function addresses the role of televised sports events in offering an escape from the tedium of daily life and personal concerns through entertainment. Also, they illustrated that males are more likely to feel entertained than female when watching televised sports events on leisure times.

D: Virtual Fitness:

Pre-Covid-19 the leisure and fitness industry was going from strength to strength, with no signs of slowing down. A wave of change had seen centers revived and improved, though Covid-19 and the resulting restrictions and lockdowns have brought about the new challenge of needing to attract people to return to leisure activities and in some cases expedited the drive to modernize (Ioannides & Gyimóthy, 2020). Although the Covid-19 outbreak has disrupted the leisure and fitness industry, it has also highlighted the importance of our health and leisure activities and forced individuals and leisure operators to think about improvements they can make. whilst they are clearly facing unprecedented challenges they realize, more than ever, the need to provide facilities that improve the leisure time of their communities (Kaur, Singh, Arya, & Mittal, 2020). One of these improvements is Virtual fitness. During the Covid-19 crisis, the fitness industry quickly pivoted to deliver more fitness options virtually. Although nothing replaces human connection, virtual options are a wonderful way to supplement, jump-start, and/or continue a fitness regime in leisure times. Virtual fitness allows the participant to exercise with the assistance of a workout regime delivered via the Internet or an app to a personal electronic device. Options range from prerecorded or live, free or paid subscription and are accessible on a schedule or on demand. There is no shortage of virtual workout options, and selecting a program that is right for individual can be both exciting and daunting (DeSimone & ACSM-CPT, 2020). Most virtual fitness options fall into three categories, as mentioned by DeSimone and ACSM-CPT (2020): 1- Online fitness classes: Aimed at participants who enjoy a group class experience, these workouts are offered by discipline or style and include yoga, Pilates, boot camp, toning, dance, cardio, chair-based workouts, fusion classes, and licensed programs from participants favorite in-club brands, YouTube, and television personalities. 2- Personal training: Targeted to users seeking an experience similar to a one-on-one personal training session, virtual options range from workouts determined by user experience, goals, and lifestyle. User goals and fitness level can be assessed and reevaluated as he/she progress through the program. Options include: a) A real-life trainer who will meet with participant via chat or video to answer questions and tweak the workout; b) A computer-based program that delivers a workout based on participant data (fitness, level, experience, injuries, etc.); some of these offer the option to include a human trainer to help motivate and modify routines; c) Artificial intelligence-based programs take the technology up a notch with exercise adjustments based on user input and with external data extracted from smart watches and fitness trackers. 3. Equipment-based training: bikes, treadmills, and other home-based equipment allow participant to interact with a live or recorded workout and an online community in real-time or after workout.

Several studies have been conducted on virtual fitness and its positive physical, mental and cognitive effects have been demonstrated (Adrizal & Pahlifi, 2020; Honary, Bell, Clinch, Wild, & McNaney, 2019; McFadden & Li, 2019). For example, Jong and Drummond (2020) explored online fitness culture among female participants aged 18–24 in Australia, researchers suggested that online fitness use is becoming a popular leisure activity and source of health and fitness information. They found that social network sites are used as a platform to gather and teach ideas of health and fitness in leisure times. In another example, the application of information communication technologies (ICTs) has effectively motivated young people regarding exercise, particularly running, during leisure time, as

mentioned by Zach, Raviv, and Meckel (2016). A survey carried out by independent market research agency, YouGov, on Deloitte's behalf in 2021. This survey was conducted online with a nationally representative sample of more than 3000 UK adults aged 18-19. The results showed that individuals devote 16% of their leisure time to virtual fitness at home; the remarkable point in this survey was that outdoor fitness accounted for only 6% of UK youth's leisure time. At-home socializing using the internet/mobile apps allocated the most leisure time to themselves, almost 44% (Agency, 2021).

E: Exergames:

Exergame (also known as virtual reality training) is an emerging product used for video games that is also a form of exercise which relies on sensor technologies (cameras, body sensors, and hand held remotes) in such a way that users are required to 'move' to fully interact and best experience during the game (Benzing & Schmidt, 2018; Donath, Rössler, & Faude, 2016; Zheng et al., 2020). Exergame enables players to improve their motor and cognitive functions in the course of performing game tasks. In the past two decades, several studies have reported that exergames are a fun, feasible, attractive, and safe way to perform physical exercise in leisure time through interactions with motion sensors (Baracho, Gripp, & Lima, 2012; Lieberman et al., 2011). A point that should not be neglected is that exergames are different from video games. In exergames, players have to make physical movements, such as throwing arms and legs to walk, but in video games, there are no physical movements and the player is in a stationary state (Staiano, 2020). WiiR (from Nintendo company), Sony's PlayStation MoveR, and Microsoft's XBOX 360 KinectR systems are the common commercially available systems that allow individuals to play exergames (Viana et al., 2021). Although there are several types of exergames, the most common exergames simulate traditional moderate-intensity continuous exercises (e.g., walking, running, and cycling), sports modalities (e.g., basketball, bowling, yoga, tennis, table tennis, baseball, swimming, ping-pong, and boxing), and dancing (Morais et al., 2021; Viana et al., 2020).

Exergaming is often considered as an opportunity that unites entertainment and exercise; on the one hand, exergames make physical activity fun and entertaining, on the other hand, exergames stimulate people's physical activity while playing games. For instance, several studies have shown that exergames are performed for various purposes such as entertainment, enjoyment, health and leisure time physical activities. For example, Su and Zeng (2022) investigated the effects of health consideration on exergaming behavior in college students, the results indicated that college students use exergames as physical activities in their leisure times. Best (2013); Peng, Crouse, and Lin (2013) Found that, console-based exergames are popular among adolescents and considered to be attractive on leisure times. In another study, Schwarz et al. (2018) examined the context of gameplay for mobile exergaming in adolescents' everyday life; The adolescents indicated leisure time and travel time to and from school as suitable timeframes for playing a mobile exergame. In addition, they indicated certain times they were available that would be an opportunity to play an exergame: Just after school; After finishing school work; Commuting to school; After having dinner; During the weekend; During holidays.

Overall, the leisure functions of exergames have been mentioned in many studies (Hashim, Kamaruddin, & Jantan, 2019; Maziah, 2018; Rütth & Kaspar, 2020; Schwarz et al., 2018; Staiano, Beyl, Hsia, Katzmarzyk, & Newton Jr, 2017; Unbehaun et al., 2018).

Now the question we should seek to answer is, why are we addressing the issue of digital leisure? As mentioned above, traditional leisure affects society as a sporting, economic, social, cultural, and political phenomenon. The exploitation of leisure time has always been a challenging and important issue for different communities. The importance of this issue is doubled for countries like Iran, where a large number of its population are young people and teenagers. The results of the 2016 census data indicated that 31.5% of the total population in Iran were young people and millennials (amar.ir, 2016). Proper budgeting of leisure time, besides flourishing individuals' talents, also leads to the growth and development of society in general and prevents many social deviations. Given the interdisciplinary nature of leisure, if various studies are conducted in this area, it is possible to pin down the functions of leisure in the investigated society and identify the patterns that govern the way leisure time is spent and thus guide them in the right direction. To ensure that the leisure time of people is managed in the right direction, it is necessary for the researchers in different disciplines to carry out various studies

to identify the leisure needs of the individuals and introduce useful leisure activities to cater for those needs (Fancourt, Aughterson, Finn, Walker, & Steptoe, 2021)

Although Multiple research studies have been undertaken to identify the individuals' traditional leisure needs in Iran in the field of sports and non-sports (Ansarifard, 2016; Esmaeili, Shirvani, Rezaei, & Afshari, 2022; Iman, Soroush, Rastegar, & Hajbande, 2017; Pourahmad, Rezaenia, Hosseini, Andisheh, & Amini, 2021), the significant point lies in the difference between traditional leisure and digital leisure. Since the nature of traditional leisure and digital leisure is claimed to be different, so are the needs of people in the field of digital leisure and traditional leisure. Therefore, the findings of traditional leisure studies cannot be generalized to account for digital leisure. After reviewing the existing literature in Iran, the researchers in this study noticed that the number of studies in the area of digital leisure was far from sufficient and the position of digital leisure among different disciplines, especially in the field of sports, is not clear. As long as the digital leisure position in the fields of sports and non-sports is not clear, it is impossible to identify the needs of the individuals in this field and guide them to engage in useful digital leisure activities. As McIntosh, Jay, Hadden, and Whittaker (2017) mentioned that further research on theoretical principles may help explore the most effective methods for underpinned interventions while assessing the length and results of intervention regarding E-health & sports.

In this vein, systematic literature reviews (SLR) are an increasingly used review methodology to synthesize the existing body of literature in a field (Kraus, Breier, & Dasí-Rodríguez, 2020). One of the main advantages of SLR regarding traditional reviews is that they adopt a replicable, scientific and transparent process (Rowley & Keegan, 2020). Furthermore, SLR rank research by its quality, help researchers to synthesize the literature under review and support better decisions for policymakers (Kraus et al., 2020). Hence, conducting an SLR can help experienced scholars to develop new and interesting research paths (Massaro, Dumay, & Guthrie, 2016).

On the other hand, bibliometric analysis is a research technique that allows access to large amounts of data synthesizing the results obtained, providing macro and micro valued results for both researchers and practitioners. These types of studies have become an essential instrument for comprehensive analysis and research in diverse fields of science (Zou, Yue, & Le Vu, 2018). In the context of the sport sciences academic literature, there are several bibliometric studies in topics such as fitness equipment (Addolorato, Calabuig, Prado-Gascó, Gallardo, & García-Unanue, 2019), sport entrepreneurship (González-Serrano, Jones, & Llanos-Contrera, 2019), women's entrepreneurship (Moreira, Marques, Braga, & Ratten, 2019), sports sponsorship (Maldonado-Erazo, Durán-Sánchez, Álvarez-García, & Del Río, 2019) or sports innovation (Ferreira, Fernandes, Ratten, & Miragaia, 2020). Nevertheless, there is a gap in bibliometric studies regarding digital leisure in Iran. Thus, in this study, a bibliometric analysis is performed to fill the detected gap. Besides, a SLR is conducted following the recommendations of previous studies (Fahimnia, Sarkis, & Davarzani, 2015; Feng, Zhu, & Lai, 2017; Secundo, Ndou, Del Vecchio, & De Pascale, 2020) that highlight the value of better research outcomes due to the combination of combining these two methods.

Given the scenario described in the preceding paragraph, this paper aims to analyse the current state of digital leisure research in the context of sports and non-sports in Iran. Accordingly, this research provides a macroscopic overview of digital leisure in academic literature based on bibliometric analysis. SLR approach was used to perform the search, and to select the documents under study. Bibliometric elements such as quantifying the number of authors, journals with most publications on this topic, used instruments, research approach, geographical scope of the research, and possible thematic clusters are identified. The results presented in this paper afford a comprehensive overview of the developments and gaps in digital leisure researches in Iran. Therefore, this work offers a picture of the evolution of the research field, helping scholars and practitioners to identify key influences of digital leisure in sport, providing some valuable insights, as well as guiding future research or practical applications in the sport industry. So, in the present study, we intend to investigate the position of digital leisure in sports and non-sports fields in Iran and take a step towards improving leisure activities in general and digital leisure activities in particular. For this purpose, the following research questions have guided the study design:

RQ1- What is the evolution of digital leisure studies in Iran in different time periods like?

RQ2- To what extent is digital leisure covered in Iranian databases?

RQ3- To what extent have sports and non-sports writers been interested in digital leisure?

RQ4- How have Iranian journals acted in accepting digital leisure articles?

RQ5- How broad is the geographical distribution of digital leisure research in Iran?

RQ6- What are the favorite instruments of Iranian researchers in conducting digital leisure researches?

Methodology

This research is a descriptive study conducted using the systematic review method with the goal of investigating the position of digital leisure in the local research published in Iran. The statistical population of this study consisted of all the theses and dissertations submitted to the public and private universities and scientific- research and scientific-promotional articles published in domestic journals. The research team was made up of a search expert and two leisure and search specialists. In this systematic review, electronic search was conducted in the Iranian databases in Persian in order to identify the researches in the field of digital leisure. These databases include: Scientific Information Database, IranDoc, Noor Specialized Magazines Website, Comprehensive Humanities Portal, Magiran and the Integrated System of the Libraries of Islamic Azad University. No time limit was considered to find the studies. According to the research team, 25 keywords were chosen to search in the databases. These keywords include: Virtual leisure, digital leisure, internet leisure, computer leisure, electronic leisure, electronic recreation, digital recreation, virtual recreation, internet recreation, computer recreation, electronic entertainment, digital entertainment, virtual entertainment, internet entertainment, computer entertainment, digital game, virtual game, internet game, computer game, digital sport, virtual sport, internet sport, computer sport, computer football, and game.

Different databases use their specific search method, but in the current study, the common ground between all these methods was searching among the titles and the keywords of the databases. Considering the constant updating of databases and in order to increase the validity of the search, all searches were carried out in one day (December 26, 2020). For example, the virtual keyword search strategy in Noor specialized journals database was as follows:

1. First, after entering the advanced search function of the Noormags database, the virtual leisure keyword was entered in the field of "All these words".
2. In the field of "scientific rank", in order to search among all the scientific-research and scientific-promotional articles, the "all" option was selected.
3. In the "Language" field, Persian was selected.
4. In the "Subject Category" field, "all" was selected.
5. In the field of "Content Position", the title and keyword options were checked.
6. Finally, knowing that no time limit had been defined for the selection of the relevant research studies, the field of "publication year" was left empty.
7. In so doing, 12 Persian articles were located using the virtual leisure keyword in this database and after excluding the articles obtained earlier in other databases, three articles were included in the systematic review. The criteria for including research papers in this study are: a: Persian language and 100% textuality of papers. b: All articles must have been published in Iranian publications at the level of scientific research or scientific promotion; Articles from conferences and meetings were not included in the study. c: Dissertations and theses from all Iranian universities, including universities affiliated with the Ministry of Science, Research and Technology, Ministry of Health, Islamic Azad University and Payam Noor, were included in the study; In cases where the paper was extracted from the theses related to the object of inquiry of the research, the thesis received the priority and the articles were not included in the review.

In the initial search among all of the selected databases, 425 studies were obtained and in the first stage, 22 articles were excluded because they did not bear on the purpose of the study. In the second stage, 114 articles were excluded due to replication and in the third stage, 6 articles were deleted for the publication in invalid journals. To examine the text of the selected studies, a checklist developed by the research team was employed to extract the data. Afterwards, the defining features of the included researches were systematically extracted and summarized according to the researcher-developed checklist. The criteria that were measured based on the checklist include: a) Title of journal or university, b) Gender and number of authors, c) Date of publication, d) Author's field of study, e) Data collection instrument, f) Data sources, g) Research level, h) Research approach, i) The geographical scope of the research and, j) content (the dominant subject area) of each research.

Results

The publication date of the researches is 2001-2021. Figure (1) shows that the first research on digital leisure was published in 2001, but until 2005, few researches were published and the number could hardly go beyond ten. However, since then the publication of the articles derived from the research studies conducted over time has gradually increased, growing rapidly from 2010 to 2013 and reaching a record peak. Since then, the volume of the published researches has reduced and since 2017 there has been a kind of decline and collapse in the publication of these researches. In general, in the 2010s, the number of the published studies represented a very significant leap, so that 84% of the studies were conducted in this decade.

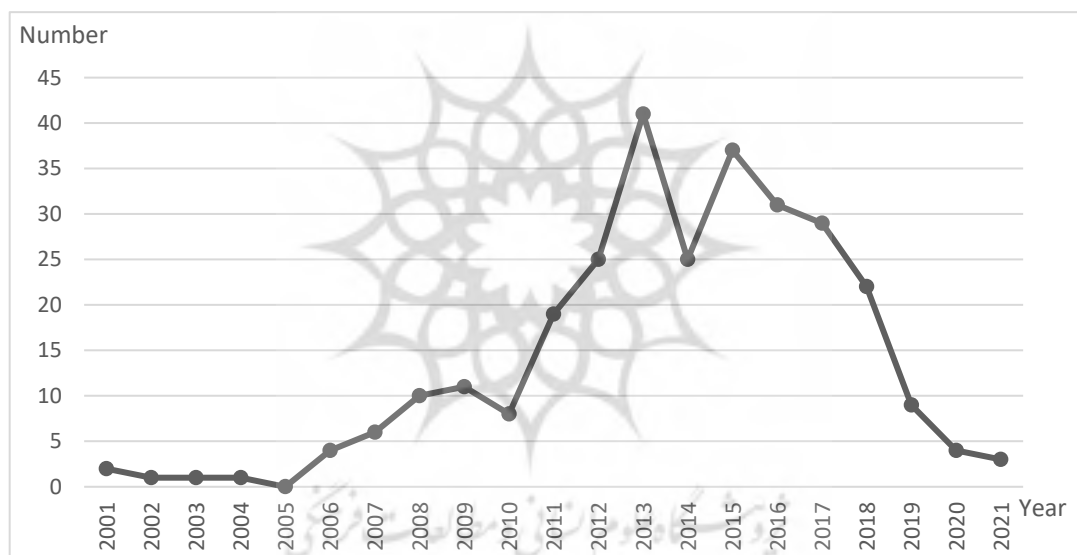


Figure 1. Number of the studies published in 20 Years

Table 1. Research studies obtained from the selected databases based on keywords

Databases	Sid.i	Irandoc.ac.i	Magiran.co	Noormags.i	Ensani.i	sika.iau.i	Total
Keyword	r	r	m	r	r	r	
Digital leisure	0	5	2	7	4	0	18
virtual Leisure	4	8	2	3	6	0	23
internet leisure	0	0	1	4	3	0	8
computer leisure	1	2	0	1	2	0	6
virtual recreation	0	0	0	0	3	0	3

computer recreation	0	0	0	0	1	0	1
electronic recreation	0	0	0	2	2	0	4
Computer game	46	60	13	11	8	7	145
virtual entertainment	0	0	0	0	3	0	3
internet entertainment	0	0	0	4	0	0	4
computer entertainment	0	1	1	2	1	0	5
electronic entertainment	1	0	0	0	0	0	1
Digital game	5	1	3	0	3	1	13
Virtual game	4	3	1	5	2	0	15
Internet game	1	1	1	2	2	1	8
Virtual sport	0	3	1	3	2	1	10
Internet sport	0	0	0	1	0	0	1
Computer sport	0	0	0	1	0	0	1
Computer football game	0	1	0	2	0	0	3
digital entertainment	0	0	0	0	0	0	0
digital sport	0	0	0	0	0	0	0
digital recreation	0	0	0	0	0	0	0
internet recreation	0	0	0	0	0	0	0
electronic leisure	0	0	0	0	0	0	0
Total	65	87	27	51	43	10	283

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According to figure (2), out of 283 authors, 126 were women and 157 were men.

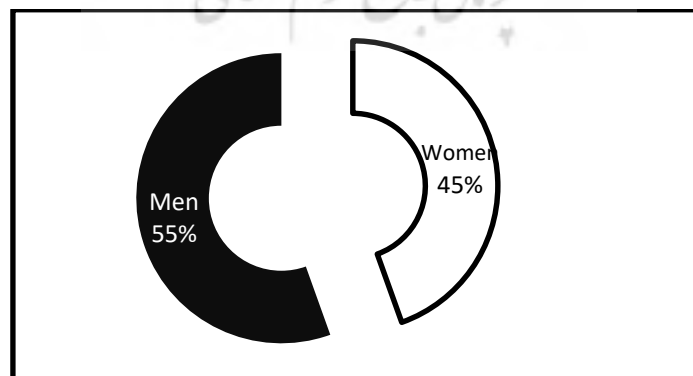


Figure 2. Gender of the authors conducting the research study

According to Table (2), 57% of all researches were carried out by 3 authors, 23% by 2 authors, 8% by 1 author, and the remaining 20% had more than three authors.

Table 2. Number of authors in the reviewed researches

	Thesis and dissertation		Article
	Thesis	Dissertation	
	94	1	88
Total	95		
Frequency	0.34		0.66
Total	283		

Table (3) indicates that a large proportion of the reviewed research studies are in the form of articles. Among the 283 studies reviewed, 34% were theses and dissertations and 66% were journal articles. 94 studies were master's theses and 1 study was a Ph.D. dissertation.

Table 3. Type of the reviewed research studies

	1 author	2 authors	3 authors	4 authors	5 authors	6 authors	7 authors	15 authors
Frequency	0.08	0.23	0.57	0.07	0.03	0.01	0.007	0.003
Number	23	65	161	20	8	3	2	1
Total	283							

As can be seen in table (4), universities under the supervision of the Ministry of Science conducted the majority of the researches related to digital leisure, such that 71% of all these reviewed came from the universities run by the Ministry of Science while 29% of them belonged to the Islamic Azad University branches. Among the universities supervised by the Ministry of Science, Allameh Tabataba'i University and among the branches of the Islamic Azad University, Tehran Center had the largest number of theses.

Table 4. Distribution of the reviewed theses in the universities

Type	Ministry of Science, Research, and Technology						Islamic Azad University			
	Allameh Tabataba'i	Payame Noor	Tarbiat Modarres	Kharazmi	Art	Shahid Chamran	Other	Tehran Center	Rudehen	Other
Number of research	19	7	5	5	3	3	26	8	3	16
Total	68						27			
Frequency	0.71						0.29			
Total	95									

Table (5) indicates that the researchers in the field of psychology have conducted the greatest number of studies on digital leisure. After psychology, there comes the authors in the field of physical education and educational technology, among which in the field of physical education, 13 studies

were in the subfield of motor behavior, 7 were in sport management, 5 studies belonged to sports physiology and 2 studies were conducted in the area of sport pathology. 11 research studies in the field of medical sciences belonged to the subfields of health (6), nursing (3) and occupational therapy (2). In general, 61% of the authors majored in the five fields of psychology, physical education, educational technology, communication, and sociology.

Table 5. Fields of study of the authors conducting the reviewed research studies

Majors	Psychology	Physical Education	Educational Technology	Communication	Sociology	Educational Planning	Medical Sciences	Other
Number	71	27	27	24	24	15	11	84
Frequency	0.25	0.10	0.10	0.08	0.08	0.05	0.04	0.30
Total	283							
Total	283							

Table (6) lists the journals that have published the most articles in the area of digital leisure. The "Information and Communication Technology in Educational Sciences" enjoys the largest number of the publications. Out of 188 articles reviewed, 13 were published in 11 journals in the field of physical education. The journals of Harakat and Biosciences, both of which are published by the University of Tehran and have an ISC-index, each with two articles, enjoy the greatest number of articles on digital leisure among the journals of physical education.

Table 6. Journals that published more than four articles in the field of digital leisure

Journal	Number of Articles	INX	Q	IF
Information and Communication Technology in Educational Sciences	15	ISC	Q3	0.156
Journal of Iranian Cultural Research	10	ISC	Q1	0.339
New Media Studies	8	ISC	Q1	0.269
Cultural Studies and Communication	7	ISC	Q3	0.151
Technology of Education	5	ISC	Q2	0.139
Culture-Communication Studies	5	ISC	Q2	0.339
Iranian Journal of Health Education and Health Promotion	4	ISC	Q2	0.193
Total Journals	104			
Total Articles	188			

As can be seen in Figure (3), 27% of all researches have been conducted in Tehran province, with Isfahan and Khorasan Razavi being in the second and third places. Overall, 55% of all research studies were undertaken in the eight provinces listed in the figure (3). 21% of these studies lacked a specific geographical focus. 24% of the remaining studies were related to other provinces of Iran.

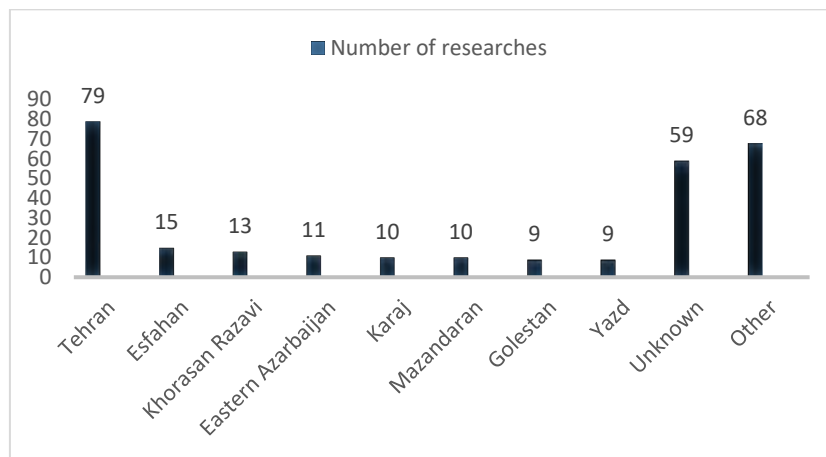


Figure 3. Geographical focus of the reviewed researches based on province

Table (7) indicates that a large number of reviewed studies adopted a quantitative approach. In other words, 77% of the researches used the quantitative method, 19% were done qualitatively and 4% were mixed- method studies.

Table 7. Distribution of Reviewed Research Methods

	Quantitative	Qualitative	Mixed
Number	218	55	10
Frequency	0.77	0.19	0.04
Total	283		

As can be observed in Table (8), 82% of the data sources were the primary sources, such as questionnaires, interviews, etc., 14% were of the secondary type such as library documents, and the remaining 4% employed both primary and secondary types. The primary sources are the studies and early writings of a theorist, researcher, or a living witness. These sources contain the entire research report, a theory, or statements of an observer while the secondary sources cover the existing theoretical and empirical literature including books and articles published earlier.

Table 8. Distribution of the reviewed research data sources

	Primary	Secondary	Mixed
Number	232	41	10
Frequency	0.82	0.14	0.04
Total	283		

Table (9) indicates that the main data collection instrument was questionnaire, such that 64% of the research data were derived from a questionnaire, 15% came from field notes and data recording forms, 6% from observation, 4% from interviews, and 11% were obtained from a combination of the mentioned instruments. Most of the combinations of the instruments used for data collection are listed in Table 9, respectively.

Table 9. Types of the instruments used in the reviewed research studies

	Psychosocial	Social Cultural	Educational	Sports	Health	Game and Entertainment	Other
Number	85	74	52	27	24	15	11
Frequency	0.30	0.26	0.18	0.09	0.08	0.05	0.04
Total	283						

Table (10) shows that the dominant subject areas of research in the area of digital leisure included Psychology (30%), Culture and Sociology (26%), Education (18%), Sport (9%), Health (8%), Games and Entertainment (5%) and 4% were related to other areas such as Politics, Economy, Law, Technology, Literature, and Tourism.

Table 10. Dominant Subject Areas in the reviewed researches

Type of instrument	Number	Frequency		
Questionnaire	181	0.64		
Field notes and data recording forms	42	0.15		
Observation	17	0.06		
Interview	12	0.04		
Mixed	31	Questionnaire + Observation	11	0.11
		Questionnaire+ Interview	8	
		Questionnaire+ Field Note	8	
		Interview+ Field Note	2	
		Interview+ Questionnaire+ Observation	2	
Total	283	100%		

Discussion and Conclusion

The study of the existing literature showed that no systematic and comprehensive research has been conducted in the field of digital leisure in Iran. As a result, the findings of this study provide a comprehensive picture of the studies in the field of digital leisure. Using quantitative summaries and detailed descriptions, the present study examined an incoherent body of research studies in the field of digital leisure. Due to the dispersion of these studies, it is easy to notice the multifaceted nature of digital leisure. Researchers in various fields such as physical education (Ghobadi Yegane, Yousefi, & Khazaei, 2014; Javid, Kazemi, & Fatemi, 2019; Rostamipour, Zareian, & Aslankhani, 2019), psychology (Bolboli & Gholamzadeh, 2019; Dehghanzadeh, Dehghanzadeh, & Minaei, 2019; Miri, Hajilo, Basharpour, & Narimani, 2020), sociology (Niazi, Shafaei Moghadam, & Hasanzadeh, 2019; Shirani Bidabadi, Behyan, & Hashemianfar, 2018), Art (Rahimpour, 2017; Rasouli Maharlouei, 2017; Salmani, 2018), engineering (Habibi & Behnamifard, 2016, 2017), medical sciences ((Jalilolghadr et al., 2017; Rahimi Shamaei Monfared, Hassani Mehraban, Taghizade, Akbarfahimi, & dadgoo, 2015; Rostami, Javadipoor, Ghanbari, Mandani, & Azizi Malamiri, 2011), etc., have addressed the topic of digital leisure, each of which somehow seeking to find answers to the ambiguities surrounding digital leisure in their relative fields. In 283 studies examined, the first research on digital leisure was conducted in 2001. The number of researches conducted between 2001 and 2011 is few. The low rate of such studies in this time period can stem from the novelty of digital

leisure and the lack of technological development at that time. However, in the 2010s, technological advances took place in many areas and influenced every aspect of Iranians' lives with mobile phones, laptops, etc., so that life willingly or unwillingly moved towards digitalization, to the extent that it is very difficult to survive without digital tools at the moment. The dominance of digital communication devices resulted in the inclusiveness of digital interactions and the increasing desire for digital leisure, and gradually there was a need for research in this area together with an increasing researchers' interest in the field of digital leisure. As a result, the number of researches conducted in the 2010s augmented. But since 2015, the volume of publication of these researches has gradually reduced, which may stem from the desire to publish these researches in foreign journals, or because of its shrinking importance among the writers and the publications, it has been removed from the priority of publication.

Among all the researches in the field of digital leisure, the number of master's theses and Ph.D. dissertations in this field is remarkable and it can be argued that the participation of students in digital leisure research is a function of their attitudes such that by further enhancing their perspectives about digital leisure, their degree of participation in research activities increases and this issue should be taken into account by the educational policy makers, professors, and leisure managers in the universities. University professors have a key motivational role in students' research activities. Also, by enhancing their academic ability, the students' research spirit is also reinforced. This of course depends heavily on the faculty members' desire to update their knowledge in line with students' growing needs and skills, develop interactive skills, and use teaching methods that leads to a positive attitude and motivation in the students to conduct research activities in the field of digital leisure. Theses written in the field of digital leisure in universities supervised by the Ministry of Science, Research, and Technology are twice more than those of the Islamic Azad University branches. Also, more dissertations have been written in universities with highest reputation in the field of humanities than in other universities. A possible explanation is that digital leisure studies as a special field are a multidisciplinary mixture of research perspectives and traditions, the most important of which are psychology, sociology, human geography, economics, commerce, management, and the environment. Also, publications working in the field of social and cultural sciences have published the largest number of articles related to digital leisure. This signifies the intermingling of leisure time with the humanities. The absence of publications in the field of physical education and especially sports management among the ten prolific publications is interesting, while it seems that the issues of leisure and gaming should be receive much attention in such fields.

The gender of the authors of all the reviewed studies in this study was biased toward men than women. This is congruent with the gender distribution of the students in public and private universities. According to the 2016 statistics of the National Statistical Center of Iran, women made up 46% of the students of all disciplines (medicine, humanities, basic sciences, engineering, arts, agriculture, and veterinary) while 54% were men. In addition, 46% of the students in humanities were women and 54% were men. Consequently, given the overlap between digital leisure and humanities along with the higher number of male faculty members in the universities and higher education centers than women, it seems logical to conclude that the greater share of research is conducted by men. The number of authors of the reviewed researches is in the range of 1 to 7 authors, which is indicative of the existence of teamwork among the researches and the so-called phenomenon of "co-authorship". Co-authorship of digital leisure research can be due to the following reasons: the complex and interdisciplinary nature of digital leisure calls for the cooperation of experts and researchers in different fields to create a high-quality work. Multi-authored studies, because of being the result of writing and joint thinking of a like-minded group, are more valuable and valid, having a pristine quality and important content provided that all the authors have a real contribution to the research and their names are not merely listed with other motives. Even the results of studies in this field show that the more the number of authors of an article, the higher the quality of the article, especially if the authors come from different geographical areas (Kraus, Bouncken, Görmar, González-Serrano, & Calabuig, 2022). However, this does not mean that the works of a single researcher is questioned. 8% of the research reviewed in this study were done by a single author. It is possible for an experienced and skilled researcher to decide to write a seminal and high-quality work

on his own based on years of studying and research, which hardly has a parallel. Another reason for multi-authored studies in the field of digital leisure might be the increasing possibility of the article to be accepted owing to the fact that the works of several researchers are usually easier to accept in domestic or foreign journals. Furthermore, the results of some studies indicate that journals that have used multi-authored patterns in the process of publishing articles have a higher impact factor than the ones submitted by a single author, so journals also have a higher tendency to publish multi-authored articles in order to get a higher impact factor. The larger proportion of researches by three authors in this review stems from the high number of theses reviewed, the majority of which have three authors including a student, a supervisor, and an advisor.

The geographical focus of the reviewed research studies covers a vast area of Iran. Most of the researches were carried out in Tehran province with 79 studies, which in terms of the population size, the number is acceptable compared to other provinces. After Tehran, Isfahan and Khorasan Razavi ranked the second and the third. The number of studies conducted in some of the most populous provinces of Iran such as Fars, Khuzestan, and West Azerbaijan was not acceptable. In six provinces of Ardabil, Zanzan, Kermanshah, Ilam, North and South Khorasans, there was no research on digital leisure and it seems that these provinces have been neglected by the researchers. Also, a significant percentage of all researches lacked specific geographical focus. The reason for this was that the researcher made no mention of the location of the study. In some cases, the research was conducted using documentary method and drawing on secondary data sources, which lacks a specific geographical focus. The findings indicate that the most common approach to digital leisure research was quantitative approach. Although this approach has yielded accurate and detailed quantitative descriptions and has valued quantification and empiricism, it fails to account for the human dimensions and the quality of vital human realities in the field of digital leisure. It is possible to use a quantitative approach in the field of natural sciences by relying on conventional empirical methods, but in the field of digital leisure, which is concerned with humans, culture, and society, this approach fails to function alone. Because, here, the researcher does not deal with inanimate phenomena such as rock or the instincts of living things but he or she must delve into the spirit of communal life. Therefore, to obtain an introspective approach and to understand multiple human realities in the field of digital leisure, we have to adopt a qualitative approach. The qualitative approach seeks to understand the processes that underpin human events and actions. This is what we require in digital leisure studies, which quantitative approach often fails to capture. In sum, studies on digital leisure need to emphasize the qualitative aspects and employ this kind of research approach. The combination of the instruments utilized for data collection is such that a total of 231 researches drew on first-hand primary data sources and this is one of the strong points of the reviewed researches. Finally, the investigation of the main concepts and theories used in the studies reviewed confirmed the interdisciplinary nature of digital leisure. The dominant themes underlying the reviewed research studies was psychology and education. As was pointed out above, the needs, interests, and practices of educating the digital generation have undergone transformations compared to those of the previous generations. The population of such a digital generation is growing fast. Today, at least one in five households own a high-tech device to play with. Given the evolving needs and preferences of the digital generation, in order for education not to be boring for today's students, we must change the pedagogic methods to cater for the lifestyle and interests of today's generation. In order to make the educational process appealing to modern students, it seems that digital games-based learning approach can be an effective approach to educate the current generation. Digital games use inbuilt mechanisms. This naturally adds to the attractiveness of the game and makes the students actively participate in the game. This issue was taken into account in many of the studies reviewed in this study (Alborzi, Khoshbakht, & Doroudi, 2019; Bagherikerachi, Sadeghi, & Razmjoo, 2019; Miri et al., 2020).

In digital leisure researches in which the dominant subject area was sports, the authors generally examined the correlation between digital leisure and sports and argued that the relationship between sports and digital leisure is not straightforward, but the role of sports in digital games is hard to ignore. Digital games have been a very profitable partner for the sports industry; for example, play station game producers have assumed the sponsorship of many sporting events. On the other hand, leagues

sell the privilege of using the league brand and those of the participating teams to the producers of these games. In addition to earning financial profit, such leagues also provide an opportunity for free advertisement of the league (Anorue, Ugboaja, & Okonkwo, 2020). Furthermore, nowadays, a phenomenon called E-sport has grown slowly, finding its place among the fans of digital games. The fans of E-sport take part in online digital sports leagues and compete remotely with each other, and even some of these competitions are held in large and prestigious stadiums that broadcast the competitions on large display screens. In general, in the reviewed researches, the role of sports in digital leisure falls into at least four categories: participation in sports, online purchase of sports goods and services, watching athletic activities on digital media, participating in Exergames, and E-sport.

Another theme examined in the research studies reviewed in this study was socio-cultural and economic domains. Statistics published by the Digital Games Research Center (Direc) in 2017 indicate that there are beyond 28 million computer game users across Iran, mainly among the youth and the adolescents. In addition, according to the statistics, they spend an average of at least 2 hours per day playing games. In other words, beyond 56 million person/hours games are played each day. According to Direc, out of 920 billion tomans total income made in Iran's digital games market in 2017, around 525 billion tomans is dedicated to the hardware and about 395 billion tomans goes to the game, but only 6 percent of this amount is allocated to the native games. This volume of consumption and the growing number of the users, requires this platform to be used in the best way to promote and teach cultural and social issues and to sustain economic profit. The widespread distribution of unethical games, or the games containing violence and horror, and the promotion of unconventional cultural phenomena on a large scale in the market, exposes all the audience, especially our children and adolescents, to unfavorable social and cultural content. Therefore, it is suggested that the existing domestic potential in the domain of the production of computer games should be tapped more than ever to favorably serve the goal of producing games with appropriate educational and cultural content in order to replace foreign games and find a source of sustainable economic income. In addition, in order to develop and promote digital leisure activities, to improve the quantity and quality of the supply and production of scientific works and to incorporate them into appropriate packages compatible with the Iranian society by the three groups of managers, manufacturers, and researchers, more attention should be paid to qualitative research approaches. Because with growing research in the field of digital leisure and education, as well as the application of digital games in education, we can transform the existing educational approaches in favor of more appealing approaches for the students. Besides, researchers who intend to study and conduct research in the field of digital leisure are recommended to review Iranian articles published in non-Iranian databases.

Before applying the findings of any research, its limitations should be considered. In this research, data were collected over a limited time period and from limited databases and the sample did not include all the researches in the field of digital leisure. Also, unpublished researches were not included in the systematic review when this study was conducted.

Finally, we are sincerely grateful to all the organizations, systems, and scientific information and knowledge management databases that made this research possible.

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