ORIGINAL ARTICLE

E-SPOR and Health

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ABSTRACT

The rapid development of technology news has affected all areas as well as sports news and has caused new arrival. Both playing and watching competitive video games and computer games have created the concept of electronic sports (sports). However, it is played in virtual or computer environment and does not require serious financial resources, which may be facilities for modern sports or the ability to do this sport anywhere in the world. One of the most important features is to play individually and as a team and to require natural sports. At least 400 million people in the world are e-sports viewers, more than 100 million people are e-sports players and at least 7 million people in our country are e-sports players and viewers. -Sports is a new water sport in Turkey. It reveals in the literature that e-sports is a sport and that it does not spoil it, and the similar and different aspects of modern non-electronic sports and their relations with the said physical activity.

Keywords: E-Sports, video games, health

INTRODUCTİON

Electronic-Sports (e-Sports) concept in the literature, electronic game, cyber game, computer game, online game, video game, virtual game, electronic sports, etc. in the way are qualified. In terms of virtual athlete or cyber athlete e-Sports players are defined (1, 2). E-Sports yet a generally accepted definition of there is no. Wagner (2006), e-Sports, people mental and sports activities that develop and train physical abilities defines it as (3). Hamari and Sjöblom (2017) E-Sports, on the other hand, is the electronic facilitated by both players and both the inputs of the teams and the outputs of the e-Sports system. a sport mediated by human-computer interfaces is the form (4). Within the framework of these definitions, e-Sports Technology is used in computer games based on amateur / professional level in leagues and events or as a team, specific to the game played rules, game developers, individuals, teams, stakeholders such as organizers, sponsors, viewers It can be said that it is a sport branch. About e-Sports One of the most important things to know is sedentary not to be confused with sports video games. In this context The difference between sedentary sports video games and e-Sports It is imperative to distinguish. Sedentary video games real mimic sports in life and do not involve physical activity (5). On the contrary, e-Sports depends on a specific game type. they are not.

E-Spor is actually in the period when the first computer games came out. has existed, but has gained popularity over the last 10 years. is the concept. With the atari in the first 1980s, digital games started to be played. 'Arcade' in the 1990'sAtari halls known as the game culture and there have been places where it developed. Since the 2000's With the spread of the internet, the way that access network games are played online (online) transformed. As a result, the games are single player (single player) ceased to be and multiplayer (multiplayer) acting) has become. Competition factors and reward platform players to gather in various game groups directed (6). In 1997, the UK e-Sports the first award-winning tournament under the name of "Red Annihilation" has been arranged. In 1997 in the USA named Angel Munoz an entrepreneur named "Cyberathlete Professional League" established the company. Game development company in 1999. Valve First-Pearson-Shooter style games By making some changes on Half-Life, "Counter He produced the game "Strike" (3).

In 2000, e-Sports Many important developments in terms of professionalization has been experienced. One of the most important organizations in the sector being one of the Electronic Sports League (ESL) in 2000 was established. Also, in 2000, South Korea Sports, Tourism and the Ministry of Culture, the Ministry of Information and Communication and International e-Sports organization with the support of Samsung World Cyber Games was established. The World Cyber Games logo, blue, red, yellow and uses four rings in green colors and a black background with the symbol of the Olympic Games. Also, associating the games with the Olympic movement, the player (instead of athlete), youth festival, cyber game event and other non-sporting events describing games such as e-Sports words are used (7).

Today, at national and international level, official and private Many e-Sports tournaments are organized. International Competitions in electronic sports tournaments are different are classified under categories (2). e-Sports Counter is among the most popular games. Strike: GO, Dota 2, Leage of Legends, Star Craft 2, Like Hearthstone, SuperSmash Bros, Street Fighter games are available. Total e-Sports in 2018 389 million viewers, 427 million in 2019 and 2020 It is estimated to be 589 million in the year (8). Robert Morris University in June 2014 The first to accept e-Sports as a university sports team is a university and offers scholarships for those who play e-Sports. (50% education, 50% room and food). In December 2014 is the University of Pikeville as the second university Established an e-Sports team and level athletes as introduced.

Gigantic, growing very quickly all over the world reaching budgets and number of followers, positive and negative e-Sports, which has its sides, also affects the youth of our country. and this effect is gradually increasing (9). Turkey's first known e-Sports team, in 2003 Dark, which started by creating a Counter Strike squad Passage team. In more than one e-Sports field in Turkey established in 2005, among other active teams Team Turquality, HWA

Gaming founded in 2008 can be given. Bahçeşehir University's League of Legends successful team, BAU SuperMassive between (10). Founded in 2011, Turkey Digital Federation by the state with the Games Federation Recognized at the level of e-Sports, in 2013, this federation's with its closure, it went down to the vice presidency level. 24/04/2018 with the Approval of the Ministry, dated and numbered 277144, Turkey The e-Sports Federation has been established. Riot Games Turkey and In cooperation with Bahçeşehir University in March 2017 E-Sports scholarship of 1 million TL has started to be given. In addition, the university, which was implemented for the first time in Turkey the elective "Game Industry and e-Sports" course in its curriculum. (11).

Neurobiological Effects of e-Sports: Functional Magnetic Resonance Imaging (FMRI)and Positron Emission Tomography (PET) studies the spiritual cheer of video games and provides neurobiological evidence for understanding. Made reminders about the game were presented in the studies orbitofrontal cortex and anterior in video game players cingulate (12, 13), medial frontal cortex, dorsolateral prefrontal cortex, right caudate nucleus (13), amygdala and insular cortex (14) to brain control groups It has been reported that a stronger activation occurs. In a study, high during video game playing activation of clinical brain regions matter when craving is seen in addicts and the same the aim of the areas representing the game drive / craving has been determined. As a result, speak according to the authors of the game addiction and cravings in addiction and gameplay the same neurobiological mechanism of urge / craving

It is thought to be able to share (13). An event, playing video games, PET images show that the brain is a The expression that the dopamine level increases in the Striatum, which is part of the is carried out. Such as attention, learning and motor skills Well video games are on the move and from this that dopamine secretion increases in the brain. they indicate. Also, video game addiction reward and rewarding of video games and mesocorticolimbic in its positive reinforcing effects cue to an important role of pathway and dopamine (15). Teenager of extreme screen and gaming exposure a question as your brain is addicted to cocaine It has been reported that it may cause harm (16). Based on these findings Kuss and Griffiths video game reminders presenting game addicts brain the neural processes involved and the increased activity similar to addiction and other behavioral addictions argue that (17).

Positive Effects of e-Sports: Reporting that video games have negative effects has positive results as well as studies There are also research results reporting that. Made The results of the studies generally show that video games developing cognitive strategies, making quick decisions, motor developing skills, encouraging collaboration, team positive, such as being able to work in hands, providing motivation It is that it has effects. Researchers video game the spatial orientation abilities of the players developing, rotating objects spatially in the mind increased skill, players' attention more than are successful in following the event, requiring dual attention show improved performance in missions, engine reported that they found that their skills improved (18).

In another study, those who play a gun shooting game. detection, attention-grabbing and distracting irrelevant information more successful and effective in filtering than normal people It has been reported that (19). Video games specified Another cognitive benefit is that it increases creativity. Any video, regardless of whether it is violent or not play increases children's creativity capacity reported (20). Instant feedback in the game encourage players to concentrate and achieve success It was reported that it enabled them to insist on continuation. As the game level gets harder, players are in the fight willingness to continue to make children be determined and encourage him to chase success (21).

Negative Effects of e-Sports

1. Negative Effects on Mental Health: In the number of video games and users in recent years The rapid rise seen has caused researchers to pay attention to this The effects of games on health have been drawn to research. Studies in the literature are related to the spiritual and mental nature of video games. It focuses on physical health effects. Made those who play violent video games in studies violence and aggression (22-27), depression and anxiety (27, 28), decreased social behavior (27, 29), mental distraction, such as feeling lonely (30) and distraction (31, 32) It has been stated that it is associated with problems. Especially violence the aggressive personality of the content video games, numbness, disruptions in learning processes, risky behaviors, attention problems, impulsivity, and helpfulness

It is stated that it causes a decrease (33). Violence physiological exposure to video games thoughts and feelings about arousal and aggression It is also thought to increase. Violent video playing their games but also positive behavior It has also been reported to decrease (34). Stated in the studies other possible negative effects social isolation, addiction or game addiction, physical inactivity, and weakness academic performance (7, 35). Game addiction It is known to have many psychological symptoms. Feeling good while at the computer, inability to hold back, too much at the computer spending time, neglecting friends and family, computer feeling empty and uncomfortable when not at the beginning indecisiveness, indecision to end the game, sleep pattern lying to family about activities and have problems with school or work some are. In some studies with mental problems the increase in the time spent for playing video games It has been reported to be associated with a decrease in success (36-38).

The consequences are that psychological dependence and insufficient self-control causes negative consequences for online games It has been stated (39).

2. Negative Effects on Physical Health: In addition to mental problems, video games in the literature In studies indicating that it is associated with physical problems available. In the studies done, on video gamesthe increase in the time spent, the deterioration of the quality of sleep (27, 40), musculoskeletal problems (41), physical inactivity and it has been shown to be associated with obesity (42-44).

Researchers say that those who play video games on the computer It is necessary to move away from the screen every 15-20 minutes preferred for e-Sports career despite

reporting Majority of games (League of Legends, Counter Strike: GO, etc.) to stay away from the computer for a long time. requires. However, these games for a long time and it requires intensive mouse use. cause carpal tunnel syndrome at an early age is known. Made on forty e Sports teams in one study, athletes had an average of 3-4 times a day. Hours of playing video games, participating in the tournament top athletes, on the other hand, had more than 10 hours of video It was determined that they played a game. 45% of the participants have an eye fatigue, 34% neck and back pain, 27% wrist and hand injuries were reported. To these In addition, 24% of the participants do not have any exercise 30% of those who do not, 30-60 a few days a week It has been reported that they try to exercise for minutes (41).

Dry eyes looking at the computer screen for a long time, causing pain, rashes and radiation exposure is happening. Sitting at the beginning of the game for a long time serious musculoskeletal problems in the lower back and spine. causes (27).

Enhancing e-Sports and Game Performance Consumption of drugs: E-Sports games are competitive video game competitions and focusing on competition is an essential key, and this drugs that affect the performance of players cause its use as. Players frequently Increasing concentration and reaction rate and fatigue inhibitors such as Ritalin, Adderall, Dexedrine and Vyvanse they use stimulants (41, 45). The soul of the players to improve and motivate Selegiline's their use is widely reported. Some anxiety to keep players calm under pressure Prescribed to treat the disorder propanolol, which counteracts the effects of adrenaline or Valium They are receiving (46). Also, everyone in tournaments.

It has also been claimed that he used Adderall. For the players Marketed over-the-counter drugs include caffeine, B-12, and composites of vegetable ingredients can be shown (16, 47). Uncontrolled use of such drugs; addiction, overdose, when it comes to serotonin syndrome and stimulants serious health problems, including weight loss. brings risks. Video games, according to a study playing and using drugs during adolescence, high alcohol consumption and poor friendship and family It has been reported to be a risk factor for their relationship (48).

Suggestions: Healthcare professionals on the computer in e-Athletes spending too much sedentary time and overuse to prevent health problems that may occur due to and important contributions to raise awareness of e-Sportsmen can offer. Also, more exercise for eSports enthusiasts and encouraging participation in physical activity programs It is thought to be mandatory (41, 49).

Most of their time at the computer to make some ergonomic adjustments to the people who pass through it. it will be useful to remind. e-Sportsmen video game when playing, should pay attention to the distance to the monitor, the average eye-to-screen distance is at least as long as the arm's distance. should be at a distance of 60-70 cm. Monitor peak it should be lower than your eye level. Every 20 minutes eyes should separate from the screen and focus on a distant point, Eyes should be closed and rested for 10-15 seconds. Often blinking should be done. Correct hand mouse placement keyboard and mouse must be at the same height. The wrist is straight one must be kept in line. When using a mouse, move the wrist to the right or left. should be careful not to bend correctly. Sitting position is also important; feet should touch the floor flat, knees Should be an angle of 90 degrees, the part that supports the waist in the chair should be, back straight, shoulders relaxed, elbows at 90 degrees angle and wrists should be kept in a neutral position. While sitting attention should be paid to body posture; head in neutral position should be kept. One should be able to reach all areas easily

Meanwhile, his body should not be bent. Sitting posture should be changed every 2 hours. Every 20-30 minutes a short 1-2 minute break or a 5-10 minute break every hour should be given.

Because of the long time spent at the computer to prevent musculoskeletal problems that may occur It is important to do some exercises whenever possible. Some of the exercises recommended by physiotherapists are as follows; 1) Turn your head slowly to the right and left alternately, 8 seconds, 2) Keep your ears on both shoulders Slowly approach the area and wait for 8 seconds, 3) at the back of the neck by bringing your chin forward. try to stretch the muscles. Wait about 8 seconds, 4) Raise your shoulders to your ears for about 3 seconds wait. Then in a circular motion back and forth Try to turn 5 times, 5) With your hand from behind your elbow try to grasp it and stretch it in the opposite direction. Next from the front until you feel a stretch towards the opposite shoulder. zoom in, wait for 8 seconds, 6) elbows with the palm facing forward stretch without breaking. Wait about 8 seconds, 7) Turn left and right, with your hands up, alternately lean for 8 seconds, 8) diagonally, bringing your shoulders backward Wait for 10 seconds by making your waist hollow, 9) While your foot is in contact with the ground, turn until you feel a stretch in opposite directions, 10) Slowly lift your leg up. Circular your ankle

turn with movements, then stretch back and forth Wait for 10 seconds by moving. With this together, energy consumption due to inactivity to combat the reduction and possible development of obesity e-Athletes can participate actively and exercise, recreational participation in physical activities such as activities and sports structured weekly programs to increase should be targeted to be created.

RESULT

Most of his days in front of the computer e-Athletes who spend playing video games the means they use to prevent health risks and materials should be evaluated ergonomically and play athletes to maintain the correct posture during should be made aware. In addition, maintaining performance and to prevent disorders due to overuse exercise prescriptions should be established and recommended weekly physical to reach the duration of participation in the activity should be encouraged.

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