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From e-Sports to Problematic Game Addiction: Risks, Myths, and Educational Policies

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Abstract: This study offers a multi-dimensional examination of the rapidly growing e-sports industry and the critical issue of digital game addiction within this dynamic field. Drawing on a comprehensive literature review, it first delineates the definition, historical development, and industrial structure of e-sports, along with a comparative analysis against traditional sports. The empirical segment of the study employs a focus group interview technique to gather in-depth perspectives from 20 education administrators, who possess significant expertise in education. This qualitative approach allowed for a nuanced understanding of the potential negative effects of e-sports on children and adolescents. The focus group findings reveal significant concerns across several domains, highlighting e-sports' negative impacts on physical, psychological, social, and academic performance. Participants also expressed worries about the potential conflict with national and moral values, unmet expectations regarding contributions to the software industry, the limited scope of existing research, and the inherent risks of promoting e-sports in schools. Complementing these insights, the study thoroughly evaluates the symptoms, causes, prevalence, risk factors, and treatment/prevention approaches for gaming addiction, drawing from both national and international literature. Furthermore, it integrates findings from economic and behavioral models on digital addiction, emphasizing the profound impact of habit formation and self-control problems on digital usage patterns. By bridging theoretical understanding with empirical observations from a critical stakeholder group, this study aims to provide a comprehensive perspective on e-sports addiction, offering important and actionable implications for policymakers, educators, and parents grappling with this evolving public health concern.

Keywords: Problematic digital gaming, e-Sports, Video game addiction, Digital addiction, Self-control problems.

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E-Spordan Sorunlu Oyun Bağımlılığına: Riskler, Mitler ve Eğitim Politikaları

Özet: Bu çalışma, hızla büyüyen e-spor endüstrisinin ve bu dinamik alan içindeki kritik dijital oyun bağımlılığı sorununun çok boyutlu bir incelemesini sunmaktadır. Kapsamlı bir literatür taramasından yola çıkılarak; ilk olarak e-sporun tanımı, tarihsel gelişimi ve endüstriyel yapısı, geleneksel sporlarla karşılaştırmalı bir analizle birlikte ortaya konulmaktadır. Çalışmanın ampirik bölümü, eğitim alanında önemli uzmanlığa sahip 20 eğitim yöneticisinden derinlemesine bakış açıları toplamak amacıyla odak grup görüşmesi tekniğini kullanmaktadır. Bu nitel yaklaşım, e-sporun çocuklar ve ergenler üzerindeki olası olumsuz etkilerinin ayrıntılı bir şekilde anlaşılmasına olanak tanımıştır. Odak grup bulguları, e-sporun fiziksel, psikolojik, sosyal ve akademik performans üzerindeki olumsuz etkilerini vurgulayarak çeşitli alanlarda önemli endişeleri ortaya çıkarmaktadır. Katılımcılar ayrıca; milli ve manevi değerlerle potansiyel çatışma, yazılım endüstrisine katkı konusundaki karşılanmamış beklentiler, mevcut araştırmaların sınırlı kapsamı ve okullarda e-sporun teşvik edilmesinin doğasında var olan riskler hakkındaki endişelerini dile getirmişlerdir. Bu görüşleri tamamlayıcı olarak çalışma; hem ulusal hem de uluslararası literatürden yararlanarak oyun bağımlılığının belirtilerini, nedenlerini, yaygınlığını, risk faktörlerini ve tedavi/önleme yaklaşımlarını kapsamlı bir şekilde değerlendirmektedir. Ayrıca çalışma, alışkanlık oluşumu ve öz denetim sorunlarının dijital kullanım kalıpları üzerindeki derin etkisini vurgulayarak, dijital bağımlılık üzerine ekonomik ve davranışsal modellerden elde edilen bulguları entegre etmektedir. Teorik anlayışı kritik bir paydaş grubundan elde edilen ampirik gözlemlerle birleştiren bu çalışma, e-spor bağımlılığına dair kapsamlı bir bakış açısı sağlamayı amaçlamakta ve bu gelişen halk sağlığı sorunuyla mücadele eden politika yapıcılar, eğitimciler ve ebeveynler için önemli ve uygulanabilir çıkarımlar sunmaktadır.

Anahtar Kelimeler: Sorunlu dijital oyun oynama, e-Spor, Video oyun bağımlılığı, Dijital bağımlılık, Öz denetim sorunları.

Introduction

The increasing prominence of digital technologies and the internet in our lives constantly creates new areas of entertainment and competition. Among these, electronic sports (e-sports) have emerged as a global phenomenon. Competitive video and computer games, both played and viewed, have transformed into a multi-billion-dollar industry, reaching millions of players and viewers. The e-sports ecosystem is also rapidly growing in Türkiye, with over 30 million people playing digital games and the local gaming industry holding significant economic value (Yükçü & Kaplanoğlu, 2018). According to Statista (2025) data (Figure 1), the global esports audience is projected to continue its substantial growth, offering the most concrete evidence that this field has evolved from a niche interest into a global entertainment phenomenon. However, the widespread adoption of digital platforms and e-sports also brings potential risks and negative impacts. In particular, prolonged and uncontrolled digital game usage poses a public health concern, defined as video game addiction (Fathi et al., 2024; Piccininno & Perrotta, 2024, Rodríguez-Fernández et al.,2024). The recognition of "gaming disorder" as an official medical condition by the World Health Organization (WHO, 2018) further emphasizes the seriousness of this issue at an international level. Video game addiction is characterized by a range of negative physical and psychological symptoms that can lead to significant functional impairments in individuals' personal, academic, social, and professional lives (Andreassen et al., 2016; Lissak, 2018; Limone et al., 2023; Cleveland Clinic, 2025; Medical Park, 2025).

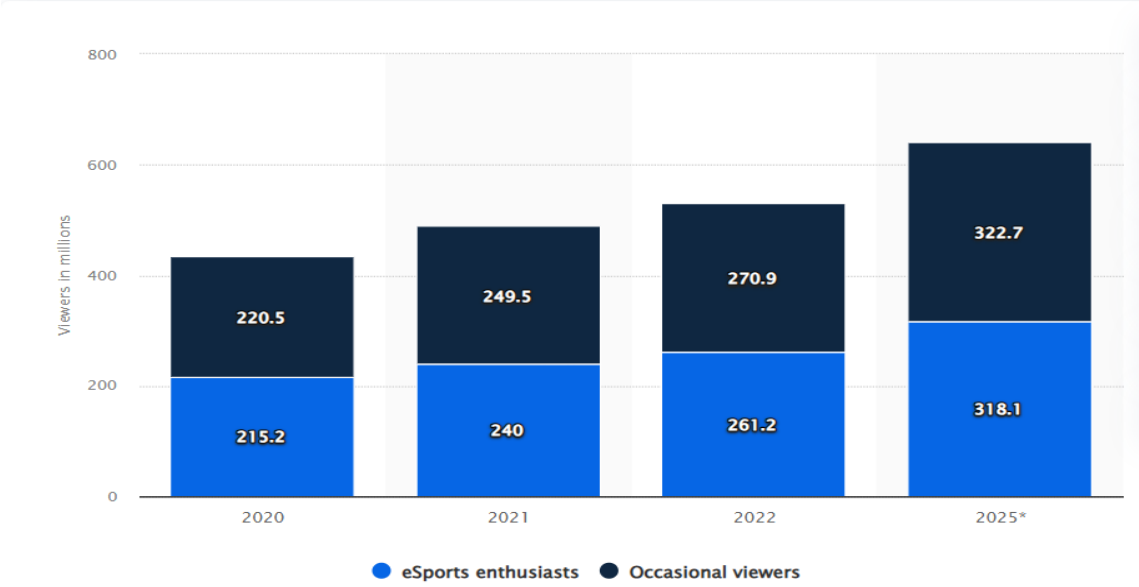

Figure 1. The upward trend in global esports audience numbers, Source: Statista (2025)

Statista (2025) data (Figure 1) reveals that the global esports audience is projected to exceed 640 million by 2025, with over 318 million defined as 'esports enthusiasts' and 322.7 million as 'occasional viewers'. This substantial growth underscores the transformation of esports from a niche interest into a global entertainment phenomenon, further exemplified by major events like the 2021 Free Fire World Series, which attracted millions of viewers, and The International 2021, which boasts a combined prize pool of over $40 million."

This article aims to understand the multi-dimensional nature of e-sports addiction, and deeply examine its current state. The article will first present an overview of the e-sports industry, its historical development, and its relationship with traditional sports in light of existing literature. Subsequently, national and international definitions, prevalence, symptoms, causes, and treatment/prevention approaches for video game addiction will be discussed in detail. The unique contribution of this study is to gather stakeholder perspectives on the potential negative impacts of e-sports through a focus group interview technique, bridging field experiences and concerns with academic literature. Finally, current findings from economic and behavioral models on digital addiction will be presented to contribute to a broader understanding of this phenomenon. This study aims to provide a comprehensive framework regarding e-sports and gaming addiction, offering valuable insights for researchers, policymakers, educators, and parents working in the relevant fields. This study, conducted in Türkiye in 2025, aimed to understand the effects of the rapidly growing e-sports

industry and digital game addiction on local dynamics. The findings reveal not only concerns consistent with the global literature but also risks and opportunities emerging within the unique social and cultural context of Türkiye.

Literature Review

The integration of digital technologies and the internet into the center of daily life has radically transformed the understanding of entertainment and competition; the most concrete output of this transformation is that electronic sports (e-sports) have become a global phenomenon. Competitive video and computer games, both played and viewed, have transformed into a multi-billion dollar industry, reaching millions of players and viewers (Wood & Attfield, 2005; Kirriemuir, 2002; Yükçü & Kaplanoğlu, 2018). The e-sports ecosystem is also rapidly growing in Türkiye, with over 30 million people playing digital games and the local gaming industry holding significant economic value (Yükçü & Kaplanoğlu, 2018). According to Statista data, the global e-sports audience is projected to exceed 640 million by 2025 (Statista, 2025). However, this rapid growth and the widespread adoption of digital platforms bring potential risks, particularly serious public health issues such as "gaming disorder" (Medical Park, 2025; WHO, 2018).

Conceptual Framework and Industrial Development of E-Sports

Although e-sports are referred to by different terms in the literature such as electronic game, computer game, video game, cyber game, or online game (Argan, Özer, & Akın, 2006); it is generally defined as a competitive video game sport where individuals use information and communication technologies to develop their mental and physical abilities (Wagner, 2006; Hamari & Sjöblom, 2017; MoFSP, 2017a; Yükçü & Kaplanoğlu, 2018). These definitions emphasize that e-sports highlight skills such as reflexes, hand-eye coordination, quick decision-making, and team and resource management (MoFSP, 2017a).

Historically, the development of e-sports is analyzed in two main periods: the Atari era (1980-1990) and the Internet era (Lee & Schoenstedt, 2011; Mustafaoğlu, 2018). The process, which began with the Space Invaders Tournament in 1980, gained momentum in the 90s with the rise of "First-Person Shooter" (FPS) games like Doom and Quake, and gained a corporate

structure with organizations such as Red Annihilation (1997) and the Cyberathlete Professional League (CPL) (Edwards, 2013; Yükçü & Kaplanoğlu, 2018). In the 2000s, the organization of international tournaments like the World Cyber Games and the Electronic Sports World Cup, and the popularization of strategy games like StarCraft in countries such as South Korea, ensured the establishment of e-sports culture on a global scale (Wagner, 2006; Mustafaoğlu, 2018; Yükçü & Kaplanoğlu, 2018).

Today, the e-sports industry has a massive market structure consisting of game developers, team owners, sponsors, organizers, and viewers (Yükçü & Kaplanoğlu, 2018). It has become a global industry through structures like the International e-Sports Federation (IeSF) and Major League Gaming (MLG) (Jenny et al., 2016; Schaeperkoetter et al., 2017). The main components of revenue streams include brand advertising, sponsorship investments, media rights, and ticket sales (esportsearnings.com, 2018; Newzoo, 2017b; Yükçü & Kaplanoğlu, 2018). In Türkiye, investments by major sports clubs such as Beşiktaş, Fenerbahçe, and Galatasaray (Üçüncüoğlu & Çakır, 2017), the establishment of the Turkish E-Sports Federation in 2018, and the initiation of licensing processes have ensured the field gained official status (Mustafaoğlu, 2018). The adoption of the "Games as a Service" model by game developers aims to keep players in the system for longer periods and ensure the continuity of the economic cycle (Newzoo, 2017a; Yükçü & Kaplanoğlu, 2018).

The Debate: E-Sports vs. Traditional Sports

The question of whether e-sports is a "real" sport causes heated discussions in the literature. Traditional sports proponents argue that e-sports cannot be classified as a sport because they lack intense physical activity and take place in a virtual environment (Parry, 2018; DiFrancisco-Donoghue & Balentine, 2018; Mustafaoğlu, 2018). Additionally, there are ethical concerns regarding the inclusion of violent games in sports organizations (Orlando & Perry, 2018; Aydın, 2019). Conversely, supporters argue that e-sports, like traditional sports, involve voluntariness, competition, adherence to rules, and mastery of strategy/reflexes (Guttmann, 1978; Wagner, 2006; Hemphill, 2005; Rambusch, Jakobsson & Pargman, 2007; Seo, 2013; Suits, 2018; Mustafaoğlu, 2018). The existence of international federations and the level of institutionalization are significant arguments supporting this view (Schaeperkoetter et al., 2017). Despite these debates, e-sports are recognized as an official sport in countries such as

South Korea, China, and Russia, and have seen increasing acceptance by the Asian Olympic Council and Olympic committees (Jonasson & Thiborg, 2010; DiFrancisco-Donoghue & Balentine, 2018; Mustafaoğlu, 2018).

Arguments supporting e-Sports as a Sport The table 1 summarizes the main arguments supporting why e-sports should be considered a sport:

Table 1. Main Arguments Supporting E-Sports as a Sport

Supporting Argument	**Explanation**	**Sources**
Voluntariness and Motivation	Like all sports, e-sports are based on voluntary and intrinsic motivation.	Guttmann, 1978.
Rules and Regulation	E-sports have specific durations, player numbers, in-game rules, and structural regulations. International federations set the rules.	Suits, 2018.
Competition	Like every sport, esports involves intense competition. Winners and losers are determined.	Guttmann, 1978; Seo, 2013.
Skill/Talent	E-sports encompass elements requiring mastery such as strategy, tactics, quick reflexes, and hand-eye coordination.	Wagner, 2006; Hemphill, 2005; Rambusch, Jakobsson ve Pargan, 2007.
Large Audience	E-sports competitions are global events reaching millions of viewers.	Newzoo, 2017b.
Institutionalization	E-sports has adopted an institutional structure through international federations, professional leagues, and teams.	Schaeperkoetter et al., 2017;Suits, 2018.

Arguments against e-Sports as a sport The table below summarizes the main arguments advocating why e-sports should not be considered a sport.

Table 2. Main Arguments Against E-Sports as a Sport

Argument Against	**Explanation**	**Sources**
Lack of Physicality	E-sports lack intense physical exertion, which is a fundamental characteristic of sports. E-sports players remain sedentary.	Parry, 2018; DiFrancisco-Donoghue & Balentine, 2018
Virtual Environment	E-sports activities take place in a virtual or digital environment, unlike traditional sports.	Hamari & Sjöblom, 2017;
Moral and Ethical Debates	There are ethical concerns regarding the inclusion of especially violent games in traditional sports organizations.	Orlando & Perry, 2018;

Digital Gaming Addiction: Diagnosis, Symptoms, and Risk Factors

With the spread of e-sports, "gaming disorder" or video game addiction has come to the agenda as a serious public health issue (Yeşilay, 2025). The World Health Organization (WHO) officially recognized this condition as a medical condition in the 11th revision of the International Classification of Diseases (ICD-11) in 2018 (WHO, 2018; Pontes et al., 2019). This diagnosis includes criteria such as impaired control over gaming, increasing priority given to gaming over other interests, and continuation of gaming despite the occurrence of negative consequences (Krishna, 2017). The American Psychiatric Association (APA) also considered this status as a "condition for further study" in DSM-5 (APA, 2013).

Symptoms of gaming addiction include a decline in school and work performance, restlessness and irritability when not playing (withdrawal), the need to play more to achieve the same pleasure (tolerance), lying, decreased personal hygiene, and the severing of social relationships (Petry et al., 2014; Cleveland Clinic, 2025; Medical Park, 2025). Griffiths (2010) suggests that all addictions (chemical or behavioral) are related to continuous rewards and reinforcement. Neurobiological research has revealed that the process of playing and winning

games triggers dopamine release in the brain, a mechanism similar to substance use disorders (Weinstein & Lejoyeux, 2015; Cleveland Clinic, 2025; Medical Park, 2025).

Genetic predisposition (Yeşilay, 2025); psychological factors such as impulsivity, low self-control, anxiety, depression, and ADHD (González-Bueso et al., 2018; Sussman et al., 2018; Gervasi et al., 2017); and family communication problems (Schneider et al., 2017; Medical Park, 2025) play a role in the etiology of addiction. In particular, the limitless worlds and social interaction opportunities offered by MMORPGs are structural features that increase the risk of addiction (Griffiths, 2010). Prevalence studies show that gaming addiction rates vary between 0.7% and 26.8% worldwide (Mihara & Higuchi, 2017; Sussman et al., 2018); it can reach up to 17% in China (Long et al., 2018), while limited studies in Türkiye report this rate to be around 9.4% (Medical Park, 2025).

Among treatment approaches, Cognitive Behavioral Therapy (CBT) stands out as the most effective method (Stevens et al., 2019; King et al., 2017); additionally, family counseling and, when necessary, pharmacological treatments are applied (King et al., 2017). Prevention strategies include parental control, digital detox, "digital citizenship" education (Yeşilay, 2025), and directing individuals to active video games (exergames) (Mustafaoğlu, 2018). The effectiveness of legal restrictions (e.g., curfews, shutdown laws) in countries like China and South Korea remains debated (Király et al., 2018; Sussman et al., 2018). Some researchers also draw attention to the responsibility of the industry itself (Van Rooij et al., 2010).

Economic and Behavioral Models on Digital Addiction

Digital addiction is also examined through behavioral economics models. The model developed by Allcott et al. (2022) explains digital addiction through two fundamental dynamics: "habit formation" and "self-control problems". According to this model, current consumption increases future demand (habit) (Becker & Murphy, 1988). In the study, the fact that participants who reduced usage through incentives kept their usage low even after the incentives ended proves the habit-forming effect of platforms (Allcott et al., 2022).

Self-control problems are defined as individuals consuming more due to momentary impulses, contrary to their predetermined preferences (Laibson, 1997; Gruber & Koszegi, 2001). The fact that the "limit setting" feature significantly reduced usage and that most participants were willing to pay for this feature demonstrates individuals' awareness of their

own self-control issues (or naiveté) and their need for an external control mechanism (Loewenstein et al., 2003; Allcott et al., 2022). Similarly, Wang et al. (2024), in their study examining MOBA game addiction among university students, emphasized that lack of motivation and introjected regulation affect addiction, highlighting the need to strengthen self-control abilities.

The Present Study and Research Questions

Although the existing literature comprehensively addresses the prevalence, symptoms, and neurobiological bases of digital game addiction, the number of studies focusing on the school administration dimension is quite limited. While researchers like Karakuş, Balcı, and Tiryaki (2023) and Sokić and Crvenko (2020) have drawn attention to gaps in the literature and diagnostic challenges, previous studies have largely focused on players (students/youth). Today, as the integration of e-sports into schools is being discussed, it is of great importance to understand the perspective of educational administrators, who are among the most critical stakeholders in this process.

This study aims to bridge the gap between theoretical models and educational policies in practice by examining the multi-dimensional nature of e-sports addiction through the lens of educational administrators. In this context, the study seeks to answer the following research questions:

1. How do educational administrators perceive the concept of e-sports and its classification as a "sport"?
2. How are the physical, psychological, and social risks of e-sports for secondary education students evaluated by administrators?

To what extent does the proliferation of e-sports in schools align with or conflict with existing national education policies and violence prevention efforts?

Methodology

This study was conducted using the focus group interview technique, a qualitative research method, to deeply understand stakeholder views on the potential negative impacts of e-sports addiction (Morgan, 1997). Within the scope of the study, a comprehensive national and international literature review was first conducted to reveal the current state of e-sports and gaming addiction. This review included academic articles, theses, conference papers, industry reports, and reliable news sources. The literature review covered topics such as the definition of e-sports, its historical development, industrial dimension, relationship with traditional sports, and the definitions, symptoms, causes, prevalence, risk factors, diagnosis, treatment, and prevention approaches of digital gaming addiction. Additionally, economic and behavioral models developed on digital addiction were examined in this section to strengthen the theoretical framework of the study.

In the empirical part of the study, focus group interviews were conducted with a study group determined using criterion sampling, one of the purposive sampling methods. This method was chosen to ensure the study focused on decision-makers with direct influence on policy implementation and deep knowledge of the field. The inclusion criteria for determining the sample were defined as follows: (1) holding a high-level managerial position, specifically "Branch Manager" or "Deputy Provincial Director," within the Provincial Directorate of National Education; (2) specifically managing units responsible for secondary education, as this is considered the most critical stage regarding the prevalence of e-sports activities and potential risks for adolescent development; and (3) possessing sufficient professional experience to evaluate both the educational and administrative implications of e-sports integration. Consequently, administrators not working in secondary education units or lacking managerial authority were excluded from the study to maintain the focus on relevant policy perspectives. Based on these criteria, a total of 20 education administrators participated in the study. Of the participants, 15 were male (75%) and 5 were female (25%), with ages ranging from 39 to 60 and professional experience varying between 8 and 37 years.

Table 3. Demographic Information of Focus Group Participants

Participant	Gender	Age	Position/Title	Professional Experience (Years)
1	Male	48	Branch Manager	20
2	Male	56	Branch Manager	32
3	Male	49	Branch Manager Provincial Directorate of National Education	8
4	Male	55	Deputy Manager	33
5	Male	52	Branch Manager Provincial Directorate of National Education	23
6	Male	56	Deputy Manager	28
7	Male	44	Branch Manager	21
8	Male	48	Branch Manager	15
9	Female	52	Branch Manager	26
10	Female	50	Branch Manager	26
11	Female	42	Branch Manager	12
12	Male	54	Branch Manager	21
13	Male	45	Branch Manager Provincial Directorate of National Education	19
14	Male	59	Deputy Manager	37
15	Male	57	Branch Manager Provincial Directorate of National Education	26
16	Male	55	Deputy Manager	24
17	Female	57	Branch Manager	28
18	Male	49	Branch Manager	18
19	Female	46	Branch Manager Provincial Directorate of National Education	14
20	Male	60	Deputy Manager	20

This demographic structure indicates that the participants possessed a broad range of experience and perspectives on the effects of e-sports on education. Data were collected using a semi-structured focus group interview guide. The interview guide consisted of open-ended questions covering topics such as the general perception of e-sports, its benefits and potential risks for education, addiction symptoms, its effects on academic and social life, the place of e-sports in schools, prevention strategies, and proposed solutions. During the interviews, participants were encouraged to freely express their thoughts and experiences.

The data obtained from the focus group interviews were audio-recorded and transcribed. These transcribed data were analyzed using thematic analysis, one of the qualitative data analysis approaches. Thematic analysis aims to make sense of the data by identifying recurring themes, patterns, and main ideas within the dataset (Braun & Clarke, 2006). In this process, the data were read multiple times, important statements were coded, themes were formed under similar codes, and relationships were established between these themes. During the analysis process, software was used. In qualitative research, unlike in quantitative research, the concepts of validity and reliability are ensured by criteria such as credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Within the scope of this study, various methods were used to increase the reliability and validity of the findings. Credibility was ensured by conducting focus group interviews through long-term engagement and by comparing the literature review with the focus group data (triangulation). Additionally, obtaining feedback from some participants by presenting interview transcripts and initial analysis results (member checking) ensured that the researcher's interpretations aligned with the participants' real experiences. Transferability was supported by providing detailed information about the data collection process, participant characteristics, and analysis methods in the methodology section, leaving the applicability of the findings to the reader's discretion. Dependability was supported by detailed documentation of the research process. Finally, confirmability was ensured by the researcher's efforts to minimize the influence of their own biases and assumptions on the findings during the analysis process and by supporting each theme with direct quotations from the dataset.

This study was conducted in strict adherence to academic ethical principles throughout the entire research process. Participants' rights and well-being were observed, their identities were kept completely confidential, and the protection and privacy of personal data were

ensured. Before the interviews, participants were provided with detailed information about the study's purpose, process, potential risks and benefits, and data usage, and they voluntarily signed fully informed consent forms. The data obtained were used solely for the academic purposes of this study.

Findings

This section details the qualitative data obtained from the focus group interviews. The thematic analysis revealed that education administrators harbor significant reservations regarding the integration of e-sports into educational settings. These concerns were grouped under three main dimensions:

(1) Biopsychosocial Health Risks,

(2) Educational and Institutional Paradoxes, and

(3) Socio-Economic and Scientific Gaps.

Theme 1. Biopsychosocial Health Risks

The most prevalent concern among participants was the detrimental impact of e-sports on the holistic health of students. This theme encompasses physical deterioration, the blurring of reality, and the risk of deepening addiction.

1.1. Physical Degeneration and Sedentary Lifestyle

Participants emphasized that the sedentary nature of e-sports—often requiring 24-25 hours a week or up to 12 hours daily during tournaments—directly contradicts the physical developmental needs of adolescents. Administrators observed a correlation between heavy gaming and physical ailments, noting that breaks are insufficient to mitigate the harm.

- *"Children stay motionless in front of computers for hours. Their eyes get worse, and backaches start. Also, their sleep patterns are disrupted. They come to school sleepy in the mornings."* (Participant 7).
- *"Eating habits are also severely affected. Fast food, junk food... Due to irregular eating, they experience both weight problems and lack of concentration."* (Participant 12).

- *"Especially during tournament periods, they spend 10-12 hours a day in front of the screen. This causes students to become physically and psychologically exhausted, leading to burnout."* (Participant 4).

1.2. Distortion of Reality and Behavioral Risks

Beyond physical health, a critical finding was the fear that school-aged children, who may not have fully internalized abstract concepts, struggle to distinguish between virtual directives and real-world consequences. Participants argued that implicit messages within games could foster dangerous behaviors.

- *"We heard about a student trying to imitate a scene from a game in real life. This is very frightening. They sometimes cannot distinguish the boundary between the virtual world and the real world."* (Participant 11).
- *"Younger individuals, especially, might think they can possess superpowers or perform dangerous moves from games in real life. This could lead to serious accidents." (Participant 19).*

1.3. Reinforcing Addiction under the Guise of Professionalism

Participants highlighted the danger of institutionalizing e-sports, arguing that it might legitimize "gaming disorder". The concern is that promoting e-sports in schools could validate excessive screen time for students already prone to addiction.

- *"E-sports can draw children who are already at risk of addiction even deeper into addiction. We might be legitimizing addictions under the guise of professionalism."* (Participant 2).
- *"If a student already plays games for 5-6 hours a day, allocating more time to gaming under the name of e-sports will only deepen their addiction."* (Participant 15).

Theme 2. Educational and Institutional Paradoxes

This theme captures the conflict between the fundamental philosophy of national education and the inherent nature of competitive gaming. Participants identified deep contradictions in definitions, violence prevention policies, and responsibility sharing.

2.1. The Conceptual Conflict of "Sport"

A significant conflict exists regarding the classification of sedentary gaming as a "sport." Participants argued that while schools promote physical activity, e-sports encourage immobility, creating a semantic and pedagogical contradiction.

- *"When we say 'sport,' we think of running, jumping, sweating. E-sports, on the other hand, are entirely based on immobility. That is why its juxtaposition with the word 'sport' seems strange to me."* (Participant 3).
- *"While we advise children to be active in physical education classes, accepting e-sports as a sport creates a contradiction since e-sports are a primarily sedentary activity."* (Participant 8).

2.2. The Violence Paradox and Educational Values

Administrators pointed out a paradox where the Ministry of National Education implements anti-bullying programs, yet simultaneously considers introducing games containing violent content. This was seen as incompatible with the goal of raising ethical individuals.

- *"A child constantly exposed to violent scenes in games can experience anger management issues in real life. Then we implement violence prevention projects in schools, yet this is seen as a paradox."* (Participant 7).
- *"We observe students exhibiting aggression due to gaming, directing their anger towards friends or teachers. Bringing these games into schools as a sport is equivalent to encouraging violence."* (Participant 4).
- *"As the Ministry of National Education, we are fighting against school violence and trying to prevent peer bullying. Introducing violent games into schools contradicts our efforts."* (Participant 14).
- *"Our educational philosophy is to raise good people. I believe that violent games are incompatible with this philosophy."* (Participant 9).

2.3. Displacement of Parental Responsibility

Participants critiqued the argument that schools must manage e-sports because "children play anyway." They argued this approach effectively absolves parents of their duty to monitor digital habits and transfers the burden of risk management to the school.

- *"Bringing esports into schools means accepting all its inherent risks. Saying 'they play anyway' feels like, to me, avoiding responsibility."* (Participant 5).
- *"Our duty is to protect students. It is not the right approach to introduce a risky area into schools under the pretext of controlling unmanaged exposure."* (Participant 13).
- *"A child's screen time and gaming habits at home should be the family's responsibility. The school's involvement in this area feels like it alleviates the family's responsibility."* (Participant 10).
- *"The school already has enough duties. Parents need to monitor their children's digital habits because it's not right to leave this burden to the school."* (Participant 17).

Theme 3. Socio-Economic and Scientific Gaps

The final theme addresses the misalignment between the promised economic benefits of e-sports and the reality observed by educators, as well as the lack of local scientific grounding.

3.1. The "Consumer vs. Producer" Disconnect

While e-sports are often promoted as a gateway to the software industry, participants observed that students remain passive consumers rather than active producers. The expectation that gaming leads to engineering skills was described as unmet.

- *"We saw e-sports as an opportunity, expecting young people to turn to software and contribute to the national economy by developing their own games." But we see that they are just consumers, not producers."* (Participant 6).
- *"Children just play; they don't wonder about the engineering or algorithms behind the software. This doesn't provide the expected contribution to our development in the IT field."* (Participant 18)

3.2. Lack of Scientific Foundation

Finally, administrators noted a lack of comprehensive, local scientific research regarding the long-term effects of e-sports on Turkish youth. Relying solely on foreign sources was deemed risky.

- *"Our scientific data on e-sports is very limited. We generally read from foreign sources. We do not fully know its effects on young people in our own country."* (Participant 1).

"Before supporting e-sports in schools, much more research needs to be done on their benefits and harms. Taking steps without a scientific basis is risky." (Participant 16)

Discussion

This study addresses the increasing impacts of e-sports and digital game addiction, drawing on both the general framework from the literature and specific concerns derived from focus group interviews. The findings clearly indicate that despite the economic and social potential of e-sports, the serious risks it entails shouldn't be overlooked. The insights gained from this research align with extensive existing literature, as comprehensively reviewed by Karakuş, Balcı, and Tiryaki (2023), which highlights the pervasive psychological and physiological issues associated with online game addiction and the challenges in its definitive diagnosis. Observations from the focus group interviews align with the literature's warnings regarding the physical and mental health problems caused by e-sports (sleep disorders, eating irregularities, irritability, carpal tunnel syndrome, etc.) (Cleveland Clinic, 2025: Medical Park, 2025). Specifically, a study by Kurt and Üstünel (2024) on internet addiction among school-aged children further corroborates these concerns, detailing specific physical ailments such as eye-related complaints (31%), musculoskeletal problems (22%), and the postponement of self-care habits (e.g., toilet use by 26%, hygiene by 11%) due to prolonged digital engagement. The concern that prolonged computer usage by school-aged children will negatively affect academic performance and social relationships parallels the risks of a sedentary lifestyle and lack of physical activity emphasized by Mustafaoğlu (2018). This is further underscored by Mahmud et al.'s (2023) cross-sectional study on Bangladeshi university students, which found that playing online games for at least 30 hours per week is associated with a lower cumulative

grade point average (CGPA), less physical activity, and reduced study time. Their findings also highlighted that frequent class skipping negatively affects academic performance, reinforcing the direct academic consequences of extensive online gaming. The fact that even physical activities during game breaks are insufficient to compensate for these harms strengthens the arguments about the lack of physicality in defining e-sports as 'sport' (Parry, 2018).

Adding to this perspective, a study by Omar et al. (2023) on Egyptian sports club attendees explored the relationship between sports addiction, internet use, and video gaming. Interestingly, they found no significant correlation between exercise dependence and internet addiction. Their findings suggest that engagement in sports may absorb a person's time and energy in psychologically, physically, and mentally healthier ways, potentially compensating for or even replacing pathological video gaming and internet use. This offers an intriguing insight into the potential role of traditional sports as a healthy alternative or mitigating factor against digital addictions, a point of relevance in the ongoing debate about the 'sport' status of e-sports and its implications for public health.

Additionally, recent research by Karafil and Uysal (2022) investigating factors contributing to esports game addiction among university students revealed several key motivations. Their findings indicate that the desire to socialize and make new friends, the aspiration to become a professional-level esports player, and the goal of earning money by sharing game videos on social media are significant contributors to addiction. These psychological, economic, social, and professional aspirations highlight the multifaceted appeal of esports, which can inadvertently increase the risk of problematic engagement.

In line with these observations, Esen, Baser, and Uslu (2023) investigated the relationship between digital game addiction, physical activity levels, and MET values among university students. Their study found a significant relationship between digital game addiction and lower physical activity levels, although no direct relationship was observed with MET values. Importantly, they reported a significantly higher level of digital game addiction among male participants compared to female participants, aligning with broader literature on gender disparities in gaming addiction. Furthermore, their finding that 90% of university students play digital games, while only about 10% of families are concerned and

actively control their children's gaming, underscores the need for increased parental awareness and intervention.

Furthermore, the nuanced perspectives from teacher candidates in a Turkish study by Akkaya, Gezer Şen, and Kapıdere (2021) reflect this dichotomy, stating that 'While some of the teacher candidates' expressed the view that e-sports socialized, others argued that digital games cause screen addiction and disconnect the individual from sociality.' This reinforces the complexity of e-sports' impact on individuals' social lives and well-being.

Participants' concerns about behavioral guidance and the potential conflict with national-spiritual values highlight an important dimension, regarding the content of digital games and the effect of implicit messages on individuals. This situation indicates that games are more than just entertainment tools; they have become powerful platforms that can influence cultural and social values. Furthermore, the focus group's emphasis on reality perception problems and the risks of children transferring virtual experiences to real life is supported by findings in the literature related to psychological interaction and behavioral addiction. Tragic events from the past, such as suicides or murders (e.g. Zhang Xiaoyi, Shawn Woolley, Daniel Petric)), also demonstrate the concrete basis for these concerns.

The unmet expectations regarding contributions to the software industry and the fact that e-sports players use games solely for consumption indicate that the creative and productive potential of e-sports is not being fully realized. This is a problem related to the growth of the e-sports industry being driven by consumption and competition rather than technical and software development, as also noted by Yükçü and Kaplanoğlu (2018).

The emphasis on a lack of research among the focus group findings highlights the need for comprehensive studies with broad perspectives in the field of e-sports and addiction, especially in Türkiye (Yükçü & Kaplanoğlu, 2018). This situation increases the importance of the current study.

Concerns about the legitimization of e-sports in educational institutions and the shifting of family responsibility to schools reveal the necessity of striking a appropriate balance between the educational benefits and harms of e-sports. Particularly, the views that promoting violent digital games in schools would contradict the Ministry of National Education's violence prevention policies, and that the concept of "sport" does not align with

the connotation of physical activity, (Aydın, 2019) suggest that careful steps must be taken in this area.

Moreover, recent research indicates a high level of digital game addiction awareness among health sciences faculty students, with female students generally demonstrating higher awareness than males (Mancı et al., 2024). This underscores the potential for targeted educational efforts to effectively raise awareness among key professional groups and the broader public.

The most critical theme in the findings is the risk of e-sports reinforcing gaming addiction and the associated tendency towards aggression. Prof. Dr. Osman Tolga Arıcak, a member of the Turkish Green Crescent (Yeşilay) Science Board, made the claim that "e-sports actually lead some young people to internet gaming addiction in a veiled and masked way" and "e-sports will increase the risk of addiction," which strongly supports the focus group findings (Medical Park, 2025). Arıcak also states that continuous playing of violent games can lead to the "normalization" of violent behavior in the mind and the perception of violence as a primary solution in crisis situations. Similarities between gaming addiction and gambling addiction and mechanisms such as dopamine release are also found in the literature.

Economic and behavioral research on digital addiction (Allcott et al., 2022) empirically demonstrates the importance of habit formation and self-control problems in digital technology use. The focus group participants' awareness of the harms of e-sports and their concerns about this situation, as shown by Allcott et al. (2022), indicates the need for perceived control problems (naiveté) regarding individuals' own digital usage habits and intervention mechanisms (limits, digital detox). The model's estimation that self-control problems account for a significant portion (31%) of social media use suggests that these problems can have serious impacts not only at the individual level but also at the societal level. Building on this, recent quantitative research by Wang, Chiu, and Ho (2024) specifically explored Esports game addiction among college students in Multiplayer Online Battle Arena (MOBA) games, finding that only introjected regulation and amotivation positively impacted addiction. Their work emphasizes the need for parents, schools, and society to actively strengthen students' self-control abilities to prevent Esports game addiction, and advises game developers to adjust game structures to prevent their use as mere social tools or means to escape reality.

Adding a crucial perspective, Sokić and Crvenko (2020), in their review exploring the boundaries between internet gaming addiction and traditional sport, highlight the persistent ambiguity in defining e-sports and the methodological limitations that complicate distinguishing between 'intense dedication' and 'addiction.' They point out that despite similar behavioral challenges like 'exercise addiction' in traditional sports, e-sports addiction often carries a significantly higher stigma. Furthermore, their work underscores the scarcity of psychological research specifically on professional e-sports players and identifies gaps in current diagnostic criteria (DSM-5, ICD-11) for effectively differentiating dedication from problematic engagement. This perspective emphasizes the importance of evaluating e-sports not only for its potential risks but also for its positive cognitive benefits, such as visual-spatial cognition, problem-solving, and emotional regulation.

In conclusion, the focus group findings and existing literature reveal that e-sports is a complex phenomenon with both economic and social benefits, as well as serious risks. It is understood that children and adolescents are particularly vulnerable to these risks, and that parents, educators, and policymakers must adopt more conscious and proactive approaches.

This study has several limitations that should be considered when interpreting the findings. First, as a qualitative study employing a focus group method, the results represent the perceptions and experiences of a specific group of participants and cannot be generalized to the entire population of education administrators in Türkiye. Second, the sample consisted solely of education administrators (branch managers and deputy directors); the perspectives of other key stakeholders, such as teachers, parents, and the students themselves, were not included. Future research could incorporate these groups to provide a more holistic understanding. Third, the study relies on self-reported views regarding e-sports and addiction, which may be influenced by personal biases or lack of technical knowledge about the gaming industry. Finally, the study was conducted within a specific cultural and educational context in Türkiye; therefore, the findings may differ in other countries with different educational policies or cultural attitudes toward e-sports.

Conclusion and Recommendations

This study presented a multi-faceted analysis of the rapidly growing e-sports industry and the associated phenomenon of digital game addiction. The literature review showed that e-sports have become a global industry, reaching large economic volumes and requiring unique skills. However, debates continue regarding whether e-sports should be considered a sport, particularly due to concerns about physical activity and moral/ethical issues. Video game addiction, with its official recognition as a disorder by the World Health Organization, is recognized as a prevalent public health problem causing serious negative consequences in physical, psychological, social, and academic life. Research further confirms that online game addiction negatively impacts academic achievement motivation through reduced learning engagement (Sun et al., 2023).

The findings from the focus group interviews revealed significant concerns regarding the negative impacts of e-sports and excessive digital game use on health (sleep disorders, eating problems, aggression, carpal tunnel syndrome), distortions in reality perception, potential conflicts with national and spiritual values, unmet expectations regarding contributions to the software industry, lack of research, concerns about legitimization in schools, and the shifting of family responsibility. Particularly noteworthy aspects of the findings include the risk of gaming addiction reinforcing aggressive tendencies and the potential for it to lead to gambling addiction. Economic models on digital addiction empirically demonstrated that habit formation and self-control problems play a significant role in digital technology use.

This study illuminates several critical avenues for future research in the field of e-sports addiction. To foster a deeper understanding of this evolving area and to facilitate the development of effective interventions, comprehensive large-scale quantitative studies (e.g., survey research) are crucial. These studies should encompass e-sports players, parents, and educators to robustly determine the prevalence, risk factors, and impacts of e-sports addiction, thereby enhancing the generalizability of findings to broader populations. Furthermore, longitudinal studies are essential to examine the long-term effects of e-sports use on individuals' physical, psychological, and social development. Such research will enable a better understanding of the dynamics of the addiction process and causal relationships,

forming a fundamental basis for early detection and prevention strategies. It's also imperative to conduct randomized controlled trials to rigorously evaluate, guiding the identification of the most efficacious interventions, the effectiveness of various prevention and treatment approaches, including digital detox programs, screen time limit tools, and cognitive-behavioral therapy. Detailed investigations into the addiction potential of different e-sports game genres (e.g., FPS, MOBA, RTS) and their specific effects across various age groups are needed, as differences in game mechanics and social dynamics can significantly influence addiction risk. Comparative cultural studies exploring how variations between Eastern and Western e-sports cultures affect addiction tendencies could also yield valuable insights into culturally sensitive prevention and treatment models. Finally, policy development studies, conducted in collaboration with e-sports industry stakeholders (game companies, federations, sponsors), are vital for establishing ethical codes, age restrictions, and responsible gaming principles, emphasizing the shared responsibility in creating a safer gaming environment. Additionally, research focusing on educational programs and incentive mechanisms to enhance e-sports' contribution to the software industry could encourage young individuals to transition from being mere consumers to active developers and innovators, boosting technological advancement.

Based on this study's findings, we offer comprehensive recommendations for policymakers, educators, parents, and other relevant stakeholders, aiming for a holistic approach that maximizes e-sports' opportunities while minimizing its harms. We emphasize the necessity of widespread awareness and education campaigns for parents, educators, and youth. These campaigns should detail e-sports' potential risks, gaming addiction symptoms, and the benefits of digital detox, with alongside expanded support for organizations like Yeşilay (Turkish Green Crescent). Implementing school-based prevention programs that integrate "digital citizenship" or "digital health" into curricula is crucial to inform students about conscious technology use and digital addiction risks, explicitly advising against the promotion of violent digital games in educational settings. Furthermore, there must be a strong promotion of physical activity through programs that guide children and adolescents towards alternative sports, and hobbies, evaluating innovative approaches like active video games (exergames) before integrating them into competitive e-sports. We also advocate for industry regulations that encourage game developers to design less addictive products—

through features like achievable goals, reminders, and usage limits—supported by necessary legal frameworks, potentially drawing lessons from initiatives such as the SMART Act. Finally, a multi-disciplinary approach is vital, necessitating the establishment of teams and treatment centers comprising experts from diverse fields including psychology, psychiatry, education, sociology, law, and sports science, to ensure comprehensive intervention against e-sports addiction.

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