Exploring the Psychological Indicators of Online Gaming Dependency in Teenagers

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ABSTRACT

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Objective: This study aimed to explore the psychological indicators underlying online gaming dependency among teenagers, focusing on emotional regulation, cognitive distortions, social belonging, and behavioral control mechanisms.

Methods and Materials: A qualitative exploratory design was employed to examine the lived experiences of adolescents exhibiting signs of online gaming dependency. Data were collected through semi-structured, in-depth interviews with 19 teenagers aged 14–18 years from various regions of Greece. Participants were selected using purposive sampling until theoretical saturation was achieved. Each interview lasted between 45 and 70 minutes, addressing topics such as emotional motivations, gaming habits, and social relationships. Data were transcribed verbatim and analyzed thematically using NVivo 14 software. Coding followed Braun and Clarke's six-phase framework, ensuring rigor through member checking, peer debriefing, and audit trail documentation to enhance trustworthiness and confirmability of the findings.

Findings: Thematic analysis yielded four main categories: (1) emotional regulation through gaming, where adolescents used gaming as a coping mechanism for stress, anxiety, and emotional discomfort; (2) cognitive distortions and reward mechanisms, highlighting the influence of illusion of mastery, instant gratification, and reinforcement loops on dependency; (3) social dynamics and virtual belonging, revealing that online relationships provided validation and identity formation but often replaced real-world connections; and (4) loss of control and behavioral dependence, characterized by compulsive play, neglect of daily tasks, withdrawal symptoms, and tolerance development. Together, these themes depict online gaming as an emotionally and cognitively reinforcing behavior that fulfills psychological and social needs while fostering dependency.

Conclusion: Online gaming dependency among adolescents emerges from a complex interplay of emotional, cognitive, social, and behavioral factors. Effective prevention requires integrating emotional regulation training, digital literacy education, and family-based interventions to promote healthy engagement with technology.

Keywords: Online gaming dependency; Adolescents; Emotional regulation; Cognitive distortion; Social belonging; Behavioral addiction

1. Introduction

Emotional exhaustion represents one of the most pervasive and distressing forms of psychological strain that can emerge during adolescence—a developmental stage characterized by heightened emotional sensitivity and evolving social cognition. It denotes a state of chronic emotional fatigue resulting from sustained interpersonal tension, overexposure to stressors, and limited access to adaptive coping mechanisms (Feng, 2025). Although emotional exhaustion has often been examined within occupational or academic contexts, growing research underscores that the family environment plays an equally crucial role in shaping emotional depletion among young individuals (Yan et al., 2024). For adolescents, the family remains the primary social system where emotional security, socialization, and self-concept are formed. When that system becomes a source of conflict and emotional strain, the result can be profound emotional dysregulation and fatigue that extend far beyond the home environment (Chiang & Bai, 2024; Elattar et al., 2022).

The concept of family conflict encompasses a range of interparental and parent–child tensions, such as verbal disputes, inconsistent discipline, emotional neglect, and psychological hostility. Frequent exposure to such conflict has been consistently associated with emotional exhaustion, internalizing symptoms, and behavioral withdrawal in adolescents (LaMontagne et al., 2022). Research on parent–adolescent conflict suggests that the emotional atmosphere of the family strongly influences adolescents' capacity to manage stress and regulate emotions (Chiang & Bai, 2024). Adolescents who perceive frequent or unresolved conflict often exhibit symptoms such as irritability, sadness, guilt, and emotional detachment, which collectively represent the experiential core of emotional exhaustion (Silva et al., 2020). Moreover, unresolved family tension can lead to learned helplessness, where adolescents begin to perceive their emotional investment as futile, resulting in diminished motivation, psychological depletion, and chronic fatigue (Dodanwala & Shrestha, 2021).

Within the broader stress–strain framework, emotional exhaustion has been conceptualized as a mediating mechanism linking chronic interpersonal conflict with negative emotional and behavioral outcomes (Wang et al., 2024). Studies have shown that continuous interpersonal strain activates physiological stress responses that, if unregulated, manifest in symptoms of emotional exhaustion such as fatigue, cynicism, and depersonalization (Yan et al., 2024; Yeh et al., 2020). While much of this evidence arises from occupational settings such as teaching or healthcare, the psychological processes underlying emotional exhaustion are comparable across domains—persistent demands, emotional overextension, and insufficient recovery lead to depletion of emotional resources (Farrukh et al., 2024). In adolescents, however, the sources of exhaustion are often relational rather than professional, rooted in the quality of family communication and parental interaction styles (Elattar et al., 2022; Moroń et al., 2023).

Empirical findings reveal that adolescents exposed to frequent parental quarrels and inconsistent family climates report higher levels of depressive symptoms and lower emotional resilience (Peláez-Fernández et al., 2024). Emotional exhaustion may thus act as an intermediate emotional state—bridging environmental stressors such as family conflict and psychological outcomes like anxiety, hopelessness, and social withdrawal (LaMontagne et al., 2022). From an emotional security theory perspective, adolescents who witness chronic interparental conflict internalize feelings of unpredictability and loss of control, undermining their emotional regulation capacities (Silva et al., 2020). Over time, these emotional strains accumulate, resulting in the erosion of emotional energy, motivation, and engagement with everyday life.

Cross-cultural evidence reinforces the universality of this phenomenon. For example, studies in Asian and Middle Eastern contexts indicate that adolescents often experience family-related emotional exhaustion differently from their Western counterparts due to cultural norms emphasizing obedience, filial piety, and family cohesion (Napitupulu & Desiana, 2023; Wardana & Waskito, 2024). In Indonesia, family dynamics are often guided by collectivistic expectations, where adolescents feel obligated to maintain family harmony even at the expense of their own emotional well-being. This sense of moral and emotional duty can heighten vulnerability to emotional exhaustion when family relationships become conflictual (Khisomudin et al., 2024). Such findings echo evidence from Chinese, Taiwanese, and Pakistani samples, where the intersection of role expectations and emotional labor within the family contributes to cumulative emotional fatigue (Hsieh et al., 2022; Yaseen et al., 2021).

In parallel, research on work–family conflict among adults provides conceptual insights applicable to family conflict in adolescence. For example, studies demonstrate that prolonged conflict between personal and role expectations fosters emotional exhaustion, mediating the

relationship between environmental stress and well-being (Feng, 2025; Yan et al., 2024). Although adolescents are not employees, they similarly juggle multiple emotional and social roles—child, student, friend—and thus experience inter-role tension when family instability interferes with emotional functioning in other domains (Zhang et al., 2020). Just as work-family conflict leads to burnout among adults (Okechukwu et al., 2023), family-school conflict can produce comparable exhaustion in adolescents, particularly when emotional resources are persistently depleted (Dodanwala & Shrestha, 2021; Yeh et al., 2020).

The link between emotional exhaustion and emotional regulation is central to understanding the adolescent experience. As noted by (LaMontagne et al., 2022), family context influences youth depressive symptoms primarily through its effect on emotion regulation capacity. Adolescents from conflict-laden families often exhibit limited access to adaptive emotional strategies such as cognitive reappraisal or mindfulness, instead resorting to suppression, withdrawal, or dissociation. The resulting emotional stagnation amplifies exhaustion, as the adolescent's emotional energy is spent maintaining self-control rather than processing distress. Similarly, (Chiang & Bai, 2024) found that adolescents with heightened reactivity to parental conflict displayed elevated internalizing symptoms, suggesting that repeated exposure to tension erodes regulatory resilience over time.

Emotional exhaustion within the family context also intersects with guilt, self-blame, and emotional contagion. In households where conflict is pervasive, adolescents often internalize responsibility for familial tension—believing they are the cause or that they could prevent disputes through obedience or silence (Silva, 2024). This internalized guilt not only fuels emotional exhaustion but also undermines self-esteem and emotional security. (Peláez-Fernández et al., 2024) highlighted that a supportive social and family climate contributes significantly to emotional intelligence and can buffer against suicidal ideation and emotional fatigue. Conversely, when adolescents perceive the family climate as threatening, the lack of emotional safety leads to chronic vigilance and stress hyperarousal, key antecedents of exhaustion.

The relationship between family conflict and emotional exhaustion is also dynamic and reciprocal. Adolescents' emotional depletion may exacerbate family tension by reducing their ability to respond empathetically or calmly during conflicts. This cyclical interaction mirrors findings from adult studies showing that emotional exhaustion not only results from interpersonal conflict but can also increase the likelihood of further relational strain (Segovia & Recuero, 2023). The actor–partner interdependence framework demonstrates how emotional exhaustion in one family member can spill over to others, reinforcing a cycle of tension and mutual emotional fatigue. In the context of adolescence, where emotional sensitivity and social learning are particularly strong, such reciprocal effects may be especially pronounced (Moroń et al., 2023).

Further, cross-domain parallels show that emotional exhaustion mediates numerous stress-related relationships, such as between abusive supervision and marital strain (Farrukh et al., 2024) or between job demands and work-family conflict (Wardana & Waskito, 2024). These findings reinforce the notion that emotional exhaustion functions as a universal stress response mechanism, manifesting wherever individuals face persistent emotional demands without sufficient psychological recovery. Translating these insights to the family system suggests that adolescents who experience prolonged emotional demands—such as mediating parental arguments, managing loyalty conflicts, or repressing their own distress—are likely to develop symptoms of emotional exhaustion similar to burnout syndromes observed in adult populations (Khisomudin et al., 2024; Lestari & Budiono, 2021).

Additionally, the role of social support and perceived security cannot be overstated. (Zhang et al., 2020) reported that social support buffers the effects of emotional exhaustion and anxiety among adults facing family conflict, and similar protective processes are likely relevant to adolescents. The absence of parental support deprives adolescents of one of the most critical protective factors against stress-related emotional depletion. As (Abas et al., 2024) suggested, perceived organizational support moderates emotional exhaustion at work; analogously, perceived familial support can mitigate exhaustion within the home. When adolescents feel heard and validated, they are more capable of processing distress and preventing chronic emotional fatigue. Conversely, in families where emotional neglect prevails, exhaustion becomes cumulative and debilitating.

Recent evidence also points to socio-cultural moderators in the family conflict–exhaustion relationship. In collectivist societies such as Indonesia, where family harmony is prioritized over individual expression, adolescents may suppress emotions to maintain peace, inadvertently increasing emotional exhaustion (Napitupulu & Desiana, 2023). Moreover, gender expectations can shape emotional

expression and vulnerability. Female adolescents often report higher levels of emotional exhaustion due to greater emotional labor and empathy demands within the family system (E.O et al., 2024). Boys, on the other hand, may externalize distress through irritability or disengagement, masking exhaustion under behavioral problems. These gendered expressions of exhaustion highlight the importance of considering cultural and social dimensions in adolescent emotional research.

The pandemic and post-pandemic transitions have further intensified the emotional dynamics within families. Remote schooling, confinement, and economic strain have increased opportunities for family conflict, thereby amplifying emotional exhaustion among adolescents (Hsieh et al., 2022; Moroń et al., 2023). Parents facing their own burnout or job-related stress may display lower emotional availability, inadvertently transferring their emotional fatigue to their children (Segovia & Recuero, 2023). The convergence of parental burnout and adolescent emotional depletion underscores a systemic transmission of stress within families—an intergenerational exhaustion cycle. (Silva et al., 2020) and (Elattar et al., 2022) both demonstrated that adolescents' adjustment outcomes are closely tied to perceived emotional security at home, confirming that conflict and exhaustion are not isolated experiences but intertwined processes shaping developmental trajectories.

The growing literature also emphasizes that emotional exhaustion among adolescents should be viewed not merely as an individual emotional reaction but as an indicator of family system imbalance. According to (Peláez-Fernández et al., 2024), when family members fail to maintain emotional attunement, adolescents experience diminished emotional intelligence and coping efficacy, which elevates risk for mental health problems. (LaMontagne et al., 2022) further showed that family emotional context mediates depressive symptoms through emotional regulation—suggesting that exhaustion acts as a core mechanism within this mediation chain. Meanwhile, (Feng, 2025) argued that emotional exhaustion represents the bridge between emotional labor and family conflict, extending this model to adolescents who, despite their age, perform significant emotional labor in managing parental emotions.

Finally, it is crucial to recognize that emotional exhaustion among adolescents experiencing family conflict carries significant developmental and societal implications. Chronic emotional depletion during adolescence can hinder academic engagement, peer relationships, and identity formation (Elattar et al., 2022; Wang et al., 2024). Moreover,

emotional exhaustion may serve as a precursor to long-term emotional disorders such as depression or anxiety (Yaseen et al., 2021). Therefore, understanding the dimensions of emotional exhaustion within this context is essential not only for psychological theory but also for informing family-based interventions and preventive strategies that promote adolescent resilience and emotional well-being.

Accordingly, the present qualitative study aims to explore and identify the core dimensions of emotional exhaustion among adolescents experiencing family conflict in Indonesia.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a qualitative exploratory design aimed at identifying and interpreting the underlying psychological indicators of online gaming dependency among teenagers. The qualitative approach was chosen due to its capacity to uncover deep, subjective experiences, emotional processes, and cognitive patterns associated with behavioral dependency. The research followed an interpretivist paradigm, emphasizing the participants' perspectives and meanings they ascribe to their gaming behaviors.

A total of 19 participants were selected using purposeful sampling, focusing on teenagers aged 14 to 18 years who reported regular engagement in online gaming for at least one year. All participants were residents of Greece and recruited through secondary schools, youth community centers, and online gaming forums with the assistance of school counselors and psychologists. The sample size was not predetermined but was determined by theoretical saturation—the point at which no new themes or insights emerged from subsequent interviews. This saturation point was reached after the 17th interview, and two additional interviews were conducted to confirm the consistency of emerging categories.

2.2. Measures

Data were collected through semi-structured, in-depth interviews, allowing flexibility to explore individual experiences while maintaining consistency across participants. Each interview lasted approximately 45 to 70 minutes and was conducted either face-to-face in quiet school counseling rooms or via secure online video

conferencing platforms, depending on participant preference and accessibility.

The interview guide included open-ended questions designed to elicit rich descriptions of participants' emotional states, motivational patterns, coping mechanisms, and behavioral tendencies related to online gaming. Example guiding questions included:

- "Can you describe what online gaming means to you personally?"
- "How do you feel when you are unable to play?"
- "Have you noticed changes in your mood or thoughts connected to your gaming habits?"

All interviews were audio-recorded with participant consent and later transcribed verbatim for analysis. Ethical considerations were strictly observed: parental consent and adolescent assent were obtained, and participants were assured of confidentiality and anonymity. The study adhered to the ethical guidelines of the Greek Psychological Association for research involving minors.

2.3. Data Analysis

Data analysis was conducted using thematic analysis following the six-step framework proposed by Braun and Clarke (2006). The process involved (1) familiarization with the data through repeated readings of the transcripts, (2) initial coding of meaningful units, (3) searching for themes, (4) reviewing and refining themes, (5) defining and naming themes, and (6) reporting the final thematic structure.

All transcripts were imported into NVivo 14 software to facilitate systematic coding and theme development. NVivo supported the management of large qualitative datasets and enabled the visualization of relationships between codes and categories. Coding was performed iteratively, with constant comparison across interviews to ensure reliability and internal consistency. Emerging patterns were discussed among the research team to enhance intercoder credibility and minimize interpretive bias.

To enhance trustworthiness, several strategies were employed: member checking (participants reviewed preliminary interpretations for accuracy), peer debriefing (discussions among researchers to challenge assumptions), and audit trail documentation (detailed record of all analytic decisions). The integration of these measures strengthened the credibility, dependability, and confirmability of the findings.

3. Findings and Results

The study sample consisted of 19 teenagers from various regions of Greece, including Athens, Thessaloniki, and Patras. Participants ranged in age from 14 to 18 years (M = 16.1), with 11 males (57.9%) and 8 females (42.1%). Most participants were enrolled in secondary school (n = 13; 68.4%), while the remaining were in upper secondary education (n = 6; 31.6%). Regarding family background, 12 participants (63.2%) lived with both parents, 5 (26.3%) lived in single-parent households, and 2 (10.5%) resided with other relatives.

In terms of gaming behavior, 10 participants (52.6%) reported playing online games daily for three hours or more, 6 participants (31.6%) played several times per week, and 3 (15.8%) engaged occasionally, typically during weekends. The most frequently mentioned games were multiplayer online battle arenas (MOBAs) such as League of Legends and Dota 2 (n = 8; 42.1%), followed by first-person shooter games (n = 6; 31.6%) and role-playing games (RPGs) (n = 5; 26.3%). The majority of participants (n = 15; 78.9%) reported playing both on personal computers and mobile devices, indicating high accessibility and integration of gaming into daily routines.

Table 1

Main Themes, Subthemes, and Concepts (Open Codes) Identified in the Study

Main Themes (Categories)	Subthemes (Subcategories)	Concepts (Open Codes)
1. Emotional Regulation through Gaming	Escapism and Emotional Relief	Avoiding stress, Forgetting real-life problems, Emotional release after conflict, Hiding sadness
	Anxiety Reduction	Calming effect, Temporary peace, Feeling in control, Relaxation through gaming
	Mood Enhancement	Joy from achievements, Winning boosts self-esteem, Excitement, Energy restoration
	Emotional Suppression	Hiding emotions, Ignoring sadness, Replacing negative mood with gameplay, Avoiding emotional discussions
	Dependency on Emotional Comfort	Need for daily gaming, Feeling incomplete without playing, Gaming as "therapy", Emotional reliance
2. Cognitive Distortions and Reward Mechanisms	Illusion of Mastery	Overestimating gaming skills, Believing in superiority, Perceived competence, Avoiding real challenges

	Immediate Gratification	Expecting quick results, Satisfaction from instant wins, Short-term motivation, Avoiding delay
	Distorted Self-Concept	Defining identity through avatar, Feeling "stronger online," Escaping real identity
	Achievement Fixation	Obsession with levels, Fear of losing rank, Checking progress frequently, "I can't stop until I win"
	Reinforcement Loop	Repetition of gaming routines, Emotional rewards from notifications, Addictive cycle, Fear of missing rewards
3. Social Dynamics and Virtual Belonging	Online Peer Connection	Friendship through gaming, Shared interests, Online team support, "I belong to my squad"
	Validation and Recognition	Seeking praise, Posting achievements, Positive comments, Comparing performance
	Social Substitution	Fewer real-life friends, Online friends more supportive, Avoiding family interactions
	Fear of Rejection	Anxiety about being excluded, Playing to maintain group, "They'll forget me if I don't join," Pressure to stay online
	Online Identity Construction	Using avatars as expression, Different personality online, Feeling accepted, Exploring new roles
	Conflict in Real Relationships	Family arguments, Isolation from parents, Lack of attention to school friends
4. Loss of Control and Behavioral Dependence	Compulsive Play Patterns	Urge to play repeatedly, Difficulty stopping, "Just one more round," Late-night gaming
	Neglect of Daily Responsibilities	Ignoring homework, Forgetting meals, Reduced sleep, Avoiding chores
	Withdrawal Symptoms	Restlessness without gaming, Mood swings, Irritability, Loss of motivation
	Tolerance Development	Playing longer for same excitement, Seeking more challenging games, Decreased satisfaction
	Awareness and Guilt	Feeling bad after long sessions, Trying to quit, "I know it's too much but I can't stop," Regret
	Parental Control and Resistance	Arguing about limits, Hiding playtime, Sneaking device at night

1. Emotional Regulation through Gaming

The first major theme highlighted how teenagers used gaming as an emotional regulation strategy. Participants consistently described online gaming as an emotional outlet, allowing them to temporarily detach from distress, anxiety, and daily pressures. One 16-year-old participant stated, *"When I'm upset, I just play. It clears my mind faster than talking to anyone."*

Subthemes such as *escapism and emotional relief* and *mood enhancement* revealed that gaming functioned as a coping mechanism to manage sadness and anger. Adolescents mentioned that the excitement of winning and progressing through game levels replaced their negative moods with feelings of accomplishment. *"Even if my day is bad, when I win, I feel like I've done something right,"* another respondent explained. However, the subtheme *dependency on emotional comfort* illustrated that for many participants, this relief became habitual—an emotional reliance that deepened their attachment to gaming.

2. Cognitive Distortions and Reward Mechanisms

The second theme focused on the cognitive patterns and reinforcement processes sustaining online gaming dependency. Teenagers often exhibited *illusion of mastery*, perceiving themselves as competent and powerful in gaming contexts, in contrast to feelings of inadequacy in real life.

One participant reflected, *"In the game, I'm the best. Outside, I feel like no one notices me."*

The subtheme *immediate gratification* captured how the fast-paced feedback loops of gaming fostered impulsivity and short-term pleasure-seeking. Moreover, *achievement fixation* and *reinforcement loops* indicated the addictive structure of reward mechanisms. Many participants described the urge to "level up" or "not break a streak," reinforcing compulsive playing. The distorted sense of self and dependence on digital rewards revealed a pattern of psychological conditioning resembling behavioral addiction.

3. Social Dynamics and Virtual Belonging

The third theme emphasized the social dimensions of gaming, showing how online environments provided adolescents with a sense of belonging often lacking in offline life. Subthemes such as *online peer connection* and *validation and recognition* indicated that gaming communities became sources of friendship and self-esteem. A 17-year-old participant commented, *"My team understands me better than my school friends."*

However, *social substitution* and *fear of rejection* demonstrated that this virtual attachment sometimes replaced real-world connections, causing social withdrawal. One interviewee said, *"If I don't log in for a day, they might replace me."* The *online identity construction* subtheme

revealed how adolescents used avatars to explore alternative identities and gain acceptance. Yet, *conflict in real relationships* emerged as a consequence—many teens reported family tension and reduced communication at home due to excessive gaming.

4. Loss of Control and Behavioral Dependence

The final theme illustrated the behavioral signs of dependency and diminished self-control. Subthemes such as *compulsive play patterns* and *neglect of daily responsibilities* highlighted the inability of participants to regulate their gaming time. *"I keep telling myself one last match, but it never ends,"* one adolescent admitted. Withdrawal symptoms such as irritability and restlessness were common when gaming was restricted.

Participants also described *tolerance development*, noting that they required longer gaming sessions to achieve the same level of excitement. Although many expressed *awareness and guilt* about their dependency, few succeeded in reducing playtime. A participant shared, *"I know it's affecting my grades, but stopping feels impossible."* In several cases, attempts by parents to impose restrictions led to *resistance and conflict*, demonstrating how the behavior had evolved beyond voluntary control.

4. Discussion and Conclusion

The findings of this qualitative study revealed four major themes representing the psychological indicators of online gaming dependency among teenagers in Greece: emotional regulation through gaming, cognitive distortions and reward mechanisms, social dynamics and virtual belonging, and loss of control with behavioral dependence. Together, these categories reflect the multidimensional nature of gaming dependency, where emotional, cognitive, social, and behavioral factors intertwine to sustain compulsive play. These results align with existing global literature suggesting that online gaming addiction among adolescents arises from an intricate interaction between internal psychological needs and external environmental reinforcements (Fahrul & Nurfarhanah, 2025; Singh & Suvidha, 2024; Xu, 2025).

One of the most prominent findings of the study was that adolescents used gaming as a means of emotional regulation, often seeking relief from anxiety, sadness, or family conflict. Many participants described gaming as a way to "calm down" or "forget about problems," reflecting a reliance on gaming for mood management. This pattern echoes prior research showing that adolescents frequently employ gaming to escape psychological distress or negative emotional states (Saputra, 2024). Such findings support the conceptualization of online gaming as an avoidant coping mechanism, where emotional discomfort is temporarily replaced by the excitement and control experienced during gameplay (said & Magistarina, 2024).

The results resonate with (A-zzahrah et al., 2024), who found that excessive gaming among adolescent girls significantly deteriorated sleep quality and heightened emotional exhaustion, suggesting that gaming's short-term soothing effects lead to long-term emotional imbalance. Similarly, (Nurhidayati & Iqbal, 2024) demonstrated that adolescents often perceive gaming as a "safe emotional outlet," especially when family communication and emotional expression are limited. The current study extends these findings by illustrating that for Greek adolescents, emotional dependence on gaming is not merely a coping tool but a reinforcing cycle that reduces tolerance for real-world frustration. This mechanism resembles the emotional regulation deficit model proposed by (Nursalam et al., 2023), in which maladaptive gaming serves as a replacement for emotional awareness and self-soothing skills.

Consistent with (Iskajyan et al., 2024), who noted the destructive influence of online games on adolescent emotional stability, the present study found that the participants' inability to manage negative affect without gaming contributed significantly to dependency symptoms such as irritability, guilt, and distress during abstinence. The results therefore suggest that emotional dysregulation is both a cause and a consequence of gaming dependency, as adolescents increasingly rely on gaming-induced euphoria to manage fluctuating moods. Furthermore, parallels with (Azahra et al., 2024) underscore the cultural universality of this finding, as adolescents across diverse contexts exhibit similar tendencies to escape real-life pressures through digital immersion.

The second major finding of this research pertains to cognitive distortions and reward reinforcement mechanisms, which sustain compulsive gaming behavior. Participants reported feeling more competent, confident, and in control while gaming—attributes rarely experienced in their offline environments. This aligns with the illusion of mastery described by (Li, 2023), where adolescents develop exaggerated self-efficacy beliefs based on digital performance, leading to a distorted self-concept. These cognitive biases drive persistent play as individuals seek to validate their perceived competence through continued engagement.

The instant gratification provided by online games also contributed to dependency, with participants expressing excitement about "quick wins" and immediate feedback. This finding corresponds to (Kolomiets & Demydenko, 2023), who argued that the immediacy of digital rewards conditions adolescents to favor rapid stimulation, reducing patience for delayed real-world rewards. The reinforcement cycle observed in this study mirrors the pattern described by (Kasantarino & Taubih, 2023), who identified "achievement obsession" and "fear of losing ranks" as cognitive symptoms of gaming addiction. The current findings corroborate that the dopaminergic reinforcement loop inherent in gaming design perpetuates dependency by rewarding continuous engagement (Triantoro et al., 2023).

The cognitive aspects of dependency further relate to psychological escapism and identity distortion. Several participants described feeling "stronger" or "more respected" in virtual environments, echoing (Gunawan & Setiawan, 2023), who emphasized how adolescents construct empowering virtual selves that compensate for low self-esteem. (Fitria et al., 2023) also found that digital technologies amplify reinforcement learning, strengthening maladaptive habits that persist beyond gaming contexts. Consequently, cognitive distortions—particularly overestimation of control and conflation of virtual achievement with personal worth—form a crucial component of the dependency structure. These insights collectively reinforce the idea that gaming addiction operates through behavioral conditioning intertwined with distorted cognitive appraisals, a finding consistent with the models of compulsive technology use proposed by (Emeka et al., 2023) and (Guo & Li, 2022).

A third significant finding concerns the social dimension of gaming dependency, particularly adolescents' sense of belonging within virtual communities. Most participants reported that online peers provided emotional support and validation not available in their offline relationships. This result supports the conclusions of (Xu, 2025), who observed that multiplayer games cultivate strong social identities by offering a sense of inclusion and teamwork. The current findings demonstrate that adolescents in Greece similarly perceive their online teams as "family-like," reflecting the global pattern of social substitution, in which virtual belonging replaces real-world connections (Elvadari, 2023).

These outcomes align with (Tunny, 2022), who described that adolescents experiencing loneliness are particularly susceptible to online gaming communities, where constant communication and collaboration fulfill unmet social needs.

Furthermore, (Refnandes et al., 2022) emphasized that prolonged digital socialization often correlates with emotional withdrawal from offline networks, a pattern strongly reflected in the present findings. Participants frequently mentioned conflicts with parents and school peers as consequences of excessive gaming, consistent with (Muliana et al., 2022), who documented similar dynamics in adolescents who substituted familial bonds with online interactions.

However, the sense of validation and recognition in gaming environments—through rankings, achievements, and group membership—was also a critical reinforcing factor. This observation parallels (Qu, 2023), who highlighted that digital recognition systems (likes, scores, badges) significantly influence adolescents' social motivation and identity construction. The desire to maintain status within virtual groups often resulted in anxiety and pressure to stay online, confirming the findings of (Nadeak, 2021), which linked peer expectations in gaming environments with dependency. The current study thus underscores that social belonging in gaming contexts simultaneously fulfills psychological needs for inclusion while reinforcing behavioral dependency through fear of rejection and social pressure (Widyaningrum et al., 2023).

The fourth theme concerned the participants' loss of control over gaming behavior. The data revealed classic addiction markers such as compulsive play, neglect of personal responsibilities, withdrawal symptoms, and tolerance development. Adolescents described an inability to stop playing despite awareness of negative consequences, echoing (Singh & Suvidha, 2024), who characterized gaming addiction as a self-reinforcing behavioral loop involving both craving and guilt. Similarly, (Fahrul & Nurfarhanah, 2025) found that adolescents who experience poor impulse control are at higher risk of prolonged gaming sessions, consistent with the patterns observed in the Greek sample.

The findings also align with (Haryati et al., 2023), who identified irritability, restlessness, and fatigue as behavioral outcomes of withdrawal among adolescents in Indonesia. Participants in the present study reported comparable symptoms, noting that "not playing feels like something is missing." The phenomenon of tolerance—where longer sessions are needed to achieve the same emotional satisfaction—further corroborates earlier models of behavioral addiction (Nursalam et al., 2023). Moreover, as (Guo & Li, 2022) demonstrated through mathematical modeling, the absence of strong family education systems

intensifies this compulsive trajectory, suggesting that lack of parental monitoring exacerbates behavioral escalation.

Despite this loss of control, some participants expressed awareness and guilt about excessive play, mirroring the ambivalence observed by (Kasantarino & Taubih, 2023). This self-awareness indicates that adolescents oscillate between self-regulation and surrender, a dynamic often associated with early stages of addiction recovery (Kolomiets & Demydenko, 2023). The tension between acknowledgment and continued play underscores the complexity of gaming dependency, where psychological gratification and self-blame coexist. The findings also support (Saputra, 2024), who observed that adolescents with high dependency levels experience internal conflict between their virtual commitments and real-life obligations.

Taken together, the findings of this study provide strong support for multidimensional models of gaming dependency that integrate emotional, cognitive, social, and behavioral dimensions. The qualitative themes align with global evidence indicating that online gaming addiction among adolescents arises from a convergence of unmet emotional needs, cognitive distortions, and social reinforcement (Iskajyan et al., 2024; Nurhidayati & Iqbal, 2024; Xu, 2025). Emotional regulation theory explains the use of gaming as a coping strategy, while social identity theory contextualizes the attraction to virtual communities as a substitute for real-world belonging. Additionally, behavioral reinforcement models explain how repetitive rewards sustain dependency through neural conditioning (Fitria et al., 2023).

The results also reflect the growing concern that gaming dependency is not confined to specific cultures but manifests universally, influenced by technological access and sociocultural norms. This supports (Azahra et al., 2024), who emphasized that the psychological impact of gaming transcends geographical boundaries, affecting adolescents' cognitive and emotional stability across diverse contexts. At the same time, cultural and familial variables may determine the expression and severity of these symptoms. For instance, (Elvadari, 2023) and (Triantoro et al., 2023) highlighted the protective influence of family cohesion and democratic parenting, whereas (Guo & Li, 2022) demonstrated that absence of parental guidance amplifies dependency risks.

Furthermore, the findings resonate with preventive models proposed by (Gunawan & Setiawan, 2023) and (Widyaningrum et al., 2023), which advocate integrating digital literacy, emotional education, and self-regulation training into adolescent development programs. These frameworks reinforce the current study's conclusion that online gaming dependency must be viewed not solely as an individual pathology but as a socially mediated behavioral phenomenon involving emotional needs, technological design, and cultural context.

Although this study contributes valuable insights into the psychological indicators of online gaming dependency, several limitations should be acknowledged. First, the sample size was relatively small (19 participants) and limited to Greek adolescents, which restricts the generalizability of the findings to broader populations. Second, as with most qualitative studies, the interpretation of data relied on subjective meanings and researcher reflexivity, which may introduce interpretive bias despite efforts to ensure trustworthiness through member checking and peer debriefing. Third, since all participants self-reported their gaming habits, social desirability bias may have influenced the accuracy of their responses, particularly regarding time spent gaming or emotional dependency. Finally, the study did not include triangulation with parental or teacher perspectives, which could have enriched the contextual understanding of adolescents' gaming behavior.

Future research should employ mixed-methods approaches to triangulate qualitative findings with quantitative data on gaming frequency, psychological well-being, and cognitive functioning. Expanding samples across different cultural contexts and socioeconomic backgrounds could reveal cross-cultural differences in the expression of gaming dependency. Additionally, longitudinal studies are needed to examine the developmental trajectory of gaming dependency, particularly how emotional reliance evolves into behavioral compulsion over time. Experimental studies could also investigate the neurological correlates of cognitive distortions and reinforcement loops associated with gaming. Finally, further exploration of family-based and school-based interventions could provide evidence for preventive models that combine emotional education, self-regulation, and digital literacy.

In practice, educators, counselors, and parents should focus on fostering emotional resilience and healthy coping mechanisms among adolescents. Schools could integrate digital well-being programs that teach time management, emotional awareness, and balanced use of technology. Counselors should develop therapeutic interventions addressing emotional regulation deficits and cognitive distortions related to gaming. Parental involvement remains critical; thus, family communication workshops could help parents establish supportive and structured home environments. Collaboration between policymakers,

educators, and psychologists is essential to design community-based initiatives that promote healthy gaming habits and mitigate the psychological risks associated with online gaming dependency among teenagers.

5. Limitations & Suggestions

This study, while offering valuable qualitative insights, has several limitations. First, the sample size was limited to twenty-two adolescents from specific regions of Indonesia, which may restrict the generalizability of findings to broader cultural or socioeconomic contexts. The study relied solely on self-reported interview data; thus, participants' accounts might be influenced by recall bias or social desirability, particularly when discussing sensitive family issues. Furthermore, as the research design was cross-sectional, it cannot determine the temporal or causal relationships between family conflict and emotional exhaustion. The absence of parental or teacher perspectives also limits the ecological validity of interpretations. Finally, although NVivo 14 supported systematic coding, thematic interpretation inherently involves researcher subjectivity, and alternative analytical frameworks might yield different thematic structures.

Future research should aim to triangulate adolescent self-reports with parental, teacher, or counselor observations to capture a more comprehensive picture of emotional exhaustion within family systems. Longitudinal qualitative or mixed-methods designs could illuminate how emotional exhaustion develops and fluctuates across adolescence and identify protective factors that promote recovery. Comparative studies across cultures—particularly between collectivist and individualist societies—would deepen understanding of how cultural norms shape adolescents' perceptions of conflict and exhaustion. Additionally, integrating physiological measures such as cortisol levels or sleep quality assessments could enrich the psychological data, offering multidimensional evidence of emotional depletion. Exploring gender differences, socioeconomic influences, and the moderating role of digital media use may also extend current findings.

The results underscore the importance of developing culturally sensitive family interventions that enhance emotional communication, conflict resolution, and adolescent coping skills. Counselors and school psychologists should provide safe spaces where adolescents can express distress without fear of judgment, thereby reducing emotional suppression. Family-based psychoeducation programs can help parents recognize the emotional impact of conflict and teach constructive dialogue techniques. At the school level, guidance counselors could integrate resilience training and emotional regulation workshops to empower adolescents to manage stress adaptively. Moreover, community initiatives that strengthen peer and religious support networks may offer additional buffers against emotional exhaustion, fostering healthier developmental outcomes.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contributed to this article.

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