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Social Structural Pressures and East Asian Adolescents' Consumption Behaviors Toward Virtual Anime-Style Characters: The Mediating Role of Parasocial Attachment

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Abstract. East Asian adolescents face multiple structural stressors, including academic pressure, peer competition, parental expectations, and uncertainty about the future. When these pressures frustrate their basic psychological needs, some turn to virtual anime-style games for emotional compensation, forming parasocial attachments to virtual characters. Integrating compensatory consumption theory and parasocial relationship theory, this paper synthesizes existing literature to construct an analytical pathway from structural social stress through psychological need deficits and parasocial attachment to consumption behavior. The analysis suggests that when academic competition and family expectations leave adolescents' needs for belongingness and competence unfulfilled, their emotional involvement with virtual characters accelerates from casual contact toward attachment; once attachment is formed, consumption becomes a natural extension of maintaining and expressing the relationship, manifested both in the general logic of paying for parasocial proximity and in possessiveness-driven consumption that transforms intangible bonds into tangible possessions. Moreover, the developmental asynchrony between the socioemotional system and the cognitive control system during adolescence further heightens adolescents' susceptibility to immediate rewards in gaming contexts. By integrating compensatory consumption theory and parasocial relationship theory within the novel context of anime-style virtual games, this study extends the application boundaries of both frameworks, and suggests that parents and schools should attend to the real-world satisfaction of adolescents' needs for autonomy, competence, and belonging rather than merely restricting gaming time and spending.

Keywords: social structural pressure, parasocial attachment, virtual anime-style character consumption, compensatory consumption, East Asian adolescents

1. Introduction

Contemporary East Asian adolescents face multiple sources of stress, including academic pressure, peer competition, parental expectations, and uncertainty about the future [1, 2]. In response to these compounded stressors, many East Asian adolescents turn to digital media for psychological relief, such as virtual anime-style games [3], thereby forming attachments to such games [4].

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Existing research on the relationship between adolescents and virtual games has predominantly focused on gaming addiction [5], with limited exploration of whether such social structural pressures lead to consumption behaviors among adolescents within virtual gaming environments, and whether this relationship is mediated by their parasocial attachment to virtual characters. This study aims to examine the relationship between the consumption behaviors of East Asian adolescents—represented by high school students—toward virtual anime-style characters and the social structural pressures they face, while also exploring the role of parasocial relationships in this relationship.

2. Social background

2.1. Research participants

This study focuses on East Asian high school students (approximately 15-18 years old) as the core population of interest, based primarily on the following theoretical and empirical grounds.

First, high school represents a period during which adolescents experience heightened exposure to multiple stressors, including academic competition, family expectations, and peer comparison. Confronted with these pressures, high school students often seek outlets for emotional catharsis.

From a developmental psychology perspective, Stever [6], in his lifespan development framework, noted that parasocial relationships are most active during adolescence and that media figures serve as "materials for identity construction and transitional attachment objects" at this stage. This implies that high school students under structural pressure are more likely to establish deep emotional connections with virtual characters.

Therefore, the population of high school students constitutes a representative sample for studying attachment to and consumption behaviors related to virtual anime-style characters.

2.2. Social structural pressures facing East Asian adolescents

2.2.1. Academic pressure

Academic pressure constitutes the most core and pervasive source of stress faced by East Asian adolescents. In South Korea, a 2022 survey by Statistics Korea revealed that 76.2% of adolescents aged 13-18 identified studying, grades, or academic advancement as their primary source of anxiety, far exceeding appearance (42.8%), career choice (36.2%), and peer relationships (35.8%) [7]. The adolescent suicide rate in South Korea remains among the highest across OECD countries, with academic pressure consistently identified as the primary driving factor [8]. Approximately 46.7% of South Korean general high school students sleep fewer than 6 hours per day, well below the recommended 8-hour standard, with academic burden identified as the primary cause of sleep deprivation [9]. The situation in China is equally severe. China's Gaokao (college entrance examination) system is closely associated with the academic pressure experienced by high school students. A 2023 survey by the Chinese Academy of Social Sciences further revealed that over 68% of urban adolescents reported feeling "high" or "extremely high" academic pressure from their parents [10].

2.2.2. Family expectations

In Confucian cultural contexts, family expectations also constitute a significant source of stress for adolescents. A 2023 survey by the Chinese Academy of Social Sciences found that more than 68%

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of urban adolescents perceived "high" or "extremely high" academic pressure from their parents, yet only 41% felt comfortable discussing emotional or mental health issues at home [10]. This pattern of "high expectations–low communication" may lead adolescents under pressure to turn to alternative sources of emotional support.

Data from South Korea similarly indicate that family expectations constitute a source of adolescent stress. A 2024 South Korean survey showed that 23.7% of adolescents feel stressed at home, with 2.1% describing it as "severe" [7]. Although the direct reporting rate of family stress is slightly lower than that of school-related stress (25.6%-29.3%), its interaction with academic pressure may produce synergistic effects.

2.2.3. Peer pressure

Peer pressure also constitutes one of the sources of stress in the daily lives of East Asian adolescents. Transparent ranking systems in highly competitive environments (e.g., South Korean hagwons posting lists of high-scoring students, Chinese schools publishing rankings after each examination) render social comparison a normalized source of stress [11]. Furthermore, adolescents in Confucian cultural contexts universally exhibit academic comparison tendencies in peer interactions, where diligent performance by close friends can induce a sense of pressure to "work harder" [12].

2.2.4. Uncertainty about the future

Anxiety regarding future career and economic prospects constitutes another important dimension of stress for East Asian adolescents. Data from the National Bureau of Statistics of China indicate that the urban youth unemployment rate in China reached a historical peak of 21.3% in 2023 (with 11.58 million graduates entering the labor market) [13]. Young people place particular emphasis on career stability and development opportunities, tending to avoid high-risk choices in an uncertain economic environment.

Furthermore, the rapid development of artificial intelligence technology is reshaping the employment expectations of East Asian youth. The World Bank [14] reports that AI automation is accelerating changes in job structures, with large numbers of routine white-collar tasks facing the risk of substitution; a 2025 national survey in China further revealed that nearly half of unemployed youth regard AI as a primary source of unemployment threat [15]. This "technological unemployment anxiety," compounding traditional economic pressures, further intensifies young people's uncertainty about future career prospects.

When the visibility of real-world futures diminishes, the immediate feedback, controllability, and sense of achievement offered by virtual worlds may hold particular appeal [16].

2.3. Introduction to virtual anime-style games

Virtual anime-style games have achieved widespread penetration among East Asian adolescents. According to CIC Consulting [17], 95% of China's Generation Z (born 1995-2009) are broad-spectrum ACG (Anime, Comic, and Games) users, and anime-style games represent one of the core vehicles of this culture, with a domestic user base reaching 230 million in 2025 [18]. Core consumption points in such games include the following: gacha-based character acquisition, unlocking exclusive storylines and voice content, and purchasing merchandise and derivatives, among others. A 2025 survey by SMBC Consumer Finance [19] indicated that 21.6% of young

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people regularly participate in in-game purchases, with some players' excessive spending affecting their normal living expenses.

3. Social pressure and virtual anime-style games

3.1. Consumption behaviors related to social pressure and virtual anime-style games

According to compensatory consumption theory, when individuals' self-concept is threatened and psychological needs are unmet, they engage in consumption behaviors to compensate for psychological deficits and reconstruct the self. Such consumption does not necessarily serve utilitarian needs; for instance, individuals may use escapism to address psychological needs [20]. When adolescents face multiple social pressures and experience psychological need deficits, they may turn to virtual anime-style games as a means of emotional release, thereby generating consumption behaviors.

Furthermore, the developmental stage of adolescence itself predisposes young people toward impulsive consumption. Steinberg's [21] Dual Systems Model proposes that the socioemotional system responsible for reward-seeking and sensation-seeking reaches its peak during mid-adolescence (approximately ages 14-16), while the cognitive control system responsible for impulse control and long-term planning lags in development, not reaching full maturity until the early-to-mid twenties [21-23]. This developmental asynchrony leads high school students to demonstrate heightened susceptibility to immediate rewards when confronting multiple pressures within gaming environments.

3.2. Parasocial attachment

Parasocial relationships (PSRs) refer to enduring unidirectional emotional bonds that individuals form with media figures (e.g., television characters, virtual idols, game characters), essentially representing a stabilized form of parasocial intimacy [24, 25].

The need deficits resulting from multiple social pressures may foster the formation of parasocial bonds within virtual game contexts, wherein virtual characters serve as accessible targets for emotional investment and compensatory attachment. Tukachinsky and Stever [26] proposed a developmental stage model of parasocial relationships comprising four phases: initial engagement, emotional involvement, attachment formation, and relationship maintenance or disengagement. High-pressure environments may accelerate individuals' progression from casual contact to attachment, as stress intensifies both the strength and persistence of compensatory motivation [26]. In other words, when adolescents perceive multiple social pressures and their basic psychological needs for belongingness and competence remain unfulfilled [27], they are more likely to rapidly progress beyond the casual contact phase into deep interaction (parasocial interaction, PSI) with virtual characters, thereby accelerating PSR formation.

In addition, Gong et al. [28], drawing on the investment model, found that the intensity of parasocial interaction significantly predicts players' willingness to pay for mobile games, and this effect is particularly pronounced among players who have already established parasocial relationships [29, 30]. Meanwhile, interpersonal relationship frustrations—such as peer exclusion or conflict—significantly increase individuals' tendency to turn toward virtual characters. It is plausible that loneliness may not only predict the formation of parasocial consumption behaviors but also accelerate the transition from parasocial interaction to attachment, particularly when real-world social needs remain unfulfilled [27].

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Once parasocial relationships (PSRs) are established, consumption behaviors become a natural extension of maintaining and expressing such relationships. Giles & Stever's [31] analysis of the Cameo platform (where fans pay for customized celebrity video messages) found that the behavioral pattern of "paying for parasocial proximity" is not unique to anime-style culture but rather represents a general behavioral logic once PSRs reach a certain intensity. Furthermore, Belk's [32] extended self theory provides an additional pathway: when attachers incorporate virtual characters into their self-boundaries, possessiveness drives them to achieve "embodiment" through consumption, transforming intangible relationships into tangible material evidence. Consequently, PSRs with anime-style games may foster consumption behaviors.

4. Conclusion

In reviewing prior theories and research, this study finds that when adolescents face multiple social pressures, they generate various psychological needs, leading them to turn to virtual anime-style games to compensate for these needs while simultaneously producing corresponding consumption behaviors. Parasocial relationships formed with virtual anime-style games may explain why adolescents engage in consumption behaviors when facing stress.

This study situates the discussion of the relationship between East Asian adolescents and virtual anime-style games within a dual theoretical framework of compensatory consumption and parasocial relationships, thereby expanding the application boundaries of existing theories. Previous studies on compensatory consumption theory and parasocial relationship theory have typically been applied in isolation. By integrating both frameworks within the context of parasocial relationships and consumption related to virtual anime-style games, this study extends the boundaries of theoretical application.

From a practical standpoint, the above findings offer reference value for understanding adolescents' anime-style consumption phenomena. For parents and schools, understanding how social pressures frustrate basic psychological needs and subsequently drive adolescents toward virtual characters seeking compensation helps more accurately identify the psychological motivations behind consumption behaviors, enabling more targeted guidance approaches. Rather than merely restricting gaming time or spending amounts, attention should be given to whether adolescents' sense of autonomy, competence, and belonging in reality are being satisfied. For adolescent mental health education, this review suggests that intervention focus should extend beyond merely "reducing gaming" to encompass the alleviation of structural stressors.

The findings of this study are based on an integration of existing literature, and key mechanisms remain to be empirically tested. Future research should prioritize the following directions: first, conducting longitudinal tracking studies or intervention experiments on fictional character attachment among East Asian adolescents to verify the causal effects of the dual-path model and its moderating variables; second, examining whether different types of social stressors—academic competition, family expectations, peer rejection, romantic setbacks, etc.—exert differential effects on attachment formation and consumption behaviors, rather than treating "stress" as a homogeneous variable; third, conducting cross-cultural comparative studies to examine whether collectivist cultural backgrounds lead East Asian youth to favor "escapism" or "fluid compensation" in compensatory strategy selection, as opposed to the "direct resolution" or "symbolic self-completion" preferred by Western individualists.

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