ACADEMICIA: An International Multidisciplinary Research Journal
ISSN: 2249-7137 Vol. 16 Issue 1, January, 2026 SJIF 2022= 8.252
A peer reviewed journal

ONLINE GAMING AND DELAY OF GRATIFICATION IN CHILDREN: A BEHAVIOURAL ANALYSIS

Dr Lav Kumar Singh* & Dr Ruma Kumari Sinha**

*Assistant Professor,
Department of Psychology, A.P.S.M. College,
Barauni, INDIA
Email id: lkumarrsingh@gmail.com

**Assistant Professor,
Department of Psychology, S.K.M. College,
Begusarai, INDIA

DOI: 10.5958/2249-7137.2026.00001.0

ABSTRACT

The rapid expansion of online gaming has transformed children's leisure activities, raising concerns about its influence on self-regulatory behaviours. The present study examined the relationship between online gaming and delay of gratification in children. Using a quantitative, cross-sectional design, data were collected from school-going children aged 8 to 14 years of Begusarai district of Bihar through a gaming behaviour questionnaire and measures of delay of gratification. Online gaming was assessed in terms of frequency, daily duration, and type of games played, while delay of gratification was evaluated through standardized behavioural indicators.

The results revealed a significant negative relationship between online gaming and delay of gratification. Higher gaming frequency and longer daily gaming duration were associated with a reduced ability to delay rewards, indicating a stronger preference for immediate gratification. Children who engaged more extensively in online gaming demonstrated lower levels of self-control in reward-based decision-making. The findings suggested that repeated exposure to fast and immediate digital rewards may influence children's tolerance for waiting and long-term goal orientation.

The study highlights the importance of balanced gaming habits and the need for parental guidance and educational interventions that promote self-regulation skills. The findings contribute to the growing literature on digital media use and child development by focusing specifically on delay of gratification, a foundational component of behavioural regulation in childhood.

KEYWORDS: *Online Gaming, Gratification, Digital Media, And Children.*

INTRODUCTION

The rapid expansion of online gaming has reshaped children's daily routines, creating digital environments filled with fast-paced action, instant feedback, and continuous reward cycles. These design features raise important questions about how digital rewards may influence

children's self-regulatory abilities, particularly their capacity to delay gratification. Delay of gratification—first systematically examined by Walter Mischel through the well-known "Marshm allow Test"—refers to the ability to resist immediate temptations in favour of more valuable, delayed outcomes. Research has consistently shown that children with stronger delay-of-gratification skills tend to display better emotional regulation, higher academic achievement, and more adaptive decision-making later in life (Mischel, Shoda & Rodriguez, 1989). As children increasingly interact with digital platforms that prioritise immediate rewards, behavioural psychologists and educators are questioning whether frequent gaming might weaken the developmental foundations of impulse control.

A growing body of research has explored the psychological effects of digital media exposure. Studies on reward sensitivity suggest that environments offering rapid reinforcement can condition children to expect instant outcomes, thereby reducing their tolerance for waiting (Evans & Stanovich, 2013). Research on online gaming specifically has highlighted associations with impulsivity, reduced executive control, and heightened sensitivity to reward cues. For instance, Craig Anderson and Karen Dill (2000) demonstrated that fast-paced video games may activate automatic behavioural tendencies that favour immediate responses over reflective decision-making. More recent studies report that excessive online gaming is linked with diminished self-regulation, attention difficulties, and impatience in everyday tasks (Lemmens, Valkenburg & Peter, 2011). However, evidence is not uniform. Some researchers argue that strategic or cooperative games may enhance cognitive flexibility and problem-solving, suggesting that the impact of gaming may depend on game type, duration, and motivational context.

Despite these insights, significant gaps remain. First, most existing studies focus on broad constructs such as gaming addiction, aggression, or attention problems, while **delay of gratification** as a distinct behavioural outcome has received far less empirical attention. Second, research that directly connects online gaming's reward structures with children's delay-related behaviours is limited, even though the theoretical connection—between immediate digital rewards and reduced tolerance for delayed outcomes—is strong. Third, many studies rely on general screen-time metrics rather than isolating gaming behaviour, making it difficult to understand the unique contribution of online games. Fourth, there is little evidence on whether different gaming genres (e.g., fast-reward action games vs. slower strategy games) differentially influence children's ability to delay gratification.

Given these gaps, a focused investigation into **the relationship between online gaming and delay of gratification in children** is both timely and necessary. Understanding this relationship can inform parents, educators, mental-health professionals, and policymakers as they navigate the challenges of children's digital engagement. It can also contribute to developmental psychology by clarifying how modern digital reward systems may shape fundamental self-regulatory skills in the formative years.

Research Question

The study has been undertaken to answer the question :Does the frequency of online gaming influence children's ability to delay gratification?

Conceptual Framework

The conceptual framework for this study proposes that online gaming, defined in terms of frequency, duration, and type of game played, influences children's ability to delay gratification. As children engage with digital games that often provide rapid rewards and immediate feedback, their behavioural responses to waiting and reward processing may be shaped by these experiences. The delay of gratification is therefore conceptualised as the outcome variable that captures children's self-regulation capacity and their preference for immediate versus delayed rewards.

Population and Sampling

The population for this study consists of **school-going children**, typically between the ages of **8 and 14 years**, who were actively engaged with digital devices and had some level of exposure to online gaming. This age range is developmentally significant, as children in middle and late childhood are still developing executive functions and self-regulation skills, making them ideal for examining the impact of online gaming on delay of gratification. The population was drawn from selected schools from the Begusarai district of Bihar, ensuring accessibility, cooperation from school authorities, and the ability to collect data in a structured and supervised environment.

The **sample** was selected from this population using a **stratified random sampling technique**, where students were first stratified based on age groups (e.g., 8–10, 11–12, 13–14 years) and gender. This ensures adequate representation of demographic moderators that might influence the relationship between online gaming and delay of gratification. Within each stratum, participants were randomly selected to minimise bias and enhance the generalisability of findings.

The sample size was 150. Inclusion criteria ensured that children must have at least occasional exposure to online gaming, parental consent, and assent from the children themselves. Exclusion criteria included children with diagnosed developmental disorders that significantly affect impulse control, unless specifically accounted for in the research design. By adopting this sampling strategy, the study aimed to obtain a representative and diverse group of participants, enabling a more robust analysis of how online gaming behaviours related to children's ability to delay gratification.

Research Methodology

The present study adopted a **quantitative, cross-sectional research design** to examine the relationship between online gaming and delay of gratification in children. This design is appropriate as it allows the assessment of gaming behaviours and self-regulatory abilities at a single point in time, enabling the identification of patterns and associations among variables. The study followed a **correlational approach**, supplemented with comparative analyses to explore differences across gaming frequency, duration, and types of games. This methodological framework is suitable for investigating behavioural relationships without manipulating variables.

Data was collected in selected schools after obtaining necessary permissions from school authorities and parents. Children who met the inclusion criteria were assessed during school hours in a controlled and familiar environment to reduce anxiety and external distractions. Participants were first completed the gaming behaviour questionnaire. Subsequently, the delay-of-gratification measure a standardized scale was administered individually under the supervision of the researcher.

The data collected from the participants were systematically organised and analysed using appropriate statistical techniques. Initially, the responses obtained from the gaming behaviour questionnaire and delay-of-gratification measures were coded and entered into statistical software for analysis. Descriptive statistics, including means, standard deviations, frequencies, and percentages, were computed to summarise the demographic characteristics of the sample and to provide an overall understanding of online gaming patterns and delay-of-gratification levels among children.

To examine the research question regarding the relationship between online gaming and delay of gratification, **Pearson's correlation analysis** was conducted to determine the strength and direction of the association between gaming frequency, gaming duration, and delay-of-gratification scores.

Result and Discussion

Table 1 Descriptive Statistics of Online Gaming and Delay of Gratification (RQ1)

Variables	N	Mean	SD
Gaming Frequency (days/week)	150	4.62	1.48
Gaming Duration (hours/day)	150	1.87	0.92
Delay of Gratification Score	150	32.45	6.78

Note. Higher scores on delay of gratification indicate greater ability to delay rewards.

Table 2 Correlation Between Online Gaming and Delay of Gratification (RQ1)

Variables	1	2	3
1. Gaming Frequency	—		
2. Gaming Duration	.58**	—	
3. Delay of Gratification	−.41**	−.47**	—

*Note.***p**< .01

The findings of the present study indicated a significant negative relationship between online gaming and delay of gratification in children. As shown in Table 2, both gaming frequency and gaming duration were inversely related to children's ability to delay rewards. These results suggested that greater engagement in online gaming was associated with a stronger preference for immediate gratification. This pattern was consistent with classical and contemporary theories of self-regulation, particularly the work of Mischel, Shoda, and Rodriguez (1989), who emphasised the role of environmental reward structures in shaping children's delay-related behaviours.

The observed association between higher gaming engagement and reduced delay of gratification aligned with prior research indicating that rapid and frequent reward cycles can condition individuals to expect immediate outcomes. Studies on digital media exposure have reported that environments characterised by instant feedback and continuous reinforcement may undermine patience and impulse control (Evans & Stanovich, 2013). Online games, especially fast-paced and reward-heavy ones, operate on similar reinforcement principles, offering immediate points,

levels, or virtual rewards, which may reduce children's tolerance for delayed outcomes in non-digital contexts.

The positive correlation between gaming frequency and gaming duration suggested cumulative exposure effects, where frequent gamers were also those spending longer hours playing. This finding supported earlier studies by Lemmens, Valkenburg, and Peter (2011), who reported that increased gaming time was associated with reduced self-regulation and heightened reward sensitivity in children and adolescents. The present study extended these findings by demonstrating that such gaming patterns were specifically linked to delay-of-gratification abilities, a construct less frequently examined in gaming research.

Furthermore, the variability observed in delay-of-gratification scores (Table 1) indicated that not all children were equally affected by gaming exposure. This finding resonated with developmental research suggesting that self-regulatory capacities are shaped by an interaction of individual differences and environmental influences. Anderson and Dill (2000) argued that repeated exposure to fast-response digital environments can strengthen impulsive response tendencies, particularly in younger users. The present results supported this argument by showing that gaming engagement was meaningfully related to behavioural choices involving waiting and reward evaluation.

Overall, the findings were consistent with a growing body of literature cautioning against excessive exposure to fast-reward digital environments during critical periods of self-regulatory development. While online gaming is not inherently harmful, the results suggested that frequent and prolonged engagement may influence children's reward-processing mechanisms in ways that reduce their ability to delay gratification.

Implications

The findings of the present study carry important implications for parents, educators, mental health professionals, and policymakers concerned with children's behavioural and emotional development in the digital age. The observed negative relationship between online gaming and delay of gratification suggests that excessive exposure to fast-reward digital environments may influence children's self-regulatory capacities, particularly their ability to wait for outcomes and regulate impulses. This highlights the need for a balanced and developmentally sensitive approach to children's digital engagement rather than an outright restriction of gaming activities.

For parents and caregivers, the study underscores the importance of monitoring not only the duration of children's gaming but also the frequency and type of games played. Encouraging structured routines that balance screen-based activities with offline tasks requiring sustained effort—such as reading, creative play, or sports—may help strengthen children's capacity for delayed rewards. Parental guidance that includes setting consistent screen-time boundaries and discussing the value of patience and long-term goals can support the development of healthy self-control.

From an educational perspective, the findings suggest that schools have a vital role in fostering self-regulation skills. Integrating activities that promote persistence, delayed rewards, and goal-oriented behaviour into classroom practices can help counterbalance the immediacy of digital reinforcement. Teachers may also benefit from greater awareness of how excessive gaming might manifest in classroom behaviour, such as impatience or difficulty sustaining attention, enabling early identification and supportive intervention.

At a broader level, the study provides evidence relevant to mental health professionals and policymakers involved in child development and digital well-being. Practitioners may consider assessing gaming habits as part of routine evaluations for impulsivity or self-regulation concerns. Policymakers and child welfare organisations may use these findings to inform guidelines on age-appropriate gaming practices and to advocate for responsible game design that does not excessively rely on instant reward mechanisms. Overall, the study contributes to a growing understanding of how digital environments interact with developmental processes and emphasises the need for collaborative efforts across families, schools, and policy frameworks to support children's long-term behavioural health.

REFERENCES

1. Anderson, C. A., & Dill, K. E. (2000). Video games and aggressive thoughts, feelings, and behavior in the laboratory and in life. *Journal of Personality and Social Psychology, 78*(4), 772–790. https://doi.org/10.1037/0022-3514.78.4.772
2. Evans, J. S. B. T., & Stanovich, K. E. (2013). Dual-process theories of higher cognition: Advancing the debate. *Perspectives on Psychological Science, 8*(3), 223–241. https://doi.org/10.1177/1745691612460685
3. Gentile, D. A. (2009). Pathological video-game use among youth ages 8 to 18: A national study. *Psychological Science, 20*(5), 594–602. https://doi.org/10.1111/j.1467-9280.2009.02340.x
4. Lemmens, J. S., Valkenburg, P. M., & Peter, J. (2011). Psychosocial causes and consequences of pathological gaming. *Computers in Human Behavior, 27*(1), 144–152. https://doi.org/10.1016/j.chb.2010.07.015
5. Mischel, W., Shoda, Y., & Rodriguez, M. L. (1989). Delay of gratification in children. *Science, 244*(4907), 933–938. https://doi.org/10.1126/science.2658056
6. Mischel, W. (2014). *The marshmallow test: Mastering self-control*. Little, Brown and Company.
7. Nigg, J. T. (2017). Annual research review: On the relations among self-regulation, self-control, executive functioning, effortful control, cognitive control, impulsivity, risk-taking, and inhibition. *Journal of Child Psychology and Psychiatry, 58*(4), 361–383. https://doi.org/10.1111/jcpp.12675
8. Odgers, C. L., & Jensen, M. R. (2020). Annual research review: Adolescent mental health in the digital age. *Journal of Child Psychology and Psychiatry, 61*(3), 336–348. https://doi.org/10.1111/jcpp.13190
9. Przybylski, A. K., & Weinstein, N. (2017). A large-scale test of the Goldilocks hypothesis: Quantifying the relations between digital-screen use and mental well-being in adolescents. *Psychological Science, 28*(2), 204–215. https://doi.org/10.1177/0956797616678438