
The Mediating role of Social Support in the relationship between Perceived Need Satisfaction and Gaming Addiction among Adolescents

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Abstract

Individuals whose perceived psychological needs (Autonomy, competence and relatedness) are satisfied and have adequate social support tend to rely less on their environment and exhibit greater autonomy. To examine the relationship between perceived need satisfaction and gaming addiction, with social support as a mediator, among adolescents aged 16–19 years. The research used a quantitative design with a sample of 300 students from colleges, focusing on those who play video games daily. Data was collected using the Basic Psychological Needs Satisfaction Scale (BPNSS) by (Deci and Ryan, 2000), the Multidimensional scale of Perceived Social Support (MSPSS) by (Zimet et al., 1988), and the Gaming Addiction Scale for Adolescents (GASA) by (Lemmens et al., 2009). Pearson correlation coefficient, independent sample t-test, and mediation analysis were used for data analysis. The findings indicated a significant negative correlation between perceived need satisfaction and gaming addiction ($r = -0.30, p < .01$), and a significant positive correlation between social support and gaming addiction ($r = 0.50, p < .01$). Furthermore, Mediation analysis revealed that social support fully mediated the relationship between perceived need satisfaction and gaming addiction, with perceived need satisfaction positively predicting social support ($\beta = .44, p < .001$) and social support negatively predicting gaming addiction ($\beta = -.41, p < .001$). An independent samples t-test revealed that male adolescents scored significantly higher on gaming addiction than females ($4.71, p < .001$). Understanding the link between perceived psychological needs, social support, and gaming addiction can help inform targeted interventions to reduce gaming addiction among adolescents.

Keywords: Gaming addiction, Social Support, Perceived Psychological Need and Students

Introduction

Over the past few decades, playing video games has grown in popularity as a pastime. According to data from the Entertainment Software Association (ESA), 70% of people under the age of 18 frequently play video games, and 75% of US households have at least one video game player (Entertainment Software Association, 2018). While online gaming satisfies different needs for different people, when activity becomes an addiction has negative consequences on individuals, particularly teenagers whose mental health suffers (Batmaz et al., 2020).

According to the Self-Determination Theory (SDT), relatedness, competence, and autonomy are perceived psychological needs that are critical to personal growth and well-being (Deci & Ryan, 2000). People may look for other sources of fulfillment if these needs are not met. When it comes to gaming addiction, the virtual world gives players the chance to fulfill needs that they might not be able to in their real-world lives.

Additionally, social support may act as a mediating factor in the relationship between perceived need satisfaction and gaming addiction

Perceived Need Satisfaction refer to an individual's personal experience of having their essential psychological needs fulfilled in daily life. While there are many human needs identified in psychological theories, this study specifically focuses on the Basic Psychological Needs proposed by Self-Determination Theory (Deci & Ryan, 2000). Autonomy is the psychological need to feel that one's actions are self-chosen and guided by personal interests rather than external control. Competence is the psychological need to feel capable, effective, and successful when dealing with challenges and tasks.

Relatedness is the psychological need to feel emotionally connected, valued, and supported by others. Social support is considered a crucial variable in understanding behavioral outcomes such as gaming addiction. Social support may act as a mediator between perceived need satisfaction and gaming addiction. When individuals experience unmet psychological needs, the level of social support they receive from family and peers can influence how they cope with these feelings.

Gaming addiction is a behavioral pattern characterized by excessive and compulsive gaming that negatively affects social, academic, and personal functioning. Symptoms include loss of control, withdrawal, tolerance, and continued gaming despite negative consequences. Research shows that gaming addiction can lead to poor academic performance, sleep problems, social isolation, and increased anxiety (Király et al., 2023; Zaman et al., 2022). When psychological needs like autonomy, competence, and relatedness are not satisfied in real life, individuals may turn to gaming to temporarily fulfill these needs, which may increase the risk of addictive behavior.

Self-Determination Theory (SDT):

SDT (Deci & Ryan, 1985) states that autonomy, competence, and relatedness are basic psychological needs essential for well-being. When these needs are unmet, individuals may turn to online gaming to experience control, achievement, and social connection, which can increase the risk of gaming addiction.

Compensatory Internet Use Theory:

This theory (Kardefelt-Winther, 2014) suggests that people use the internet or gaming to cope with stress, loneliness, or unmet needs. Over time, using gaming as an escape from real-life problems may lead to excessive or addictive gaming.

Social Support Buffering Theory (Cohen & Wills, 1985):

This theory suggests that social support acts as a buffer against stress and negative psychological outcomes. Strong support from family and friends can reduce the impact of unmet psychological needs and lower the risk of maladaptive behaviors such as gaming addiction. Conversely, low social support weakens this buffer, increasing vulnerability to stress and addictive behaviors (Cohen & Wills, 1985).

Literature Review

For any researcher, it needs to be emphasized that reviewing studies related to their area of investigation is essential, as it provides information about what has already been done in the field and gives direction to the present study.

Naeem et al. (2025) examined the relationship between emotional regulation and video game addiction among 298 adolescents, with perceived social support as a mediator. The results showed a significant relationship, indicating that better emotional regulation is linked to lower gaming addiction. Additionally, perceived social support mediated this relationship.

Meng et al. (2024) examined the relationship between low self-control, perceived social support, and internet gaming addiction among adolescents in China. Using a sample of 1,997 participants, the study found that low self-control was positively associated with gaming addiction, while social support showed a negative

relationship. Family and significant other support also moderated the link between low self-control and gaming addiction. The findings highlight the protective role of social support and the importance of culturally sensitive interventions.

Kaya et al. (2023) investigated how the fulfillment of basic psychological needs—autonomy, competence, and relatedness—affects online gaming addiction among adolescents aged 14 to 19, with a sample size of 500 participants. The findings indicated that unmet psychological needs increase reliance on gaming as an alternative source of satisfaction, leading to addictive behaviors.

Objective

The study aimed to assess the relationship among Basic Psychological Need Satisfaction, Social Support, and Gaming Addiction, and to investigate the mediating role of Social Support in the relationship between Basic Psychological Need Satisfaction and Gaming Addiction among adolescents.

Hypotheses

- **H1:** There is likely to be a significant negative relationship between Perceived need satisfaction and gaming addiction among adolescents.
- **H2:** Perceived need satisfaction is likely to be positively associated with social support among adolescents.
- **H3:** Social support is likely to mediate the relationship between perceived need satisfaction and gaming addiction among adolescents
- **H4 :** Male adolescents are likely to exhibit significantly higher levels of gaming addiction compared to female adolescents.

Research Gap: The Mediating Role of Social Support

Although previous studies show that unmet psychological needs contribute to gaming addiction, the mechanism linking these needs to addictive behavior remains unclear. Self Determination Theory highlights autonomy, competence, and relatedness as core needs, and when these are unsatisfied, adolescents may turn to gaming for control, achievement, and social connection. However, the protective role of social support as a mediator in this process has been largely overlooked. This study fills that gap by exploring how perceived need satisfaction influences gaming addiction through social support, offering insights that can guide more effective prevention and intervention strategies.

Method

Research Design

Correlational research design was used to examine the relationships between Perceived need satisfaction, social support, and gaming addiction among adolescents in Pakistan. Non probability purposive sampling was used to collect data because the participants who play video games are required.

Sample

The study sample comprised 300 male and female adolescent students (aged 16–19 years) enrolled in intermediate and second-semester programs.

Inclusion Criteria

- Adolescents aged 16-19 years.
- Adolescents must be in intermediate or 2nd semester
- Regular gamers (at least 2 hours per day).

Exclusion Criteria

- Adolescents who do not meet the minimum gaming frequency criteria.

Operational Definitions

Perceived need satisfaction, social support and gaming addiction were the variables.

Perceived Need Satisfaction: The extent to which an individual feels their basic psychological needs—autonomy, competence, and relatedness—are fulfilled, measured via self-report questionnaires (Deci & Ryan, 2000).

Social Support: An individual's perceived availability and adequacy of support from family, friends, and significant others, assessed using the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988).

Gaming Addiction: Excessive or compulsive gaming that impairs social, academic, or personal functioning, measured using the Game Addiction Scale for Adolescents (Lemmen)

Instruments

To measure the three primary constructs, three standardized and validated scales were utilized:

Demographic Information sheet

Demographic sheet was constructed to acquire demographic information including age, gender, Class, screen time, family structure and access to technology

Basic Psychological Needs Satisfaction Scale (BPNSS)

The BPNSS (Deci & Ryan, 2000) measures autonomy, competence, and relatedness through 21 items. It uses a 7-point Likert scale, where higher scores indicate greater psychological need satisfaction.

Gaming Addiction Scale for Adolescents (GASA)

The GASA (Lemmens et al., 2009) assesses gaming addiction through 21 items covering excessive use, loss of control, and withdrawal. It is rated on a 5-point Likert scale, with higher scores reflecting greater gaming addiction.

Multidimensional Scale of Perceived Social Support (MSPSS)

The MSPSS (Zimet et al., 1988) measures perceived support from family, friends, and significant others using 12 items. It uses a 7-point Likert scale, where higher scores indicate greater perceived social support.

Procedure

A sample of 300 students was selected through purposive sampling. Data were collected using a Google Form that included informed consent, demographic information, and standardized scales measuring perceived need satisfaction, social support, and gaming addiction. Participants were recruited via academic networks and social media, and participation was voluntary and anonymous, with an average completion time of 10–12 minutes. The responses were screened for completeness and accuracy, then prepared for statistical analysis using SPSS.

Ethical Considerations

Permissions were obtained, and informed consent, confidentiality, voluntary participation, and the right to withdraw were ensured. Data were securely stored and participants were debriefed.

Data Analysis Technique

The finalized dataset was analyzed using SPSS for descriptive statistics, Pearson Correlation and mediation analysis to test the role of social support between perceived need satisfaction and gaming addiction.

Result

The results of the current research are presented to assess the relationship between Perceived Need Satisfaction, Social Support and Gaming Addiction in adolescents.

4.1 Reliability Analysis

Psychometric Properties & Reliability Analysis (N=300)

Scales	M	SD	Range	α
Basic Psychological Need Satisfaction scale	87.77	20.02	21-147	.834
Multidimensional scale of perceived social support	47.64	17.75	12-84	.908
Gaming Addiction Scale	64.26	15.54	21-103	.908

Reliability analysis indicates high internal consistency for all scales ($\alpha = .834$ to $.908$), demonstrating that the measures used in the study are reliable.

4.2 Pearson Product Moment Correlation

Table 4.2

Relationship among study variables

Variable	n	M	SD	1	2	3	4	5
Autonomy	300	16.25	5.04	1				
Competence	300	25.80	5.74	.526**	1			
Relatedness	300	33.31	9.21	.673**	.649**	1		
Multidimensional Scale of Perceived Social Support	300	47.63	17.75	.458**	.325**	.508**	1	
Gaming Addiction Scale	300	64.24	15.54	-.331**	-.129*	-.307**	-.501**	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlation analysis revealed that autonomy, competence, and relatedness were positively and significantly interrelated, and also showed significant positive associations with perceived social support. In contrast, gaming addiction was found to be significantly and negatively correlated with autonomy ($r = -.331$, $p < .01$), competence ($r = -.129$, $p < .05$), relatedness ($r = -.307$, $p < .01$), and social support ($r = -.501$, $p < .01$), indicating that higher levels of need satisfaction and social support are associated with lower gaming addiction among adolescents.

Table 4.3

Independent sample t-test was conducted to explore mean differences on GA among Adolescents (N=300)

Variables	Male N= 162		Female N=138		t(df)	p	Cohen's d
	M	SD	M	SD			
Gaming Addiction	68.13	12.60	59.60	17.39	4.71(289)	.00	.561

Note. *CI=Confidence Interval, UL=Upper limit, LL=Lower limit, M=Mean, SD=Standard deviation, GA =Gaming addiction, *p<.05, **p<.01, ***p<.001,*

An independent samples t-test showed that males (M = 68.13, SD = 12.60) scored significantly higher on gaming addiction than females (M = 59.60, SD = 17.39), $t(289) = 4.71$, $p < .001$. The effect size was moderate ($d = .561$), indicating a meaningful gender difference in gaming addiction levels.

Table 4.4**Mediation Analysis**

Regression Coefficients, Standard Error, and Model Summary Information for the Mediation Analysis (N=300)

Consequent								
MSPSS (M)					GAS (Y)			
Antecedent		β	SE	P		β	SE	p
BSNSS (X)	A	0.44	0.05	.000***	c'	-0.06	0.04	.174
MSPSS (M)	---	---	---	---	b	-0.41	0.05	.000***
Constant	I	9.20	4.03	.023*	i	88.94	3.55	.000***
$R^2 = .25$					$R^2 = .26$			
$F(1, 288) = 94.57$, $p < .001$					$F(2, 287) = 49.23$, $p < .001$			

Note. BSNSS = Basic Psychological Need Satisfaction and Frustration Scale; MSPSS = Multidimensional Scale of Perceived Social Support; GAS = Gaming Addiction Scale.

* $p < .05$, ** $p < .01$, *** $p < .001$, $p > .05$.

Regression and mediation analysis revealed that perceived need satisfaction significantly predicted social support ($\beta = .44$, $p < .001$), explaining 25% of the variance. Furthermore, social support significantly predicted gaming addiction ($\beta = -.41$, $p < .001$), while the direct effect of need satisfaction on gaming addiction was non-significant ($\beta = -.06$, $p = .174$), indicating full mediation

Discussion

The present study examined the relationship between perceived need satisfaction (PNS), social support (SS), and gaming addiction (GA) among adolescents. The findings revealed that both PNS and social support were negatively associated with gaming addiction, while PNS showed a positive association with social support. These results suggest that adolescents with unmet psychological needs and lower levels of social support are more likely to engage in excessive gaming behaviors.

Consistent with **H1**, the study found a significant negative relationship between perceived need satisfaction and gaming addiction among adolescents. This indicates that adolescents whose basic psychological needs (autonomy, competence, and relatedness) are fulfilled are less likely to develop addictive gaming patterns. These findings are supported by previous studies such as Zoghipaydar et al. (2023), Zeren (2021), and Meng et al. (2024), which reported that unmet psychological needs increase vulnerability to gaming addiction, as individuals may turn to virtual environments to compensate for real-life deficiencies.

In line with **H2**, perceived need satisfaction was positively associated with social support, suggesting that adolescents with greater satisfaction of their basic psychological needs tend to perceive stronger support from family, friends, and significant others. This finding is consistent with Kaya et al. (2023), who reported that fulfillment of psychological needs enhances social functioning and strengthens supportive interpersonal relationships.

Supporting **H3**, the findings confirmed that social support significantly mediated the relationship between perceived need satisfaction and gaming addiction. This suggests that adolescents with greater satisfaction of their psychological needs are more likely to perceive stronger social support, which in turn reduces their tendency toward gaming addiction. These findings are consistent with previous research (Cui & Chi, 2021; Uçur & Dönmez, 2021), highlighting social support as an important protective factor that buffers the negative effects of unmet psychological needs and decreases problematic gaming behaviors.

Finally, consistent with **H4**, the study found that male adolescents exhibited significantly higher levels of gaming addiction than female adolescents. This finding is in line with previous literature (e.g., Zeren, 2021; Li et al., 2023), which consistently reports that males are more engaged in gaming activities and are at greater risk of developing problematic gaming behaviors.

Overall, the findings support the proposed hypotheses and extend the existing literature by demonstrating the mediating role of social support in the relationship between perceived need satisfaction and gaming addiction, thereby providing a more comprehensive understanding of gaming addiction among adolescents.

Limitations

- The study used a cross-sectional design, which limits the ability to establish causal relationships.
- Data were based on self-report measures, which may be influenced by social desirability bias.
- The sample was limited to adolescents from a specific educational context, which may reduce generalizability.
- Other potential factors (e.g., personality traits, family environment) were not included in the model.

Suggestions

- Future research should use longitudinal designs to better examine causal relationships.
- Mixed-method approaches (qualitative + quantitative) may provide deeper insights.
- Studies should include more diverse and larger samples for better generalization.
- Additional variables such as personality, parenting style, and emotional regulation should be explored.

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