

Problematic Online Gaming and Aggressive Behaviour among Young Adults in Pakistan

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Abstract: *There is a growing prevalence of young adults engaging in online gaming for entertainment purposes. However, the literature indicates that excessive or problematic online gaming is associated with aggressive behavior, although such studies are very limited in the context of Pakistan. Therefore, the objective of this study is to address this gap in the literature and provide useful implications for young adults. The study adopted a cross-sectional correlational design and employed a purposive sampling technique. Data were collected from 235 young adults between the ages of 18 and 25, with a minimum educational qualification of intermediate level, all of whom had been playing online games for at least one year. Two questionnaires were used in the study: the Gaming Addiction Scale for Adolescents (21 items) and the Buss and Perry Aggression Questionnaire (29 items) to measure the study variables. The correlational analysis revealed a significant positive association between problematic online gaming and aggressive behavior among young adults. Regression analysis further demonstrated that problematic online gaming has a positive and significant effect on aggressive behavior among young adults in Pakistan. The study concludes by offering practical implications for supporting young adults. These include raising awareness through mental health professionals, psychoeducating young adults about seeking psychological help, encouraging positive parental involvement, and emphasizing the importance of social connectedness to enhance well-being and help them become productive members of society.*

Keywords: Problematic Online Gaming, Aggressive Behaviour, Young Adults

Introduction

The world is becoming more modern and technological day by day. Business, education, entertainment, and relationship-building are shifting to online platforms (Adam et al., 1997; Khan et al., 2024; Wirtz, 2024). However, the excessive use of technology, specifically online gaming, known as problematic online gaming, has a detrimental effect on mental health, adverse well-being, and clinically impairs daily routines (Li et al., 2024; Wong et al., 2020). Several previous and recent studies have demonstrated that problematic use of online games among young cohorts is associated with aggressive behaviour and adverse well-being (Altın, 2025; Bashir et al., 2024; Hammad & Al-Shahrani, 2024).

Aggressive behaviour can be defined as behaviour intended to harm another person who is trying to avoid harm (Buss & Perry, 1992). A recent study on the association between PUBG addiction, a well-known online game, and aggression among young adults depicts a significant positive association between these two variables (Shahid & Yaseen, 2025). Another recent study on the violent game Clash of Clans also shows a positive and significant association between these variables among young cohorts (Shahid et al., 2025). Problematic use of the online game Ludo among young adults is also significantly and positively associated with aggression, according to a previous study (Bashir et al., 2024).

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The General Aggression Model was developed by Anderson and Bushman in [2002](#). This model is usually used for the theoretical framework as this theory deals with excessive online games leading toward aggression. This happens because exposure to violent video games elevates aggressive cognition, aggressive attitude, as well as aggressive physiological functioning (Anderson & Bushman, [2001](#); Anderson & Dill, [2002](#); Gentile et al., [2014](#)). This is the result of learning from constant violent video games as well as reinforcement from playing such games (Bresin & Hunt, [2025](#); Bushman & Huesman, [2014](#); Suer et al., [2015](#)). According to a previous study general aggression demonstrates that the genre of the game is important, as individuals who play excessively or become overly involved with certain games tend to exhibit aggressive behavior due to the features of those games (Allen et al., [2018](#)). The pathological game player is showing physical aggression in the real world as the personality changes take place (Bensley & Van Eenwyk, [2001](#)). In [1977](#), Albert Bandura introduced the social learning theory, it is a theory that states about social learning. The theory also states new behavior can be learned by imitating and observing others. Learning is also enhanced by vicarious reinforcement and punishment. Similarly, when the behaviour of game addiction is constantly rewarding then that specific behaviour is most likely to persist in the players (Abbasi et al., [2015](#)).

Shahid et al. ([2024](#)) stated that excessive playing of the online Ludo game leads to aggressive behaviour among young cohorts due to the negative emotions associated with playing. One more similar study depicted that online excessive Ludo game is associated with aggression among Pakistan young adults, the study discussed useful implications and encourage more similar studies (Musasawar et al., [2024](#)). However, there is limited literature regarding problematic online gaming and aggressive behaviour among young adults in Pakistan. Therefore, the objective of this study is to address this literature gap and propose targeted interventions for young adults to enhance their wellbeing.

Research Questions

1. Is there a positive relationship between problematic online gaming and aggressive behaviour among young adults in Pakistan?
2. Does problematic online gaming have a significant positive effect on aggressive behaviour among young adults in Pakistan?

Research Objectives

1. To examine the relationship between problematic online gaming and aggressive behaviour among young adults in Pakistan.
2. To assess the effect of problematic online gaming on aggressive behaviour among young adults in Pakistan.

Hypothesis

H1: There is likely to be a positive relationship between problematic online gaming and aggressive behaviour among young adults in Pakistan.

H2: There is likely to be a positive and significant effect of problematic online gaming on aggressive behaviour among young adults in Pakistan.

Method

The current study adopted a cross-sectional correlational design and purposive sampling technique to collect data from 235 young cohorts, both male and female, with at least an intermediate level of education. Participants included both employed and unemployed individuals who had been playing online games for at least one year and were citizens of Pakistan.

Assessment Measures

The Gaming Addiction Scale for Adolescents was used to measure problematic online gaming. Developed by Lemmens, J. S., Valkenburg, P. M., & Peter, J. in 2009, this scale consists of 29 items on a Likert scale, with scores ranging from "never" (1) to "very often" (5). The Cronbach's alpha reliability for this scale was 0.94. The Buss-Perry Aggression Questionnaire, developed by Buss and Perry in 1992, was used to measure

aggression. The scale comprises 29 items, with items 6 and 19 being reverse scored, and is based on a five-point Likert scale. The Cronbach's alpha reliability for this scale was 0.91.

Ethical Considerations and Procedure

All ethical standards as per APA 7 were followed. This included obtaining permission from the institution before data collection, emailing authors for permission to use the instruments, and approaching participants with a written form. The form explained the voluntary nature of participation, the right to withdraw at any point, and provided a brief description of the study's objectives. Upon signing the consent form, participants were given the questionnaires, which included a demographic questionnaire and study questionnaires. The collected data was entered into SPSS version 29 for data analysis.

Result

Table 1

Characteristics of Participants (N= 235)

Sample Characteristics	f	%	M	SD
Are you playing online games for past 1 year?				
Yes	235	100		
No	0	0		
Age			22.20	1.91
Gender				
Men	181	77		
Women	54	23		
Employment Status				
Employed	94	40		
Unemployed	141	60		

Note: f=frequency, %=Percentage, M=Mean, SD=Standard deviation

The demographic table shows that 235 participants in the study have been playing online games for the past year, with a mean age of 22.20 ± 1.91 . The gender distribution reveals that most participants are men (181, 77%), while a minority are women (54, 23%). The employment status of the participants indicates that the majority are unemployed (141, 60%), while 94 participants (40%) are employed.

Table 2

Correlation among study variables (N=235).

Variables	1	2
1. Problematic Online Gaming	-	.88**
2. Aggressive Behaviour		

Note. **p<.01

The table above shows problematic online gaming is positively as well as significantly associated with aggressive behaviour.

Table 3

Regression Analysis (N=235)

	B	SE	β	R	R ²	F	95% CI	
Variables							LL	UL
				.88	.78	858.34		
Constant	15.93	2.46					11.08	20.78
POG	1.14	.03	.88				1.07	1.22

Note. POG = Problematic Online Gaming, ***P<.001

The above table depicts problematic online gaming as predictors of outcome variable aggressive behaviour. Problematic online gaming positively and significantly predicts aggressive behaviour ($\beta=.88^{***}$, $R^2=.78$, $F=858.34$, $^{***} p<.001$) and its accounts for 78% variance in aggressive behaviour.

Discussion

There is very limited literature regarding problematic online gaming and aggressive behavior in Pakistan. Therefore, the objective of the study is to fill this gap by investigating the relationship among young adults to develop targeted interventions.

The first hypothesis of the study stated that there is likely to be a positive and significant association between problematic online gaming and aggressive behaviour among young adults in Pakistan. The results supported this hypothesis, as the correlational analysis revealed a positive and significant relationship between problematic online gaming and aggressive behavior in this population. This means that as problematic online gaming increases among young adults in Pakistan, aggressive behaviour also tends to increase. These findings are consistent with previous indigenous studies. For example, Kausar et al. (2024) found that problematic use of the online game PUBG is associated with aggressive behavior among young cohorts in Pakistan. Similarly, Shahid et al. (2024) reported that use of the online Ludo game is linked to aggressive behavior due to the negative emotions it provokes. Cultural factors may help explain these associations. In Pakistan, limited recreational opportunities for young adults, strict adherence to religious and societal norms, and a conservative cultural environment may contribute to the development of aggression in response to gaming. Additional psychological factors—such as the competitive nature of online games, frustration from unmet gaming goals, aggressive game content, and poor emotional regulation—also play a role. Furthermore, since the majority of participants in this study were male, biological factors such as testosterone, which is linked to aggression, may also help explain these findings.

The second hypothesis of the study stated that there is likely to be a positive and significant effect of problematic online gaming on aggressive behaviour among young adults in Pakistan. This hypothesis was supported by the regression analysis, which showed that problematic online gaming positively and significantly predicts aggressive behaviour, accounting for 78% of the variance in aggression scores among young adults in Pakistan. The results of this study are consistent with previous research. For instance, one study found that PUBG use among young adults in Pakistan positively and significantly predicted aggression (Shahid & Faiqa, 2025).

Another similar study aligned with our findings, indicating that addiction to Clash of Clans significantly predicted aggressive behaviour in young adults in Pakistan (Shahid et al., 2025). Additionally, other studies have reported that addiction to games like Ludo can also predict aggression among university students, with such problematic behavior contributing to poor psychological well-being (Bashir et al., 2024). Cultural factors may also play a role in the link between problematic online gaming and aggression. These include limited recreational opportunities for young adults, a conservative culture with strict adherence to religious norms, and psychological factors such as the competitive nature of gaming, frustration from unmet gaming goals, aggressive content within games, and poor emotional regulation. Furthermore, since the majority of participants in this study were male, biological factors such as testosterone—known to be associated with aggression—may also help explain the results.

Limitations and Recommendations

There are several limitations in this study that should be addressed in future research, such as the limited sample size (235 participants) and the narrow age range (18 to 25 years). Future studies could expand the age range to include individuals up to 30 years old and determine the sample size using the G*Power formula to ensure adequate representation of the population. The study did not account for educational qualifications (e.g., intermediate, bachelor's, master's), so future research should include this demographic factor. Additionally, socioeconomic status should not be overlooked. Although the study measured certain demographics such as employment status and gender, these categories were not balanced. Future studies need to ensure a more balanced distribution across demographic categories to allow for meaningful comparisons between subgroups in relation to the study variables. Moreover, future

research should include the specific names of games played by participants to analyze mean differences and determine which games are more strongly associated with aggressive behavior. This would help in drawing more precise and actionable implications.

Implications

The findings of the study highlight the need for targeted interventions for young adults in Pakistan. First, there is a lack of awareness regarding problematic online gaming and aggressive behaviour. Therefore, mental health professionals should raise awareness through media, social media, webinars, seminars, workshops, and community outreach initiatives. Young adults should be encouraged to seek psychological help if they find themselves becoming obsessed with online gaming or exhibiting aggressive behaviour, as therapy can be an effective solution. Parents also need to spend quality time with their children, rather than overlooking or ignoring problematic behaviors related to gaming and aggression. It is important to encourage young adults to engage in face-to-face social interactions, as this enhances socialization and contributes to better overall well-being

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