

Loneliness as a predictor of parasocial relationships among young adult genshin impact players

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ABSTRACT

Purpose: to examine whether loneliness significantly predicts parasocial relationships among young adult genshin impact players.

Method: this study used a quantitative predictive correlational design involving 218 young adult genshin impact players aged 18–40 years. Data were collected using the UCLA Loneliness Scale Version 3 and the multiple parasocial relationship scale, adapted to the genshin impact context. The data were analyzed using simple linear regression to examine whether loneliness significantly predicted parasocial relationships.

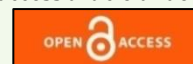
Findings: loneliness significantly and positively predicted parasocial relationships among young adult genshin impact players. However, loneliness explained only a small proportion of the variance in parasocial relationships, indicating that other factors also contribute to the development of parasocial relationships.

Implications: to a broader understanding of parasocial relationships by highlighting the psychological relevance of loneliness in players' emotional involvement with fictional game characters.

Originality: this study provides novel evidence on the predictive role of loneliness in parasocial relationships with fictional and interactive game characters, specifically among young adult genshin impact players.



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Introduction

The rapid development of digital media and online gaming has created new ways for individuals to interact with virtual media figures (Zakaria et al., 2022). One game that has gained substantial global popularity is genshin impact, an open-world action role-playing game (RPG) developed by miHoYo and released in 2020 (Y. Wang, 2026). Since its release, the game has attracted players from various countries and received considerable international attention (Adams, 2022; Coe & Yang, 2022). Five years after

its initial release, genshin impact continues to maintain a large player base, with an estimated 11.1 million monthly active players in 2026 (ActivePlayer, 2026). Beyond its gameplay mechanics, one factor contributing to the game's sustained popularity is its narrative structure and extensive characterization (Zaini et al., 2025). The game follows the Traveler, an individual from another world who travels across Teyvat in search of a lost twin (Greting et al., 2022). Throughout the journey, players encounter and obtain numerous playable characters, each with distinctive personalities, backgrounds, narratives, and dialogue (Aljammaz et al., 2023). This extensive characterization allows players to repeatedly encounter and learn about characters through quests, dialogue, character stories, events, and other in-game content (Masoud & Muhanna, 2026). Consequently, characters in genshin impact may function not merely as gameplay elements but also as media figures with whom players can develop meaningful psychological connections.

The extensive representation of characters in genshin impact has contributed to various forms of emotional and behavioral involvement among its players (Chang & Tang, 2025; Woods, 2024). Players may follow the development of their favorite characters, consume character-related content outside the game, create or engage with fan works, collect merchandise, invest financial resources to obtain specific characters, and repeatedly engage with the game because of their attachment to particular characters (X. Wang & Zhang, 2026). In some cases, players may also perceive characters as sources of emotional comfort or describe them using relational terms typically associated with interpersonal relationships, such as a partner, spouse, or ideal romantic figure (Gao et al., 2025; X. Wang et al., 2025). These behaviors suggest that engagement with game characters may extend beyond functional involvement in gameplay and develop into a more personal form of attachment. This attachment is particularly relevant to the study of parasocial relationships because media figures can become psychologically meaningful to individuals even without reciprocal interpersonal interaction (Hoffner & Bond, 2022).

Preliminary interviews conducted by the researcher further illustrate this phenomenon among genshin impact players. In interviews conducted on June 10 and June 16, 2026, participants described different forms of emotional involvement with their favorite characters. One participant reported being attracted to Varka because of his cheerful personality and character design and stated that seeing the character when opening the game generated positive feelings and encouraged continued gameplay. Another participant described Zhongli as a comfort character and reported feeling safe and comfortable when interacting with the character in the game. A third participant reported romantic attraction toward Varka and Wriothesley based on their perceived physical and personality characteristics, while another participant described Aether as a spouse and Wanderer as a boyfriend. These accounts demonstrate that players may develop different levels and forms of psychological involvement with game characters, ranging from interest in their narratives and personalities to feelings of comfort, romantic attraction, and the assignment of interpersonal roles to fictional characters.

The phenomenon is also reflected in online fan communities. A preliminary observation by the researcher on platform X identified several posts illustrating emotionally intimate and romanticized perceptions of genshin impact characters (Chang & Tang, 2025). For example, some users referred to characters such as Kaeya, Wanderer, and Kokomi as potential spouses, while others expressed desires to receive comfort from Kazuha, go on dates with him, and live together. Another user described an imagined desire to marry Zhongli and have children with him. Although such

expressions are not necessarily indicators of problematic psychological functioning, they illustrate how fictional characters can acquire interpersonal and emotional significance for players. This phenomenon matters because parasocial relationships may provide perceived emotional benefits and can fulfil certain emotional needs (Lotun et al., 2024). Therefore, understanding why some players develop stronger parasocial relationships with virtual characters is an important psychological question, particularly in increasingly immersive and interactive digital environments.

The psychological construct relevant to this phenomenon is the parasocial relationship (PSR). Horton & Wohl (1956) originally introduced the concept of parasocial interaction to describe the illusion of a reciprocal relationship between media audiences and media figures. In subsequent developments of the concept, a parasocial relationship has been understood as a relatively enduring, one-sided relationship that an individual perceives toward a media persona despite the absence of reciprocal interpersonal interaction (Liebers & Schramm, 2019; Tukachinsky, 2010). Parasocial relationships may take different forms, including para-friendships and para-romantic relationships, indicating that the degree of psychological involvement can range from companionship to romantic attachment (Tukachinsky, 2010). Importantly, PSR development is not limited to traditional celebrities or television characters. The interactive and recurring nature of digital games may provide additional opportunities for players to repeatedly encounter, observe, control, and engage with virtual characters. Previous research suggests that interactivity can strengthen parasocial relationships because interactive media provide greater opportunities for involvement and psychological engagement than non-interactive media (Tukachinsky et al., 2020). Nevertheless, imagination remains an important mechanism through which individuals construct and maintain parasocial relationships (Tukachinsky, 2015).

One psychological factor that may contribute to the development of parasocial relationships is loneliness. Russell (1996) defines loneliness as a subjective emotional state that occurs when an individual's perceived social relationships do not correspond to the relationships they desire. Loneliness is therefore not merely the objective absence of social interaction but reflects a perceived discrepancy between desired and existing social relationships. From this perspective, individuals experiencing greater loneliness may seek alternative sources of companionship, emotional connection, and social fulfillment. Parasocial relationships may provide one such source because individuals can perceive media figures as companions and feel closeness despite the absence of reciprocal interaction (Zafina & Sinha, 2024). Research has shown that parasocial relationships may provide perceived emotional support, companionship, and comfort, and may be associated with reduced feelings of loneliness (Liebers & Schramm, 2019; Lotun et al., 2024). Thus, loneliness may be theoretically relevant as a factor that motivates individuals to establish stronger psychological connections with media figures.

The relationship between loneliness and parasocial relationships is particularly relevant during young adulthood. Young adulthood is a developmental period marked by major changes in interpersonal relationships and a growing emphasis on intimacy and social connection (Langheit & Poulin, 2022). Arnett (2000) describes emerging adulthood as a developmental period in which individuals explore their identities, relationships, and life directions, while Erikson's (1959) psychosocial theory places young adulthood within the stage of intimacy versus isolation. At this stage, individuals face the developmental task of establishing meaningful and intimate relationships with others. Difficulties in achieving interpersonal intimacy may increase feelings of isolation,

making alternative forms of emotional connection potentially meaningful (Longa et al., 2022). In this context, parasocial relationships may serve as a complementary source of companionship or emotional connection for some young adults (Hoffner & Bond, 2022). However, whether loneliness actually predicts stronger parasocial relationships among young adult players of interactive digital games remains an empirical question.

Previous empirical studies provide some support for an association between loneliness and parasocial relationships, but their findings remain inconsistent. Research involving NCT fans in Indonesia found that loneliness was positively associated with parasocial relationships, suggesting that individuals who experience greater loneliness may develop stronger parasocial connections with media figures (Lestari & Pohan, 2023). Similarly, Fitri et al. (2025) found a positive relationship between loneliness and parasocial relationships among university students who were K-pop fans, while Sati & Fikry (2025) reported a similar pattern among NCT fans in Sumatra. These findings align with the assumption that parasocial relationships may provide an alternative or supplementary source of emotional connection for individuals with unmet social needs. However, studies have not produced consistent results. Noffiyanti et al. (2023) for example, found no significant relationship between loneliness and parasocial relationships among EXO-L fans in Lampung. More importantly, Trinidya & Cahyono (2024), who specifically examined genshin impact players, reported a very weak and non-significant relationship between loneliness and parasocial relationships.

These inconsistent findings suggest that the relationship between loneliness and parasocial relationships may not be universal and may depend on population characteristics, the type of media figure involved, and the context in which parasocial relationships develop. Most previous studies have focused on K-pop fans, celebrities, or adolescents and university students, whereas relatively limited attention has been given to players who develop parasocial relationships with fictional and interactive game characters (Kang et al., 2025; Li et al., 2025; Liu, 2025). This distinction is theoretically important because relationships with virtual game characters differ from relationships with real-world celebrities. In genshin impact, players do not merely observe characters; they repeatedly interact with them through gameplay, quests, dialogue, character development, and narrative experiences. The medium's interactive nature may therefore create a distinctive context for the development of parasocial relationships. Furthermore, although Trinidya & Cahyono (2024) examined loneliness and PSR among genshin impact players, their study focused on the correlation between the two variables and reported a very weak and non-significant association. The present study extends this line of inquiry by examining whether loneliness can predict parasocial relationships among young adult genshin impact players.

Accordingly, the present study addresses several research gaps. First, there is a population gap, as research on loneliness and PSR has more frequently examined K-pop fandoms and other media audiences than young adult players of digital games. Second, there is a media-context gap, because parasocial relationships with interactive fictional characters may involve different mechanisms from those developed toward real-world celebrities. Third, an empirical inconsistency gap remains, as previous studies have produced conflicting findings regarding the role of loneliness in PSR. Finally, a conceptual and analytical gap remains in the genshin impact context, particularly regarding whether loneliness functions as a predictor rather than merely correlating with PSR. Therefore, the novelty of the present study lies in examining loneliness as a predictive factor of parasocial relationships among young adult genshin impact players,

thereby integrating loneliness, young adult development, and parasocial relationships within the context of an interactive digital game.

Investigating this issue is important for both theoretical and practical reasons. Theoretically, this study may contribute to parasocial relationship research by extending its application from traditional media figures and celebrities to fictional characters embedded in interactive digital games. It may also provide empirical evidence on whether loneliness is relevant to the development of PSR in a gaming context where players have repeated, interactive exposure to virtual characters. Practically, understanding this relationship may provide a more nuanced perspective on the psychological meaning of character attachment among young adult gamers. Parasocial relationships should not automatically be viewed as dysfunctional because they may provide companionship, comfort, and emotional satisfaction (Liebers & Schramm, 2019; Lotun et al., 2024). However, understanding the role of loneliness may help distinguish ordinary emotional engagement with fictional characters from patterns of attachment that may function as substitutes for unmet interpersonal needs. The findings may therefore be useful for researchers and practitioners interested in digital media use, fandom, gaming behavior, loneliness, and interpersonal relationships in emerging adulthood.

Based on the theoretical perspective and empirical findings discussed above, loneliness is expected to play a role in predicting parasocial relationships among young adult genshin impact players. Individuals who experience higher levels of loneliness may have greater unmet needs for companionship and emotional connection. Parasocial relationships with genshin impact characters may provide a psychologically accessible source of perceived companionship, emotional closeness, and affection. Because the game offers repeated exposure and interactive engagement with characters, lonely individuals may be more likely to invest psychological resources in these relationships. Therefore, higher levels of loneliness are expected to be associated with stronger parasocial relationships with genshin impact characters. Accordingly, the present study aims to examine whether loneliness predicts parasocial relationships among young adult genshin impact players. The study is expected to contribute to a broader understanding of how psychological needs for social connection may interact with increasingly interactive forms of digital media and virtual characters. Based on the theoretical arguments and previous empirical findings, the hypothesis is formulated as follows: H1: Loneliness significantly predicts parasocial relationships among young adult genshin impact players.

Method

This study employed a quantitative research method using a predictive correlational design. A quantitative approach was selected because the study aimed to measure loneliness and parasocial relationships using numerical data and examine the extent to which loneliness predicts parasocial relationships among young adult genshin impact players. A predictive correlational design was considered appropriate because the study focused on examining the predictive role of one variable, namely loneliness, on another variable, namely parasocial relationships, without manipulating either variable. Participants were young adult genshin impact players who met the predetermined inclusion criteria. Participants were required to be between 18 and 40 years old, have played genshin impact for at least one year, and have at least one favorite character in the game. These criteria ensured participants had sufficient experience with the game and opportunities to develop psychological involvement with its characters.

The minimum sample size was determined using G*Power through an a priori power analysis. The analysis employed a linear bivariate regression test (one group, size of slope) with a one-tailed hypothesis. The input parameters consisted of an expected effect size of 0.30 for the alternative hypothesis slope (Slope H1 = 0.30), a null hypothesis slope of 0 (Slope H0 = 0), an alpha level of 0.05, statistical power of 0.95, and standard deviations of $\sigma_x = 1$ and $\sigma_y = 1$. The analysis resulted in a noncentrality parameter (δ) of 3.3133, a critical t value of 1.65895, 109 degrees of freedom, and a minimum required sample size of 111 participants, with an actual power of approximately 0.9503. To account for potentially incomplete responses, invalid data, or participants who did not meet the inclusion criteria, the study targeted a sample size exceeding the minimum requirement, aiming for 218 respondents. Data were collected using self-report questionnaires measuring loneliness and parasocial relationships. Both instruments were administered to participants after adapting their content to the context of genshin impact. The questionnaires were used to obtain numerical scores representing participants' levels of loneliness and parasocial relationships with their favorite genshin impact characters.

Loneliness was measured using the UCLA Loneliness Scale Version 3, developed by Russell (1996). The instrument has been adapted and translated into Indonesian by Hudiayana et al. (2022), who reported satisfactory psychometric consistency in the Indonesian version. The scale consists of 20 items designed to assess an individual's subjective experience of loneliness. The items represent the dimensions identified in the scale, including depression loneliness, social loneliness, and trait loneliness. Participants responded to each statement based on the extent to which it described their experiences. Higher scores indicate higher levels of loneliness. Parasocial relationships were measured using the Multiple Parasocial Relationship Scale (MPR) developed by Tukachinsky (2010). Arisa (2024) translated the instrument into Indonesian and adapted it to the gaming context. The adapted instrument demonstrated a reliability coefficient of 0.952, indicating high internal consistency. The scale consists of 24 items assessing several dimensions of parasocial relationships, including physical attraction, closeness, friendship, trust, solidarity, and romantic love. The items were adapted to refer to the participant's favorite genshin impact character as the media figure. An example of an adapted item is, "I think X is very handsome/beautiful." The instrument therefore captures different forms of psychological involvement with the character, ranging from attraction and friendship to emotional closeness and romantic attachment. Higher scores indicate stronger parasocial relationships with the selected character.

Data were collected through an online questionnaire distributed to participants who met the established inclusion criteria. Participants first received information about the study and participation requirements before completing the questionnaire. Participants were instructed to respond based on their experiences with their favorite genshin impact character. After data collection, the data were screened to identify incomplete responses, invalid responses, and participants who did not meet the inclusion criteria. Eligible data were then analyzed using simple linear regression. The analysis tested whether loneliness significantly predicts parasocial relationships among young adult genshin impact players. Loneliness was treated as the predictor variable, while parasocial relationship was treated as the criterion variable. The regression analysis was used to evaluate the direction, magnitude, and statistical significance of the predictive relationship between the two variables.

Results and discussion

Respondent characteristics

Respondents in this study were characterized by age, gender, employment status, educational status, daily playing duration, relationship status, length of time playing genshin impact, and participation in the Genshin Impact fandom. Table 1 presents the distribution of respondents by these characteristics.

Table 1 characteristics of research respondents

Characteristics	Category	Frequency (n)	Percentage (%)
Age	18–20 years	79	36.2
	21–23 years	75	34.4
	24–26 years	35	16.1
	27–29 years	16	7.3
	30–40 years	13	6.1
Gender	Male	40	18.3
	Female	178	81.7
Employment status	University student	126	57.8
	Employee	38	17.4
	Entrepreneur	22	10.1
	Student	9	4.1
	Other	8	3.7
	Freelancer	7	3.2
	Unemployed/Not currently working	5	2.3
	Civil servant	3	1.4
Educational status	Senior high school	109	51.2
	Diploma	10	4.7
	Bachelor's degree	92	43.2
	Master's degree	2	0.9
Daily playing duration	< 1 hour	9	4.1
	1–2 hours	89	40.8
	3–4 hours	88	40.4
	5–6 hours	19	8.7
	> 6 hours	13	6.0
Relationship status	Not currently in a relationship	186	85.3
	In a relationship	27	12.4
	Married	5	2.3
Length of playing	< 1 year	10	4.6
	1–2 years	31	14.2
	3–4 years	81	37.2
	> 5 years	96	44.0
Fandom participation	Yes	179	84.0
	No	39	16.0

Source: primary data, processed

As presented in Table 1, this study involved 218 respondents with diverse demographic and gaming characteristics. In terms of age, the largest proportion of respondents was between 18 and 20 years old, comprising 79 respondents (36.2%), followed by respondents aged 21–23 years, with 75 respondents (34.4%). Respondents aged 24–26 years accounted for 35 participants (16.1%), followed by those aged 27–29 years (7.3%) and 30–40 years (6.1%). In terms of gender, most respondents were female (178; 81.7%), while 40 were male (18.3%). Regarding employment status, most respondents were university students (126; 57.8%). This was followed by employees

(17.4%), entrepreneurs (10.1%), students (4.1%), and respondents in other employment categories, each with a smaller proportion.

Regarding educational status, most respondents had completed senior high school or vocational high school, comprising 109 respondents (51.2%). This was followed by respondents holding a bachelor's degree, with 92 respondents (43.2%). Meanwhile, 10 respondents (4.7%) had a diploma-level education, and 2 respondents (0.9%) had a master's degree. In terms of daily playing duration, most respondents reported playing genshin impact for 1–2 hours per day, comprising 89 respondents (40.8%), closely followed by those who played for 3–4 hours per day, with 88 respondents (40.4%). Nine respondents (4.1%) played for less than one hour per day, while 19 respondents (8.7%) played for 5–6 hours and 13 respondents (6.0%) played for more than six hours per day.

Regarding relationship status, most respondents were not currently in a relationship, comprising 186 respondents (85.3%). A total of 27 respondents (12.4%) reported being in a relationship, while 5 respondents (2.3%) were married. In terms of length of time playing genshin impact, the largest group had been playing for more than five years, comprising 96 respondents (44.0%). This was followed by respondents who had played for 3–4 years (37.2%), 1–2 years (14.2%), and less than one year (4.6%). Overall, the respondent profile indicates that the sample was predominantly young adults aged 18–23 years, female respondents, university students, individuals not currently in a romantic relationship, and players with relatively extensive genshin impact experience. Most respondents reported playing the game for approximately 1–4 hours per day. Most respondents also reported participating in the genshin impact fandom. These characteristics provide important context for interpreting findings on loneliness and parasocial relationships among young adult genshin impact players.

Validity test results

The instruments' validity was evaluated to determine whether the items adequately represented the constructs being measured. In the present study, item validity was assessed using the corrected item-total correlation, with a coefficient of $r \geq 0.30$ as the minimum criterion for retaining an item. The multiple parasocial relationship scale (MPRS) was originally developed based on Tukachinsky's (2010) conceptualization of parasocial relationships and was adapted to the genshin impact context by Arisa (2024). The adapted instrument initially consisted of 24 favorable items representing four dimensions of parasocial relationships: parasocial friendship communication, parasocial friendship support and companionship, parasocial love physical, and parasocial love emotional. Previous validation conducted by Tukachinsky (2010) using confirmatory factor analysis (CFA) indicated relatively high factor loadings, ranging from 0.67 to 0.99 ($p < .001$). Physical love and emotional love loaded onto the parasocial love factor, with factor loadings of 0.77 and 0.99, respectively, whereas communication and support and companionship loaded onto the parasocial friendship factor, with factor loadings of 0.95 and 0.98, respectively. Although the four-factor model showed relatively limited model fit, $\chi^2(247) = 712.5$, CFI = .81, and RMSEA = .13–.15, the alternative two-factor model demonstrated poorer fit, $\chi^2(249) = 718.1$. Thus, the four-factor structure provided a relatively more appropriate representation of the construct.

In the present study, the item analysis showed that 23 of the 24 MPRS items met the validity criterion, while Item 7 was excluded because its corrected item-total correlation was below 0.30. The retained items showed corrected item-total correlation

coefficients ranging from 0.291 to 0.715. Because the reported lower bound of 0.291 is slightly below the predetermined criterion of 0.30, this value should be rechecked against the statistical output to ensure that the reported range refers only to the retained items. After the validity screening, 23 items were retained for the subsequent analysis. The UCLA Loneliness Scale Version 3 (ULS-20) was developed by Russell (1996) and adapted into Indonesian by Hudiyana et al. (2022). The instrument consists of 20 items: 10 favorable and 10 unfavorable. Previous validation of the Indonesian version using Confirmatory Factor Analysis indicated that the one-factor ULS-20 model did not achieve adequate goodness-of-fit. In contrast, the two- and three-factor models showed improved but still inadequate fit. In contrast, the shorter ULS-8 demonstrated satisfactory goodness-of-fit, with $\chi^2(60) = 638.05$, SRMR = .05, CFI = .98, TLI = .97, and RMSEA = .07 [.07, .08]. Furthermore, measurement invariance analysis identified Items 9 and 17 as sources of inconsistency across the German, Indonesian, and United States samples. Following their removal, the resulting ULS-6 demonstrated satisfactory measurement invariance across the three countries. In the present study, item analysis indicated that 19 of the 20 loneliness items met the validity criterion, whereas Item 17 was excluded because its corrected item-total correlation was -0.025 , substantially below the minimum criterion of 0.30. The corrected item-total correlation coefficients across the loneliness items ranged from -0.025 to 0.627. After removing Item 17, 19 items were retained for subsequent statistical analysis.

Reliability test results

Reliability testing assessed the internal consistency of the retained items for both measurement instruments. Cronbach's alpha was used as the reliability coefficient, with $\alpha \geq 0.70$ considered indicative of acceptable internal consistency. The results showed that the Parasocial Relationship scale, consisting of 23 retained items, had a Cronbach's alpha of $\alpha = 0.921$. Meanwhile, the Loneliness scale, consisting of 19 retained items, obtained a Cronbach's alpha coefficient of $\alpha = 0.893$. Both coefficients exceeded the minimum criterion of 0.70, indicating good internal consistency. Therefore, the retained items of both scales were considered sufficiently reliable for use in the subsequent analysis.

Normality test results

A normality test was conducted to assess whether the regression model residuals followed an approximately normal distribution. The Kolmogorov-Smirnov test was used, with $p \geq 0.05$ indicating that the distribution did not significantly deviate from normality. The results showed that the standardized residuals obtained a Kolmogorov-Smirnov statistic of 0.054 with a significance value of $p = 0.200$ based on 218 observations. Since the significance value was greater than 0.05, the null hypothesis of normality was not rejected. Therefore, the standardized residuals were considered normally distributed, indicating that the normality assumption for the subsequent simple linear regression analysis was satisfied.

Linearity test results

A linearity test was conducted to determine whether the relationship between loneliness and parasocial relationships followed a linear pattern. The assumption of linearity was evaluated using the significance value of the Deviation from Linearity. A significance value greater than 0.05 indicates no significant deviation from a linear relationship. The analysis produced a significance value of 0.246 for the Deviation from

Linearity. Because this value was greater than 0.05 ($0.246 > 0.05$), there was no significant deviation from linearity between loneliness and parasocial relationships. Therefore, the relationship between the two variables was considered linear, and the linearity assumption was satisfied. Accordingly, the data met the linearity requirement for conducting the subsequent simple linear regression analysis.

Simple linear regression results

A simple linear regression analysis was conducted to examine whether loneliness, as the independent variable, could significantly predict Parasocial Relationship, as the dependent variable, among young adult genshin impact players. The analysis also examined the direction and magnitude of the predictive relationship between Loneliness and Parasocial Relationship. Table 2 presents the results of the simple linear regression analysis.

Table 2 results of the simple linear regression

Variable	B	Std. Error	Beta (β)	t	Sig.
Constant	87.471	3.137	–	27.879	0.000
Loneliness	0.155	0.067	0.156	2.323	0.021
R Square	0.024				

Source: primary data, processed

As presented in Table 2, the simple linear regression model was statistically significant, $F(1, 216) = 5.395$, $p = 0.021$ ($p < 0.05$). This result indicates that Loneliness significantly predicts Parasocial Relationship among young adult genshin impact players. Therefore, the regression model is statistically significant and can be used to describe the predictive relationship between Loneliness and Parasocial Relationship. The coefficient of determination, indicated by $R^2 = 0.024$, shows that Loneliness accounts for 2.4% of the variance in Parasocial Relationship. The remaining 97.6% of the variance is attributable to other factors that were not included in the regression model. Thus, although Loneliness explains a relatively small proportion of the variance, its predictive effect is statistically significant.

The regression coefficients in Table 2 further indicate that Loneliness significantly predicts Parasocial Relationship, with $B = 0.155$, $SE = 0.067$, $\beta = 0.156$, $t(216) = 2.323$, and $p = 0.021$. Since the significance value is below 0.05, Loneliness is identified as a significant predictor of Parasocial Relationship. Furthermore, the positive regression coefficient ($B = 0.155$) indicates a positive predictive relationship between the two variables. This means that higher levels of Loneliness are associated with higher levels of Parasocial Relationship among young adult genshin impact players. Based on the constant and regression coefficient presented in Table 2, the simple linear regression equation can be formulated as follows: $Y = 87.471 + 0.155X$, where Y = Parasocial Relationship and X = Loneliness.

The constant value of 87.471 represents the predicted Parasocial Relationship score when the Loneliness score is zero. Meanwhile, the regression coefficient of 0.155 indicates that every one-point increase in Loneliness is predicted to result in a 0.155-point increase in Parasocial Relationship. Conversely, a decrease in Loneliness is predicted to be accompanied by a decrease in Parasocial Relationship. Based on the significance value of 0.021 ($p < 0.05$), the research hypothesis H1 is accepted. Therefore, Loneliness significantly predicts Parasocial Relationship among young adult genshin impact players. The positive regression coefficient indicates a positive predictive

relationship, meaning higher levels of Loneliness tend to be accompanied by higher levels of Parasocial Relationship. However, with an R^2 value of 0.024, Loneliness explains only 2.4% of the variance in Parasocial Relationship, indicating that other factors outside the present model account for the majority of the variance.

Discussion

The present study indicates that loneliness is a significant positive predictor of parasocial relationships among young adult genshin impact players. This finding suggests that loneliness may be a psychological condition associated with stronger emotional involvement with fictional game characters. From the perspective of loneliness as a subjective discrepancy between desired and existing social relationships, individuals who perceive their interpersonal relationships as insufficient may be more receptive to alternative sources of companionship and emotional connection. Parasocial relationships may provide such an alternative because they allow individuals to experience closeness, familiarity, companionship, and affection toward a media figure without requiring reciprocal interaction. Thus, this finding suggests that players experiencing greater loneliness may be more likely to invest psychological meaning in their relationships with their favorite genshin impact characters.

This interpretation is consistent with the conceptualization of parasocial relationships proposed by Horton & Wohl (1956), in which repeated exposure to media figures can create an experience of interpersonal closeness despite the fundamentally one-sided nature of the relationship. Tukachinsky (2010) further demonstrated that parasocial relationships are not restricted to a single form of attachment but may include friendship-oriented and romantic forms of involvement. This distinction is particularly relevant to the present study because the parasocial relationship measure used in the genshin impact context encompasses different forms of involvement with characters, including friendship, emotional closeness, attraction, and romantic attachment. Therefore, the association between loneliness and parasocial relationships should not necessarily be understood as indicating that lonely players "replace" real-world relationships with fictional characters. Rather, loneliness may increase the psychological relevance of available media figures, making characters who are repeatedly encountered through the game more salient as sources of perceived companionship and emotional engagement.

The finding can also be understood in light of the emotional functions that parasocial relationships may serve. Lotun et al. (2024) found that people perceive parasocial relationships as capable of fulfilling emotional needs, including connection and companionship. This perspective may help explain why loneliness is associated with stronger parasocial involvement. When individuals experience unmet needs for closeness or social connection, a relationship with a fictional character may offer an accessible form of emotional engagement that does not involve the uncertainty, demands, or vulnerability associated with reciprocal interpersonal relationships. Importantly, this does not imply that parasocial relationships are inherently dysfunctional or that lonely individuals necessarily have inadequate interpersonal relationships. Instead, parasocial relationships may function as an additional source of emotional experience that becomes particularly meaningful when individuals perceive their existing social relationships as insufficient. In this sense, the present findings are compatible with the view that parasocial relationships can complement rather than substitute for interpersonal relationships.

The developmental context of young adulthood may further explain why loneliness is relevant to parasocial involvement in the present population. Substantial changes in identity, autonomy, social roles, and interpersonal relationships characterize young adulthood. Hurlock (1980) and Santrock (2011) describe this period as involving important developmental demands related to independence and establishing and maintaining meaningful relationships. Similarly, Erikson's (1959) psychosocial framework emphasizes intimacy versus isolation as a central developmental challenge of adulthood, while Arnett (2000) characterizes emerging adulthood as a period of identity exploration, instability, and changing interpersonal commitments. Within this developmental context, loneliness may become particularly salient because individuals are increasingly expected to establish meaningful, intimate relationships while navigating changes in their social environments. Consequently, virtual characters may become psychologically meaningful not because they are equivalent to interpersonal partners, but because they can provide a relatively stable and accessible object of emotional engagement during a period in which interpersonal relationships may be changing.

The nature of genshin impact as an interactive narrative medium is also important in interpreting the present finding. Unlike traditional media figures, which audiences primarily observe, genshin impact characters are encountered repeatedly through gameplay, quests, dialogue, character stories, events, and other interactive activities. Players can actively use their preferred characters, observe their personalities across different narrative situations, and repeatedly encounter character-specific content. This repeated and interactive exposure may create conditions that facilitate psychological involvement with characters. Felnhofer et al. (2023), for example, found that interactivity, narrative transportation, and immersive tendencies were associated with stronger identification with fictional characters. Their findings suggest that engagement with a character is influenced not only by individual characteristics but also by how the medium enables immersion in the narrative and interaction with the fictional world. Although character identification is conceptually distinct from parasocial relationships, this research provides a useful framework for understanding why interactive games may create particularly favorable conditions for developing psychological connections with fictional characters.

The interactive nature of genshin impact may therefore help explain why the relationship between loneliness and parasocial relationships can emerge even though the characters are fictional. Players are not merely exposed to characters; they repeatedly participate in experiences in which these characters are integrated into the player's gameplay and narrative progression. The combination of repeated exposure, narrative transportation, interactivity, and emotional engagement may make characters more psychologically accessible and familiar. In this context, loneliness may increase the importance of such experiences, while game and character characteristics may determine whether that initial engagement develops into a stronger parasocial relationship. This interpretation is consistent with Felnhofer et al. (2023), who emphasized that character involvement is shaped by multiple factors rather than by a single characteristic of the media user.

The present finding is also consistent with several previous studies examining loneliness and parasocial relationships in fandom contexts. Lestari & Pohan (2023); Fitri et al. (2025); and Sati & Fikry (2025) similarly reported positive associations between loneliness and parasocial relationships among fans of NCT and K-pop. Across these studies, the general pattern suggests that individuals who experience greater loneliness

may report stronger psychological involvement with their preferred media figures. This convergence supports the argument that perceived deficiencies in interpersonal connection can be relevant to the formation or strengthening of parasocial bonds. However, this pattern should be interpreted cautiously because fandom contexts differ substantially in the type of media figure, mode of engagement, and opportunities for interaction.

The present findings also contrast with Noffiyanti et al. (2023), who did not find a significant relationship between loneliness and parasocial relationships among EXO-L fans in Lampung. More importantly, the findings differ from those of Trinidya & Cahyono (2024), who examined genshin impact players and reported only a very weak and non-significant relationship between loneliness and parasocial relationships. The discrepancy with Trinidya & Cahyono (2024) is particularly noteworthy because both studies involve genshin impact players. This difference suggests that the relationship between loneliness and parasocial involvement may not be stable across player samples, even when the same game is examined. This inconsistency is also compatible with the broader evidence summarized by Tukachinsky et al. (2020), whose meta-analysis found that social deficiencies were not consistently associated with parasocial relationships. Their findings suggest that parasocial relationships cannot be explained solely as responses to deficits in interpersonal relationships. Instead, PSRs are also associated with processes such as identification, transportation, homophily, and other forms of media involvement.

The discrepancy between studies therefore highlights the importance of considering the multifaceted nature of parasocial relationship development. Loneliness may increase an individual's motivation or openness to mediated companionship, but it does not necessarily determine whether a strong parasocial relationship will develop. Other psychological and media-related processes may operate simultaneously. For example, individuals may become strongly attached to a character because they identify with the character, perceive similarities between themselves and the character, become emotionally transported into the narrative, or find the character's personality, appearance, values, or storyline particularly appealing. In an interactive game, repeatedly using and encountering a preferred character may further reinforce this involvement. Consequently, loneliness should be regarded as one possible contributor within a broader network of factors underlying parasocial relationships rather than as a sufficient explanation for why players become attached to particular characters.

This interpretation is especially important when considering the characteristics of the present sample. The respondents were predominantly young adults with substantial experience with genshin impact, and many were actively involved in the game's fandom. Such characteristics may provide repeated opportunities to encounter and engage with characters both inside and outside the game. Players who participate in fandom communities may consume character-related discussions, fan art, videos, social media content, and other forms of supplementary media. These activities can extend exposure to characters beyond the original game environment and potentially reinforce their psychological salience. Thus, parasocial involvement may emerge from an accumulation of repeated character-related experiences rather than from loneliness alone. The broader literature on parasocial relationships likewise emphasizes the importance of media involvement and identification in explaining the strength of parasocial bonds (Tukachinsky et al., 2020).

Another important interpretation concerns the meaning of parasocial relationships for lonely individuals. The present finding should not be interpreted as

evidence that loneliness inevitably leads individuals to withdraw from real-world relationships and replace them with fictional characters. Such an interpretation would oversimplify both loneliness and parasocial relationships. Parasocial relationships can coexist with interpersonal relationships and may provide emotional experiences that complement offline social interactions. Lotun et al. (2024) demonstrated that individuals perceive parasocial relationships as potentially effective in fulfilling emotional needs, supporting the possibility that media-based relationships may have meaningful psychological functions. Therefore, stronger parasocial involvement among lonely players may reflect an attempt to obtain experiences of familiarity, comfort, companionship, or emotional closeness rather than necessarily indicating problematic dependence on fictional characters.

At the same time, the findings indicate that loneliness alone provides only a limited explanation of individual differences in parasocial relationships. This is theoretically important because it prevents an overly reductionistic interpretation in which parasocial attachment is viewed primarily as a consequence of social deprivation. The broader literature suggests that parasocial relationships arise through the interaction of user characteristics, characteristics of media figures, and features of the media environment. Tukachinsky et al. (2020), for instance, identified involvement-related processes such as identification and transportation as important correlates of parasocial relationships, while Felnhofer et al. (2023) demonstrated that interactivity and narrative transportation can contribute to stronger character identification. In the context of genshin impact, this means future explanations of parasocial relationships should integrate both psychological needs and the distinctive affordances of interactive digital media.

Future research should therefore examine additional factors that may explain why some genshin impact players develop stronger parasocial relationships than others. Relevant variables may include character identification, narrative transportation, immersive tendencies, intensity and frequency of gameplay, frequency of exposure to character-related content, emotional attachment, perceived similarity with characters, escapism, and participation in fandom communities. Examining these factors simultaneously would provide a more comprehensive explanation of how parasocial relationships develop in interactive gaming environments. Longitudinal research would also be valuable for determining whether loneliness precedes the development of stronger parasocial relationships, whether increasing parasocial involvement subsequently influences loneliness, or whether the relationship is reciprocal. Such research would help clarify the directionality of the association that cannot be established through a cross-sectional predictive correlational design.

Conclusions

The present study concludes that loneliness is a significant positive predictor of parasocial relationships among young adult genshin impact players. This finding indicates that individuals who experience greater loneliness tend to develop stronger psychological involvement with their favorite genshin impact characters. The finding supports the theoretical perspective that unmet needs for social connection may be associated with greater engagement in parasocial relationships, in which individuals can experience perceived companionship, emotional closeness, and affection toward media figures without reciprocal interpersonal interaction. The finding also extends previous research on loneliness and parasocial relationships by showing that this association can

be observed with fictional and interactive game characters, not only among audiences of celebrities or K-pop idols.

Theoretically, this study contributes to parasocial relationship research by extending its application to interactive digital gaming and highlighting loneliness as one psychological factor associated with players' involvement with virtual characters. The findings also suggest that parasocial relationships in gaming contexts should not be understood solely as a consequence of social deficiencies, because players' relationships with fictional characters may also be shaped by narrative engagement, interactivity, character identification, and emotional attachment. Nevertheless, this study has several limitations. The cross-sectional predictive correlational design limits the ability to establish causal or temporal relationships between loneliness and parasocial relationships. In addition, the study relied on self-report questionnaires. It focused on a specific population of young adult genshin impact players, with the sample predominantly consisting of younger respondents, female participants, and university students. Therefore, the findings may not be fully generalizable to other age groups, genders, gaming populations, or players with different patterns of engagement with genshin impact.

Future research should address these limitations by using longitudinal or other research designs that can examine the temporal direction of the relationship between loneliness and parasocial relationships. Researchers may also consider recruiting more diverse samples in terms of age, gender, educational background, gaming experience, and patterns of fandom participation to improve the generalizability of findings. Furthermore, future studies should examine additional psychological and media-related factors that may contribute to parasocial relationship development, such as character identification, narrative transportation, interactivity, immersive tendencies, emotional attachment, escapism, gameplay intensity, exposure to character-related content, and fandom involvement. Examining these variables together may provide a more comprehensive understanding of how parasocial relationships with fictional game characters develop and clarify the extent to which loneliness operates alongside other psychological and media-related processes.

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