



# The Influence of Social Media Use Intensity and Interpersonal Communication Style on Self-Image Formation among Adolescents and Young Adults in the Digital Environment

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## Abstract

The formation of self-image in the digital environment refers to the process by which individuals manage their appearance, self-perceptions, and social interactions through social media in order to obtain social recognition. This study aims to examine the influence of social media use intensity and interpersonal communication style on self-image formation among adolescents and young adults in the digital space. A quantitative research approach was employed using a survey method involving 144 respondents aged between 13-30 years old who actively use social media platforms. Data were collected using a Likert-scale questionnaire and analyzed through multiple linear regression analysis. The findings indicate that both the intensity of social media use and interpersonal communication style have a positive and significant effect on self-image formation, both partially and simultaneously. These results suggest that active engagement in social media, supported by effective interpersonal communication styles, plays a crucial role in shaping individuals' self-image in digital environments.

**Keyword:** Social media usage intensity, interpersonal communication style, self-image formation, adolescents, online environment.

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## 1. Introduction

The formation of self-image in the digital environment has become a significant phenomenon in the era of digital communication. Social media has emerged as a primary space where individuals present their identities, manage impressions, and construct self-perceptions through various online activities. The self-representations displayed on social media function not only as forms of personal expression but also influence how individuals are perceived, accepted, and evaluated within their social environments. For adolescents and young adults, this phenomenon is particularly influential, as these age groups are in critical stages of identity development and are highly responsive to social validation dynamics in digital media.

Numerous studies have indicated that self-image formation in digital spaces is closely associated with the intensity of social media use and the interpersonal communication styles employed during online interactions. High intensity of social media use provides individuals with frequent opportunities to engage in content management and digital interactions, which subsequently shape how they present themselves to others. At the same time, interpersonal communication style determines the quality of message exchange, modes of self-expression, and the nature of social feedback received. Previous research on interpersonal communication and self-presentation suggests that frequent social media use, combined with open and empathetic communication patterns, contributes to the reinforcement of digital self-image construction.

Although several studies have examined the relationship between social media use intensity or interpersonal communication and self-image, research that simultaneously integrates both variables remains limited. Moreover, there is a need to specifically investigate this phenomenon among adolescents and young adults, who represent the demographic group with the highest levels of social media engagement. This study seeks to address this gap by analyzing the influence of social media use intensity and interpersonal communication style on self-image formation in digital environments, both partially and simultaneously.

This article is structured into five main sections following standard research organization. The first section presents the introduction, outlining the background and significance of the study. The second section discusses the theoretical framework and relevant literature. The third section explains the research methodology, including research design, variables, instruments, population, sample, and data analysis techniques. The fourth section presents the research findings and discussion, linking empirical results to relevant theories. The final section concludes the study by summarizing the findings and offering recommendations for future research and relevant stakeholders.

## 2. The Art of Research

- a. Social Media Use Intensity (X1)

Social media use intensity refers to the extent to which individuals engage with social media in their daily lives, encompassing frequency of access, duration of use, and depth of involvement. According to Kurniawati (2018), social media use intensity can be measured by how often individuals access social media platforms, the amount of time spent using them, and the types of activities performed during use. Rahma (2021) further argues that high levels of social media use intensity are associated with increased self-expression, a stronger need for social validation, and the construction of digital identity.

International studies have also demonstrated that frequent social media use significantly influences self-presentation and self-concept formation among adolescents. Mann and Blumberg (2022) found that higher levels of online engagement encourage individuals to actively manage impressions and construct identities that align with social expectations in digital environments. Therefore, social media use intensity plays a crucial role in shaping how individuals present and perceive themselves online.

- The indicator of social media use intensity include:
  1. Frequency of social media access
  2. Daily duration of social media use
  3. Engagement in digital activities such as posting and commenting
  4. Purposes of social media use, including communication and entertainment

b. Interpersonal Communication Style ( $X_2$ )

Interpersonal communication style refers to the manner in which individuals convey messages and interact with others through verbal and nonverbal communication in social relationships. DeVito (2013) explains that interpersonal communication style reflects patterns of self-expression shaped by openness, empathy, positivity, supportiveness, and equality in interaction. Effective interpersonal communication enables individuals to establish meaningful relationships and fosters positive perceptions from others.

Previous studies have highlighted the importance of interpersonal communication style in shaping self-image. Fenando (2021) demonstrated that effective communication styles enhance social relationship quality and contribute to positive self-perceptions. Similarly, Manik (2019) found that open and empathetic communication styles play a significant role in developing positive self-image among adolescents. In digital contexts, interpersonal communication style is reflected in how individuals respond to comments, express opinions, and engage in online discussions, thereby influencing how they are perceived by others.

- The indicators of interpersonal communication style include:
  1. Openness in sharing information
  2. Empathy toward communication partners
  3. Supportive attitudes in interaction
  4. Positive communication behaviors
  5. Equality in two-way message exchange

c. Self-Image Formation in Digital Environments ( $Y$ )

Self-image in digital environments refers to the representation of the self that individuals construct and display through digital activities and online interactions. Stuart and Sundeen (1998) define self-image as an individual's perception of themselves formed through experiences and social interactions. Goffman's (1959) theory of self-presentation emphasizes that individuals actively manage impressions to present images that align with social expectations.

In the context of social media, self-image is constructed through visual presentation, online interactions, social feedback, and consistency of digital identity. Studies by Rahma (2021) and Fenando (2021) indicate that self-image formation in digital spaces is influenced by content sharing behaviors, audience responses, and individuals' satisfaction with their online self-representation.

- The indicators of self-image formation in digital environments include:
  1. Self-presentation and visual identity
  2. Self-perception based on online interactions
  3. Social recognition through feedback from other users
  4. Consistency of digital identity
  5. Satisfaction with the displayed self-image

d. Hypothesis Development



Previous research has widely discussed the relationship between social media use intensity and self-image formation. Individuals with high levels of social media use intensity tend to engage more frequently in self-presentation activities, regularly update content, and actively manage impressions in digital spaces. Rahma (2021) found that frequent social media use influences digital identity construction, while Mann and Blumberg (2022) confirmed that self-presentation behaviors increase alongside higher levels of online activity. Based on these findings, the following hypothesis is proposed:

**H1:** Social media use intensity has a significant effect on self-image formation in digital environments.

Interpersonal communication style is also considered a key factor in shaping self-image, both in offline and online interactions. Individuals who communicate openly, empathetically, and positively are more likely to establish healthy social relationships and receive supportive social recognition. Studies by Manik (2019) and Fenando (2021) suggest that effective interpersonal communication styles enhance positive self-perception and social acceptance. Accordingly, the second hypothesis is formulated as follows:

**H2:** Interpersonal communication style has a significant effect on self-image formation in digital environments.

In addition to partial effects, prior studies suggest that social media use intensity and interpersonal communication style may jointly influence self-image formation. High social media engagement provides opportunities for self-expression, while interpersonal communication style determines how such expressions are interpreted and evaluated by others. Research by Mann and Blumberg (2022) and Colak et al. (2023) supports the interaction of these factors in strengthening digital identity construction. Therefore, the third hypothesis is proposed:

**H3:** Social media use intensity and interpersonal communication style simultaneously have a significant effect on self-image formation in digital environments.

### 3. Method

This study employed a quantitative associative research design to examine the influence of social media use intensity and interpersonal communication style on self-image formation in digital environments. The sample consisted of 144 respondents aged between 13-30 years old who were active users of social media platforms, representing adolescents and young adults with high levels of digital engagement. Data were collected through a structured questionnaire using a Likert scale, measuring social media use intensity through indicators of frequency, duration, digital activities, usage purposes, and emotional attachment, while interpersonal communication style was assessed based on openness, empathy, supportiveness, positive attitudes, and equality in communication. Self-image formation in digital environments was measured using indicators of self-presentation, self-perception, social recognition, digital identity consistency, and self-satisfaction. The collected data were analyzed using multiple linear regression to examine both partial and simultaneous effects among variables. Prior to regression analysis, classical assumption tests, including normality, multicollinearity, and heteroskedasticity tests, were conducted to ensure the validity of the regression model. All statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS).

### 4. Result

#### a. Respondent Characteristic

The respondent characteristics describe the profile of 144 social media users who participated in this study. The majority of respondents were female, within the late adolescent to early adulthood age range, residing in Indonesia primarily on the island of Java and having an educational background dominated by university students. On average, respondents owned more than one social media account, had been using social media for approximately six to ten years, and spent three to five hours per day engaging in digital platforms. Most respondents rarely uploaded content and primarily used social media for entertainment, information seeking, and communication purposes. These characteristics provide a comprehensive overview of the respondents' digital behavior context, which is relevant to the study variables, namely social media use intensity, interpersonal communication style, and self-image formation in digital environments.

Table 1. Respondents Characteristic

Aspect	Category	Amount	Percentage
Gender	Woman	90	62,5%
	Man	54	37,5%
Age	13–15 years	11	7,6%
	16–20 years	53	36,8%
	21–25 years	66	45,8%
	26–30 years	14	9,7%

Domicile	Domestic Domicile	137	95,1%
	Foreign Domicile	4	2,8%
	Unknown	3	2,1%
Study	Junior High School	4	2,8%
	Senior High School	23	16,0%
	Collage	84	58,3%
	Other	33	22,9%
Owned Social Media	Instagram	102	70,1%
	Tiktok	101	70,1%
	X (Twitter)	28	19,4%
	Facebook	12	8,3%
Number of Active Social Media Accounts	1–5 accounts	132	91,7%
	6–10 accounts	8	5,6%
	>10 accounts	3	2,1%
	Not quantifiable	1	0,7%
Long Time Use of Social Media	1–5 years	37	25,7%
	6–10 years	80	55,6%
	11–15 years	20	13,9%
	16–20 years	5	3,5%
	>21 years	2	1,4%
Daily Duration of Social Media Use	<1 hour	7	4,9%
	1–3 hours	39	27,1%
	3–5 hours	62	43,1%
	>5 hours	36	25,0%
Frequency of Uploading Content	Never	11	7,6%
	Infrequently (1–2 Times / week)	87	60,4%
	enough (3–5 times / week)	35	24,3%
	Frequently (everyday)	11	7,6%
The Main Purpose of Using Social Media	Entertainment	124	86,1%
	Searching for information	102	70,8%
	Communication	95	66,0%
	Self exspression	54	37,5%
	Build Self Image	35	24,3%
	Other	2	1,4%

b. Validity and Reliability Testing

Validity testing was conducted to ensure that each statement item in the research instrument accurately measured the intended construct. The test was performed using the Pearson Product Moment correlation by comparing the calculated correlation coefficient ( $r$ -count) with the critical value of the correlation coefficient ( $r$ -table) based on the first 30 respondents. With an  $r$ -table value of 0.1367 at a 5% significance level, all items were declared valid, as each  $r$ -count value exceeded the  $r$ -table threshold. This indicates that all measurement items for social media use intensity ( $X_1$ ), interpersonal communication style ( $X_2$ ), and self-image formation in digital environments ( $Y$ ) were appropriate and suitable for use in this study.

Reliability testing was carried out using Cronbach's Alpha coefficient to assess the internal consistency of the measurement instruments. An instrument was considered reliable if it achieved a minimum Alpha value of 0.60. The results showed that all variables met this criterion, with Alpha values of 0.691 for social media use intensity ( $X_1$ ), 0.815 for interpersonal communication style ( $X_2$ ), and 0.775 for self-image formation ( $Y$ ). These findings indicate that all research instruments demonstrated good reliability and were suitable for further statistical analysis.



Table 2. Validity Test Results

Indicator	Item Code	r Count	r Table	Description
<b>X1 Intensity of Social Media Use</b>				
Frequency of Social Media Use	X1.1	0,654	0,1367	Valid
Duration of daily Social Media Use	X1.2	0,688	0,1367	Valid
Interaction Activity on Social Media	X1.3	0,645	0,1367	Valid
Intensity of Content Viewing	X1.4	0,496	0,1367	Valid
Intensity of responding (likes, comments, shares)	X1.5	0,521	0,1367	Valid
Involvement in Posting Activities	X1.6	0,492	0,1367	Valid
Dependence on Social Media	X1.7	0,647	0,1367	Valid
<b>X2 interpersonal Communication Style</b>				
Openness in communication	X2.1	0,539	0,1367	Valid
Empathy in Communication	X2.2	0,679	0,1367	Valid
Supportive Attitude in Communication	X2.3	0,570	0,1367	Valid
Positive Attitude in Communication	X2.4	0,818	0,1367	Valid
Equality in communication	X2.5	0,761	0,1367	Valid
Clarity in message delivery	X2.6	0,766	0,1367	Valid
Ability to understand the other person	X2.7	0,735	0,1367	Valid
<b>Y Self-Image Formation in Cyberspace</b>				
Self-presentation	Y1	0,653	0,1367	Valid
Self-perception on social media	Y2	0,594	0,1367	Valid
Seeking social recognition	Y3	0,776	0,1367	Valid
Digital identity consistency	Y4	0,730	0,1367	Valid
Efforts to build a positive image	Y5	0,507	0,1367	Valid
Satisfaction with self-image	Y6	0,795	0,1367	Valid

Table 3. Reliability Test Results

Variable	Number of Questions	Cronbach's Alpha	Limit Value	Description
<b>Intensity of Social Media Use (X1)</b>	7	0,691	0,60	Reliable
<b>Interpersonal Communication Style (X2)</b>	7	0,815	0,60	Reliable
<b>Self-Image in Cyberspace (Y)</b>	6	0,775	0,60	Reliable

c. Classic Assumption Test

- The Normality Test

The normality test was conducted to determine whether the residual data in the regression model were normally distributed. Statistical testing was performed using the One-Sample Kolmogorov-Smirnov test on the unstandardized residual values with a total of 144 respondents. The test results showed an Asymp. Sig. (2-tailed) value of 0.021, which is lower than the significance level of 0.05. Statistically, this result indicates that the residual data do not perfectly follow a normal distribution.

Nevertheless, the visual examination using the Normal P-P Plot of Regression Standardized Residuals for the dependent variable demonstrated that the residual points were distributed closely around the diagonal line and followed its direction. This pattern suggests that the residual distribution approximates normality. Furthermore, given the relatively large sample size ( $N = 144$ ), the deviation from normality can be tolerated based on the Central Limit Theorem. Therefore, the regression model in this study is considered to practically satisfy the normality assumption and is suitable for further analysis.

Table 4. Normality Test Results

Information	Value
<b>N</b>	144
<b>Mean</b>	0,0000000
<b>Standard Deviation</b>	3,67567531
<b>Test Statistic</b>	0,081

<b>Asymp. Sig. (2-tailed)</b>	0,021
<b>Conclusion</b>	The residual data is not completely normal but is still tolerable.

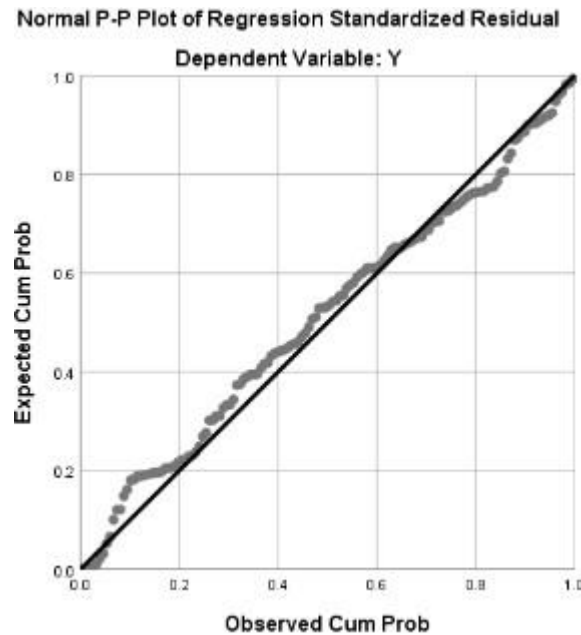


Figure 1. Probability Test Results

- Heteroskedasticity Test**  
 The heteroskedasticity test was conducted to determine whether there was inequality in the variance of the residuals across observations in the regression model. A reliable regression model is characterized by constant residual variance, known as homoskedasticity. The test was performed through visual inspection of a scatterplot with self-image formation as the dependent variable. The results show that the residual points are randomly distributed and do not form any specific pattern, such as funnel-shaped, widening, narrowing, or wave-like distributions. This random dispersion indicates that heteroskedasticity is not present in the regression model. Therefore, it can be concluded that the regression model satisfies the assumption of homoskedasticity and is appropriate for use in multiple linear regression

Table 5. Heteroskedasticity Results

<b>Criteria</b>	<b>Results</b>
<b>Residual distribution pattern</b>	Randomly distributed
<b>Certain pattern Forms</b>	Not found
<b>Conclusion</b>	No heteroscedasticity occurs

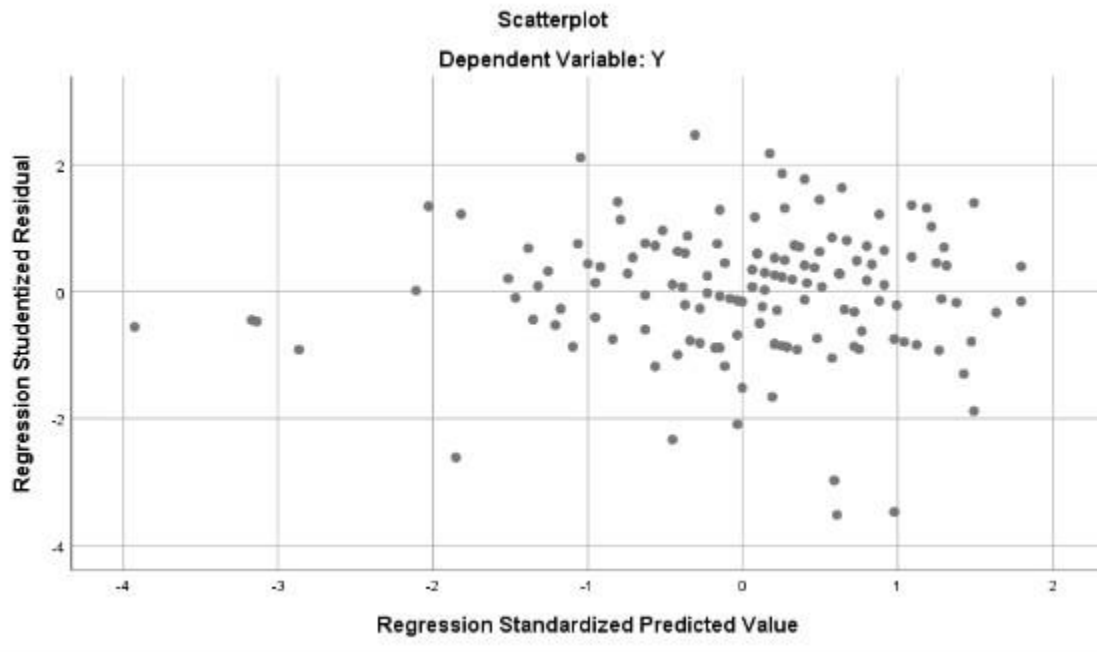


Figure 2. Heteroskedasticity Test Results

- **Multicollinearity Test**  
 The multicollinearity test was conducted to determine whether strong correlations existed among the independent variables in the regression model. The test results indicate that the tolerance values for social media use intensity ( $X_1$ ) and interpersonal communication style ( $X_2$ ) were both 0.722, while the Variance Inflation Factor (VIF) values for both variables were 1.386. These values meet the established criteria, namely tolerance values greater than 0.10 and VIF values less than 10.  
 Based on these findings, it can be concluded that no multicollinearity exists among the independent variables in the regression model. Therefore, the model satisfies the multicollinearity assumption and is suitable for use in multiple linear regression analysis.

Table 6. Multicollinearity Test Results

Variable	Tolerance	VIF	Description
<b>Intensity of Social Media Use (X1)</b>	0,722	1,386	No multicollinearity
<b>Interpersonal Communication Style (X2)</b>	0,722	1,386	No multicollinearity

d. Data Analysis

- **Partial Effect Test (t-test)**  
 The partial effect test was conducted to examine the influence of each independent variable on the dependent variable. The t-test results indicate that social media use intensity ( $X_1$ ) has a positive and significant effect on self-image formation in digital environments, with a calculated t-value of 2.992 and a significance level of 0.003, which is below the 0.05 threshold. This finding suggests that higher levels of social media engagement are associated with stronger self-image formation in online contexts.  
 Furthermore, interpersonal communication style ( $X_2$ ) also demonstrates a positive and significant effect on self-image formation, with a calculated t-value of 3.921 and a significance level of 0.000. This result indicates that effective interpersonal communication characterized by openness, empathy, supportiveness, positive attitudes, and equality in interaction plays a crucial role in shaping self-image in digital environments. Based on the standardized

beta coefficients, interpersonal communication style exhibits a more dominant influence on self-image formation compared to social media use intensity.

Table 7. Partial Effect Test Results

Variable	B	Std. Error	Beta	t Count	Sig.
<b>Constant</b>	0,722	2,060	–	3,433	0,001
<b>Social Media Use Intensity (X1)</b>	0,248	0,083	0,254	2,992	0,003
<b>Interpersonal Communication Style (X2)</b>	0,319	0,081	0,333	3,921	0,000

- Simultaneous Effect Test (f-test)

The simultaneous effect test was conducted to examine the combined influence of social media use intensity and interpersonal communication style on self-image formation in digital environments. The F-test results show an F-value of 25.427 with a significance level of 0.000, which is below the 0.05 threshold. This indicates that both Independent variables simultaneously have a significant effect on self-image formation, confirming the overall validity of the regression model used in this study.

Table 8. Simultaneous Effect Test Results

Sumber Variasi	Sum of Squares	df	Mean Square	F	Sig.
<b>Regression</b>	696,812	2	348,406	25,427	0,000
<b>Residual</b>	1932,014	141	13,702	–	–
<b>Total</b>	2628,826	143	–	–	–

- Coefficient of Determination (R<sup>2</sup>)

The coefficient of determination test was performed to assess the extent to which the independent variables explain variations in the dependent variable. The results indicate an R Square value of 0.265, meaning that social media use intensity and interpersonal communication style jointly explain 26.5% of the variance in self-image formation in digital environments. The remaining 73.5% of the variance is influenced by other factors not included in this research model.

Table 9. Coefficient of determination Results

R	R Squares	Adjusted R Square	Std. Error of the Estimate
0,515	0,265	0,255	3,70165

## 5. Discussion

### a. The Effect of Social Media Use Intensity on Self-Image Formation

The results of this study indicate that social media use intensity has a positive and significant effect on self-image formation in digital environments. This finding suggests that the more frequently and intensively individuals engage with social media, the greater their tendency to construct, present, and manage their self-image online. Social media functions not only as a communication tool but also as a symbolic space in which individuals express identities, preferences, and personal values that they wish others to perceive.

This result is consistent with previous studies indicating that high levels of social media use intensity encourage more active self-presentation behaviors, such as sharing content, interacting through comments, and maintaining online visibility. Among adolescents and young adults, social media serves as a primary medium for identity exploration and social identity development. Therefore, social media use intensity can be regarded as a significant factor influencing how self-image is constructed and maintained in digital spaces.

### b. The Effect of Interpersonal Communication Style on Self-Image Formation

The findings also reveal that interpersonal communication style has a positive and significant effect on self-image formation in digital environments, with a stronger influence compared to social media use intensity. This indicates that the quality of interpersonal communication such as openness, empathy, positive attitudes, and supportiveness plays a crucial role in shaping positive self-image on social media platforms.

Individuals with effective interpersonal communication styles are more likely to convey messages clearly, build healthy social relationships, and create favorable impressions among others. In digital contexts, this communication competence is reflected in how individuals respond to comments, express opinions, and engage in constructive interactions. These findings support the view that self-image formation is not solely determined by the frequency of social media use, but also by how individuals communicate and interact within digital environments

### c. The Combined Effect of Social Media Use Intensity and Interpersonal Communication Style on Self-Image Formation



Simultaneously, social media use intensity and interpersonal communication style were found to have a significant combined effect on self-image formation in digital environments. This finding indicates that self-image formation is the result of an interaction between the level of individual engagement in social media and the quality of interpersonal communication skills. Social media provides opportunities and platforms for self-expression, while interpersonal communication style determines how such expressions are interpreted and evaluated by others.

These results reinforce the notion that self-image formation in digital spaces is a multidimensional process that cannot be explained by a single factor. High social media use intensity without supportive communication styles may lead to suboptimal self-image outcomes, whereas effective interpersonal communication can strengthen self-image formation when supported by purposeful and active social media engagement.

## 6. Conclusion

This study demonstrates that social media use intensity and interpersonal communication style have significant effects on self-image formation in digital environments. Social media use intensity positively influences self-image formation, indicating that higher levels of engagement in social media activities increase individuals' tendencies to construct and present their self-image online.

In addition, interpersonal communication style has a positive and significant effect on self-image formation, with a more dominant influence than social media use intensity. This finding emphasizes the importance of communication quality such as openness, empathy, and positive interaction in shaping positive self-image in digital contexts.

Simultaneously, social media use intensity and interpersonal communication style jointly contribute significantly to self-image formation in digital environments. However, the explanatory power of these variables remains limited, suggesting that self-image formation is also influenced by other factors beyond the scope of this study. Overall, the research objectives have been achieved, and the findings provide empirical support for understanding self-image formation among adolescents and young adults in the digital era.

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