

Peer Relationships and Their Impact on Juvenile Delinquency Intensity: A Cross-Sectional Study

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ABSTRACT

Adolescence is a critical developmental stage marked by identity formation and heightened susceptibility to peer influence. This study examined the relationship between peer relationships and juvenile delinquency among 96 adolescents aged 15–21 years, selected through accidental sampling. Data were collected using a Likert-scale questionnaire and analyzed with Pearson correlation and simple linear regression. Results indicated that peer relationships significantly influenced juvenile delinquency ($p = 0.003, r = -0.301$), with higher-quality peer relationships associated with lower levels of delinquent behavior. These findings highlight the importance of school-based interventions and peer mentoring programs to promote supportive peer environments and reduce deviant behaviors among adolescents.

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Introduction

Adolescence is a stage of human development that signifies the transition from childhood to adulthood [1]. This period generally occurs between the ages of 12 to 21 years [2], during which individuals undergo rapid changes in physical, psychological, and social aspects. Adolescents often seek identity and independence through interactions with their peers. Peers are groups of individuals with relatively similar age and maturity levels [3]. Therefore, they have a significant influence on the development of adolescent behavior.

Peers can exert both positive and negative influences on adolescents. Positive interactions may foster responsibility, discipline, and cooperation, whereas negative peer dynamics may lead to behavioral deviations, including juvenile delinquency. Juvenile delinquency refers to behavior that violates social, legal, or religious norms and may harm oneself or others [4]. This encompasses a range of behaviors, from minor infractions such as truancy and smoking, to serious offenses like brawling, substance abuse, and criminal acts.

Understanding the diversity of juvenile delinquency is essential, as such behaviors are often shaped by environmental and social contexts, particularly peer interactions. From psychological and developmental perspective, peer influence is vital in behavior and identity formation. Bandura's social learning theory suggests that adolescents adopt behaviors through observational learning, while Erikson's psychosocial theory emphasizes the importance of social interaction during identity development. The dynamics within peer groups can have lasting effects on adolescents' personalities.

Prior research indicates that delinquent behavior often emerges in group settings, with peer pressure being a key contributing factor [5], [6]. Adolescents who associate with deviant peer groups are at greater risk of exhibiting delinquent behaviors [7]. Moreover, the extent of peer influence depends on adolescents' perception of group norms [8]. If deviant behaviors are seen as normative, adolescents are more likely to imitate them.

This phenomenon is evident in Indonesia, where juvenile delinquency continues to rise. According to the Ministry of Women's Empowerment and Child Protection (KemenPPPA), there were over 8,117 reported cases of violence involving adolescents in 2024. The increase in such cases and the strong influence of peer groups highlight the need to examine the relationship between peer relationships and juvenile delinquency. Therefore, this research aims to analyze the relationship between peer relationships and the intensity of juvenile delinquency, and to provide empirical evidence on how peer dynamics impact adolescent behavior.

This study employs a quantitative approach with a survey method. Data were collected from adolescents in selected school or community environments, and statistical analyses were

conducted to determine the relationship between peer relationships and the intensity of juvenile delinquency.

Methods

This study employed a quantitative approach with a population of adolescents aged 15–21 years, both male and female, who voluntarily agreed to participate as respondents. The sampling technique used was accidental sampling, in which participants were selected when encountered and met the inclusion criteria [9]. Due to the unknown total population size, the Lemeshow formula was applied to determine the sample size, resulting in 96 respondents with a 95% confidence level and a 10% margin of error.

Participation was voluntary, and informed consent was obtained prior to data collection. Data were collected anonymously, with no physical or psychological intervention involved. Therefore, given the non-invasive nature of the research, parental consent and formal ethics committee approval were not deemed necessary. Nevertheless, the researchers ensured confidentiality and protected the anonymity of all participants.

The variables in this research consisted of peers as independent variables and the intensity of juvenile delinquency as the dependent variables. The peers scale was developed based on the framework by Adawiyah [10], which includes three aspects, namely compactness, agreement, and obedience (See Table 1). This scale comprises 19 favorable items reflecting indicators of these three aspects.

Table 1. The peers scale.

Aspects	Indicator	Favorable	Number of Items
Compactness	Ability to socialize, comfort in interactions, helping behavior, empathy	1, 2, 3, 4, 5, 6, 7	7
Agreement	Trust, acceptance, group loyalty, social conformity	8, 9, 10, 11, 12	5
Obedience	Peer pressure, excessive loyalty, obedience due to fear of exclusion	13, 14, 15, 16, 17, 18, 19	7
Total			19

The juvenile delinquency scale (See Table 2) was developed based on the framework proposed by Adawiyah [10], which includes four aspects: delinquency that causes physical victims, delinquency that causes material victims, social delinquency without victims, and delinquency that goes against status. Each aspect encompasses specific behavioral indicators such as fighting, vandalism, lying, and truancy. The scale consists of 38 items, including 17

favorable and 21 unfavorable statements, providing a balanced and in-depth assessment of respondents' attitudes toward various forms of juvenile delinquency.

Table 2. The juvenile delinquency scale.

Aspects	Indicator	Favorable	Unfavorable	Number of Items
Delinquency that causes physical victims	Fighting, violence, physical retaliation	1, 2, 3	4, 5, 6, 7, 8, 9	9
Delinquency that causes material victims	Vandalism, theft, coercion	10, 11, 12, 13	14, 15, 16, 17, 18, 19	10
Social delinquency that does not cause victims	Lying, dating, risky social behaviors	20, 21, 22, 23, 24	25, 26, 27, 28	9
Delinquency that goes against status	Truancy, disobedience to school rules and parental authority	29, 30, 31, 32, 33	34, 35, 36, 37, 38	10
Total		17	21	38

The research instrument employed a Likert-type psychological scale comprising both favorable and unfavorable items, with four response options: Very Appropriate, Appropriate, Not Appropriate, and Very Not Appropriate. The ordinal data were transformed into an interval scale using the Successive Interval Method.

Prior to data analysis, tests for validity, reliability, and classical assumptions (normality, linearity, and heteroscedasticity) were conducted. Data analysis involved the Pearson correlation technique to examine the relationship between variables, and simple linear regression analysis to determine the direction and predictive capacity of the independent variable on the dependent variable. All analyses were performed using SPSS version 21.

Results

A. Respondent Characteristics

This research involved 96 respondents, with a greater proportion of female participants (54.2%) compared to male participants (45.8%). The most frequent age among participants was 17 years, making it the dominant age group within the sample. Table 3 presents the respondent characteristics.

Table 3. Respondent characteristics.

Characteristics	Frequency	Percentage
Gender		
Male	44	45.8
Female	52	54.2
Age		
15	2	2.1
16	12	12.5
17	26	27.1
18	23	24.0
19	12	12.5
20	14	14.6
21	7	7.3

B. Validity Test

The validity test was conducted to assess whether the questionnaire items effectively measured the intended constructs. Using a significance level of 5% ($\alpha = 0.05$) and a sample of 96 respondents, the critical r table value was determined to be 0.1986. An item was considered valid if the calculated correlation coefficient (r_{count}) exceeded r_{table} [11]. The testing process was carried out in three stages. In the first stage, three items from the peer variable and seven items from the juvenile delinquency intensity variable were identified as not meeting the validity criteria. In the second stage, one additional item from each variable was also found to be invalid. In the third and final stage, all remaining items were found to be valid, indicating that the instrument was appropriate for measuring the intended constructs.

C. Reliability Test

The reliability test was conducted to assess the internal consistency of the questionnaire items. A Cronbach's Alpha coefficient greater than 0.60 is considered to indicate acceptable reliability [12]. The analysis yielded Cronbach's Alpha values of 0.618 for the peer variable and 0.748 for the juvenile delinquency variable, indicating that both instruments demonstrate satisfactory internal consistency.

D. Classical Assumption Test

Before performing data analysis, classical assumption tests were conducted to validate the use of the selected statistical methods. One such test was the normality test, which examined whether the data were normally distributed. This test was performed using the Kolmogorov-Smirnov method, where a significance value (p) greater than 0.05 ($p > 0.05$) indicates that the data follow a normal distribution. The result is depicted in Table 4.

Table 4. The normality test.

Unstandardized Residual	
N	96
Mean	0.0000000
Std. Deviation	0.95585626
Most Extreme Differences	
Absolute	0.052
Positive	0.052
Negative	-0.045
Kolmogorov-Smirnov Z	0.506
Asymp. Sig. (2-tailed)	0.960

*Test distribution is normal

*Calculated from data

Based on the Kolmogorov-Smirnov normality test (Table 4), a significance value of 0.960 ($p > 0.05$) was obtained, indicating that the residuals were normally distributed and that the assumption of normality was met for linear regression analysis.

Subsequently, a linearity test was conducted to assess the linear relationship between the independent and dependent variables. The assumption of linearity was considered fulfilled when the significance value exceeded 0.05 ($p > 0.05$) and F_{count} was lower than the F_{table} value, indicating no significant deviation from linearity.

Table 5. The linearity test.

	Sum of Squares	df	Mean Square	F	Sig.
Juvenile_Delinquency * Peers					
Between Groups (Combined)	20.384	19	1.073	1.087	0.381
Linearity	8.628	1	8.628	8.738	0.004
Deviation from Linearity	11.756	18	0.653	0.661	0.837
Within Groups	75.042	76	0.987		
Total	95.426	95			

Based on Table 5, the significance value was 0.837, and the calculated F_{count} of 0.661 was lower than the critical F_{table} value (1.79), indicating a linear relationship between the variables.

Following the confirmation of linearity, a heteroscedasticity test was conducted to examine whether the variance of the residuals remained constant across all levels of the independent variable. The test, performed using the Spearman rank method, showed a significance value greater than 0.05, indicating homoscedasticity and the absence of heteroscedasticity.

Table 6. The heteroscedasticity test.

			Abs_RES	Peers
Spearman's rho	Abs_RES	Correlation Coefficient	1.000	0,013
		Sig. (2-tailed)		0.899
		N	96	96
	Peers	Correlation Coefficient	0.013	1.000
		Sig. (2-tailed)	0.899	
		N	96	96

Based on Table 6, a significance value of 0.899 ($p > 0.05$) was obtained, indicating no evidence of heteroscedasticity. Overall, the results of the classical assumption tests (normality, linearity, and heteroscedasticity) confirmed that all assumptions were satisfied. The data were normally distributed, exhibited a linear relationship between variables, and showed no signs of heteroscedasticity, meeting the criteria for further statistical analysis.

E. Correlation Analysis

Correlation analysis was conducted to examine the strength and direction of the relationship between peer interaction and juvenile delinquency. A statistically significant correlation was indicated when the p-value was less than 0.05 and the obtained correlation coefficient (r) exceeded the critical r value corresponding to the sample size.

Table 7. Correlation analysis.

		Peers	Juvenile_Delinquency
Peers	Pearson Correlation	1	-.301**
	Sig. (2-tailed)		0.003
	N	96	96
Juvenile_Delinquency	Pearson Correlation	-.301**	1
	Sig. (2-tailed)	0.003	
	N	96	96

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

Based on Table 7, there was a statistically significant relationship between peer relationships and the intensity of juvenile delinquency, with a significance value of 0.003 ($p < 0.05$). The correlation coefficient ($r = -0.301$) indicates a negative association, suggesting that more positive peer relationships are associated with lower levels of juvenile delinquency.

F. Simple Linear Regression Analysis

Simple linear regression analysis was employed to examine the predictive relationship between a single independent variable and a dependent variable. The model is expressed

as $Y = a + bX$, where Y represents the predicted value of the dependent variable (juvenile delinquency), X is the independent variable (peer relationships), a denotes the intercept (constant), and b is the regression coefficient (slope).

Table 8. The simple linear regression analysis.

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	4.753	0.373		12.729	0.000
Peers	-0.302	0.099	-0.301	-3.057	0.003

Based on Table 8, the regression analysis yielded a constant value (a) of 4.753, indicating that in the absence of peer interaction, the predicted level of juvenile delinquency is 4.753. The regression coefficient (b) for the peer interaction variable was -0.302, suggesting that for each one-unit increase in peer interaction, the level of juvenile delinquency decreases by 0.302 units. Therefore, the resulting regression equation is $Y = 4.753 - 0.302X$. This confirms that peer interaction has a negative influence on the level of juvenile delinquency.

Discussion

The results of this research indicate a significant negative correlation between peer relationships and the intensity of juvenile delinquency. With a significance value of 0.003 ($p < 0.05$) and a Pearson correlation coefficient of -0.301, it can be concluded that more positive peer relationships are associated with lower levels of juvenile delinquency. This finding is consistent with previous studies suggesting that the social environment plays a crucial role in shaping adolescent behavior [5].

Furthermore, this conclusion is supported by recent research conducted by Sundari [13], which found that peer influence accounts for 40.9% of the variance in juvenile delinquency, with an F value of 40.068, exceeding the critical F table value of 0.250. In other words, increased exposure to negative peer influences heightens the likelihood of adolescents engaging in delinquent behaviors. These results align with the theory of social conformity, which posits that adolescents are particularly susceptible to peer pressure when adjusting their behavior [14].

Similarly, Hayani [15] reported a significant positive relationship between peer conformity and juvenile delinquency, with a correlation coefficient of $r = 0.555$ ($p = 0.000$). This reinforces the pivotal role of peer conformity in influencing adolescent behavior, both positively and negatively. Adolescents who associate with peers exhibiting deviant norms are more inclined to adopt similar behaviors.

Overall, the findings of this research underscore the significant impact of peer influence on juvenile delinquency. As such, it is essential for parents, educators, and the broader community to provide appropriate supervision and guidance to help adolescents engage in positive social environments. Moreover, implementing character education programs and reinforcing moral values may serve as effective strategies to mitigate the tendency toward deviant behavior among adolescents.

Conclusion

The results of this research indicate a significant relationship between peer interaction and the intensity of juvenile delinquency. This finding supports existing theories and prior studies emphasizing the influential role of peer relationships in shaping adolescent behavior. Negative peer interactions are associated with increased delinquent behavior, while positive peer environments may serve as protective factors against such tendencies.

Based on these findings, educational and developmental interventions for adolescents should prioritize enhancing the quality of peer social interactions. In practice, schools are encouraged to implement peer mentoring programs in which students who demonstrate positive behavior serve as role models for their peers. Furthermore, establishing a school-based monitoring system is recommended, including teacher training to identify early signs of deviant behavior and the creation of regular communication forums involving both schools and parents. These strategies are expected to foster a social environment conducive to the development of healthy and responsible adolescent behavior.

Study Limitations and Recommendations for Future Research

This study has several limitations that should be considered when interpreting the results. First, the use of accidental sampling may limit the representativeness of the sample, potentially affecting the generalizability of the findings to the wider adolescent population. Second, the study relied on self-reported data, which may be subject to social desirability or recall bias. Third, the cross-sectional design prevents the establishment of causal relationships between peer relationships and juvenile delinquency, as data were collected at a single point in time. Fourth, the regression analysis did not include control variables such as gender, socioeconomic status, parental supervision, or school environment due to limitations in scope and data availability. These factors may have influenced the observed associations and should be considered in future research.

Future research should address these limitations by employing probability sampling techniques to obtain more representative samples and by incorporating longitudinal or experimental designs to better assess causality. Additionally, integrating multiple data sources,

such as teacher or parent reports, could help reduce self-report bias. Including a broader range of variables, such as family dynamics, academic performance, and community environment, may provide a more comprehensive understanding of the factors influencing juvenile delinquency. Cross-cultural comparisons could also be valuable in examining whether the relationships observed in this study hold across different social and cultural contexts.

Conflict of Interest

The authors declare that there is no conflict of interest.

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