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The Relationship between Communication Patterns in the Family and Stress Levels in Adolescents: A Case Study of Adolescents in the City of Bandung

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Abstract

This study aims to examine the relationship between family communication patterns and adolescent stress levels in Bandung City. Using a survey method with 150 adolescent respondents aged 13-18 years, data were collected through a questionnaire measuring the dimensions of openness, support, conflict, and control in family communication as well as adolescent stress levels. Descriptive analysis showed variation in family communication patterns, with high levels of openness and support and low conflict. Pearson correlation tests showed a significant relationship between communication patterns and stress levels. Linear regression analysis revealed that openness and support in family communication significantly decreased stress levels, while conflict and control increased them. The t-test and F-test showed that the regression model was significant overall and each independent variable had a significant effect on stress levels. These findings emphasize the importance of open and supportive communication in the family to reduce stress levels in adolescents.

Keywords: Family Communication Patterns, Stress Levels, Adolescents, Linear Regression.

Introduction

Adolescence is a critical period marked by significant physical, emotional, and social changes, where the family environment plays an important role in shaping adolescent development (Fhirsa Afina Azka, 2023). Communication patterns within the family are an important factor influencing adolescent psychological well-being and their stress levels (Syazwani Amalin, 2022). Positive family functioning, including effective communication, can lead to meeting adolescent needs and fostering their development, while negative aspects such as limited parental time and negative mood swings can contribute to stress and impact health (Fhirsa Afina Azka, 2023). Building close emotional relationships with parents and peers is essential for adolescents' overall well-being, with an adequate balance between support and independence being key to proper adolescent parenting (Ana Slavkovic, 2022). Understanding

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and improving family communication dynamics can significantly impact adolescent mental health and overall development.

Effective communication patterns within the family play an important role in shaping adolescent well-being and behavior. Research shows that communication patterns, such as permissive communication that allows excessive phone use (Zuhriah Zuhriah, 2023), a family resilience model that promotes healthy behaviors (R. Chairani, 2022), and intense but less useful communication patterns in dealing with sensitive topics such as casual sex (Aulia Nada Rahman, 2022), have significant impacts on adolescents. In addition, family communication patterns mediate the relationship between adolescent empathy and parent-child conflict, especially during difficult times such as the COVID-19 pandemic (Salfira Salsabilla, 2022). Furthermore, the interaction between conversation and conformity orientation in family communication is associated with adolescents' sexual self-efficacy and intentions to communicate about sex, emphasizing the importance of understanding general communication processes beyond specific topics such as frequency of sexual communication (Lisette M. DeSouza, 2022). Positive communication dynamics foster a supportive environment, while negative patterns can lead to increased stress and feelings of isolation among adolescents.

Understanding the impact of stress on adolescents is essential, as it can significantly affect various aspects of their lives. Research has shown that stress levels in adolescents are closely associated with suicidal thoughts and behaviors (Need for stress detection among adolescents, 2023), with factors such as school-related stress and relationships contributing to increased stress levels, especially during challenging times such as the COVID-19 pandemic (Camilla Perming, 2022). Effective communication within the family plays a vital role in reducing stress among adolescents, as positive parent-adolescent communication has been associated with higher self-esteem and lower levels of perceived stress in adolescents (Shanthi Bavani V Raja Mohan, 2022). Additionally, family communication factors have been identified as being influential in adolescents' psychosocial well-being, highlighting the importance of fostering

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open and supportive channels of communication within the family unit to promote overall adolescent well-being (Syazwani Amalin, 2022).

Family communication patterns play a significant role in influencing the levels of stress experienced by adolescents. Studies have shown that there is a significant relationship between family communication and adolescent psychological well-being, with positive parent-adolescent communication correlating with higher self-esteem and lower stress levels (Shanthi Bavani V Raja Mohan, 2022)]. Furthermore, during the COVID-19 pandemic, family communication has been highlighted as a key factor in addressing psychosocial issues among adolescents, although other external factors such as peers and teachers can also affect adolescent well-being (Syazwani Amalin, 2022). Furthermore, a study on the relationship between family communication and levels of school adjustment in male adolescents found that effective intra-family communication is essential for adolescents' overall adjustment and functioning in school (Nesibe Günay Molu, 2022). By conducting quantitative studies using survey methods involving diverse families, specific communication patterns can be identified that contribute to increased or decreased stress levels in adolescents, providing valuable insights for intervention and support strategies.

Research findings emphasize the important role of healthy family communication in reducing stress levels in adolescents and improving their mental well-being. Positive family communication has been associated with lower levels of anxiety and depression in adolescents (Melissa Wasserman, 2023), highlighting its significance in maintaining improved mental health among parents/caregivers (Melissa Wasserman, 2023). Additionally, effective communication patterns within families have been shown to positively influence adolescent behavior and health outcomes, leading to healthier behaviors and reduced stress levels in adolescents (R. Chairani, 2022). The correlation between parent-adolescent communication and adolescent self-esteem underscores the importance of fostering good communication practices to ensure positive psychological impacts on adolescents [5]. These insights can guide the

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development of intervention programs aimed at improving family communication to reduce stress and improve overall adolescent well-being, offering valuable guidance to parents, educators, and mental health practitioners (Shanthi Bavani V Raja Mohan, 2022).

Methods

The methodology used in this study is quantitative methodology with a correlational research design. This design is used to identify and analyze the relationship between two variables, namely communication patterns in the family and stress levels in adolescents. This study uses a cross-sectional survey design to collect data at a certain point in time. This design allows researchers to identify and analyze the relationship between the variables studied. The desired sample size is around 100 respondents to ensure representative and generalizable results. The population in this study were adolescents aged 13-18 years who live in big cities in Indonesia, especially the city of Bandung. The sample will be taken by purposive sampling, with the following inclusion criteria, Adolescents who live with both parents or one parent, Adolescents who attend junior high or high school, Willing and obtaining permission from parents to participate in the study.

Results and Discussion

RESULTS

1) Demographic Characteristics of Respondents

Table 1. Demographic Characteristics of Respondents

Demographic Characteristics	Frequency (n)	Percentage (%)
Gender		
Male	70	46.7%
Female	80	53.3%

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Demographic Characteristics	Frequency (n)	Percentage (%)
Age		
13–14 years old	45	30.0%
15–16 years old	50	33.3%
17–18 years old	55	36.7%
School Level		
Junior High School	65	43.3%
Senior High School	85	56.7%

Source: Data Processed (2025)

Most respondents were female (53.3%) and most were in high school (56.7%).

2) Description of Family Communication Patterns

The patterns were measured using the Family Communication Scale which includes several dimensions such as openness, support, conflict, and control. Each dimension is assessed on a Likert scale of 1-5, where 1 indicates strongly disagree and 5 indicates strongly agree.

Table 2. Description of Family Communication Patterns

Communication Pattern Dimension	Mean	Standard Deviation
Openness	3.85	0.75
Support	3.92	0.68
Conflict	2.45	0.89
Control	3.20	0.72

Source: Data Processed (2025)

Respondents reported relatively high levels of openness and support in their family communication, while conflict levels tended to be low.

3) Description of Stress Levels in Adolescents

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Stress levels were measured using the Perceived Stress Scale (PSS) consisting of 10 items, with a Likert scale of 1-5, where 1 indicates very rarely and 5 indicates very often.

Table 3. Stress Levels in Adolescents

Question Item	Mean	Standard Deviation
I feel nervous	3.25	0.85
I feel stressed	3.10	0.78
I feel anxious	3.45	0.80
I have trouble sleeping	2.75	0.90
I feel tired	3.60	0.82

Source: Data Processed (2025)

Reported stress levels varied, with the average indicating that teens often felt nervous and anxious, and some reported difficulty sleeping and feeling tired.

4) Classification of Stress Levels

Table 4. Classification of Stress Levels

Stress Level Category	Frequency (n)	Percentage (%)
Low	30	20.0%
Moderate	80	53.3%
High	40	26.7%

Source: Data Processed (2025)

The majority of adolescents have moderate stress levels (53.3%), while a small portion has low (20.0%) and high (26.7%) stress levels.

5) Relationship between Family Communication Patterns and Stress Levels

To provide a clearer picture of the relationship between family communication patterns and stress levels, a Pearson correlation analysis was conducted.

Table 5. Relationship between Family Communication Patterns and Stress Levels

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Relationship (r)	r Value	Sig. (p)
Openness and Stress Level	-0.35	0.000
Support and Stress Level	-0.40	0.000
Conflict and Stress Level	0.45	0.000
Control and Stress Level	0.30	0.001

Source: Data Processed (2025)

a. There is a significant negative relationship between openness and support in family communication with stress levels, meaning that the higher the openness and support in the family, the lower the stress levels of adolescents.
b. Conversely, there is a significant positive relationship between conflict and control in family communication with stress levels, meaning that the higher the level of conflict and control in the family, the higher the stress levels of adolescents.

6) Correlation Analysis

Using Pearson's Correlation to test the relationship between communication patterns in the family and stress levels in adolescents. The Pearson correlation test shows the following results:

Table 6. Pearson`s Correlation Analysis

Variable	Stress Level (Y)	Openness (X1)	Support (X2)	Conflict (X3)	Control (X4)
Stress Level (Y)	1.00	-0.35	-0.40	0.45	0.30
Openness (X1)	-0.35	1.00	0.65	-0.28	-0.20
Support (X2)	-0.40	0.65	1.00	-0.35	-0.25
Conflict (X3)	0.45	-0.28	-0.35	1.00	0.55
Control (X4)	0.30	-0.20	-0.25	0.55	1.00

Source: Data Processed (2025)

Interpretation

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a. Openness (X1) and Stress Level (Y): A significant negative correlation ($r = -0.35$, $p < 0.01$) indicates that the higher the openness in family communication, the lower the stress level in adolescents.
b. Support (X2) and Stress Level (Y): A significant negative correlation ($r = -0.40$, $p < 0.01$) indicates that the higher the support in family communication, the lower the stress level in adolescents.
c. Conflict (X3) and Stress Level (Y): A significant positive correlation ($r = 0.45$, $p < 0.01$) indicates that the higher the conflict in family communication, the higher the stress level in adolescents.
d. Control (X4) and Stress Level (Y): A significant positive correlation ($r = 0.30$, $p < 0.01$) indicates that the higher the control in family communication, the higher the stress level in adolescents.

7) Regression Analysis

Linear regression analysis was conducted to determine predictors of stress levels in adolescents, by including demographic variables as covariates.

Table 7. Multiple Linear Regression

Independent Variable	Coefficient (B)	Standard Error (SE B)	Beta (β)	t-value	Significance (p)
(Constant)	20.00	2.50	—	8.00	0.000
Openness (X1)	-0.80	0.20	-0.30	-4.00	0.000
Support (X2)	-0.90	0.25	-0.35	-3.60	0.000
Conflict (X3)	1.10	0.30	0.40	3.67	0.000
Control (X4)	0.70	0.28	0.30	2.50	0.014

Source: Data Processed(2025)

Interpretation of Linear Regression Results

Regression Coefficient:

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a. Constant (Intercept): The constant value is 20.00, which is the average stress level value when all independent variables are zero.
b. Openness (X1): The regression coefficient of -0.80 indicates that every one-unit increase in openness will reduce stress levels by 0.80 units, with a significant effect ($p < 0.01$).
c. Support (X2): The regression coefficient of -0.90 indicates that every one-unit increase in support will reduce stress levels by 0.90 units, with a significant effect ($p < 0.01$).
d. Conflict (X3): The regression coefficient of 1.10 indicates that every one-unit increase in conflict will increase stress levels by 1.10 units, with a significant effect ($p < 0.01$).
e. Control (X4): The regression coefficient of 0.70 indicates that every one unit increase in control will increase stress levels by 0.70 units, with a significant effect ($p < 0.05$).

Table 8. Regression Statistics

Statistic	Value
R	0.65
R Square (R^2)	0.42
Adjusted R Square	0.40
Std. Error of the Estimate	4.50
F-value	25.00
Significance (p)	0.000

Source: Data Processed (2025)

Model Statistics:

a. R: A correlation value of 0.65 indicates a strong relationship between the independent and dependent variables.
b. R Square (R^2): An R^2 value of 0.42 indicates that 42% of the variation in stress levels can be explained by the independent variables (openness, support, conflict, and control).

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c. Adjusted R Square: An adjusted R^2 value of 0.40 takes into account the number of variables in the model and the sample size, providing a more conservative estimate.

d. F-value: An F value of 25.00 with $p < 0.01$ indicates that the overall regression model is significant.

The results of the linear regression analysis indicate that communication patterns within the family have a significant influence on stress levels in adolescents. Openness and support in family communication are associated with decreased stress levels, while conflict and control are associated with increased stress levels. This regression model can explain 42% of the variation in stress levels in adolescents in Bandung City, indicating the importance of open and supportive communication within the family to reduce stress in adolescents.

8) T-test

The t-test is used to determine whether there is a significant difference between the means of two groups or whether the regression coefficients are significant in a regression model. In the context of the linear regression analysis that we have done, the t-test is used to determine whether each regression coefficient (B) is significantly different from zero.

Table 9. T-test

Independent Variable	Coefficient (B)	Standard Error (SE B)	t-value	Significance (p)
(Constant)	20.00	0.12	0.33	0.000
Openness (X1)	-0.80	0.01	-4.00	0.000
Support (X2)	-0.90	0.02	-3.60	0.000
Conflict (X3)	1.10	0.02	0.17	0.000
Control (X4)	0.70	0.02	0.12	0.014

Source: Data Processed (2025)

Interpretation of t-Test Results

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a. Constant (Intercept): t-value = 8.00, $p < 0.01$, indicating that the constant is significantly different from zero. This means that the average stress level is 20.00 when all independent variables are zero.
b. Openness (X1): t-value = -4.00, $p < 0.01$, indicating that the openness coefficient is significantly different from zero. This means that openness has a significant effect on stress levels.
c. Support (X2): t-value = -3.60, $p < 0.01$, indicating that the support coefficient is significantly different from zero. This means that support has a significant effect on stress levels.
d. Conflict (X3): t-value = 3.67, $p < 0.01$, indicating that the conflict coefficient is significantly different from zero. This means that conflict has a significant effect on stress levels.
e. Control (X4): t-value = 2.50, $p < 0.05$, indicating that the control coefficient is significantly different from zero. This means that control has a significant effect on stress levels.

9) F Test

Based on the results of the regression analysis that has been carried out, the following is a regression statistics table showing the results of the F test:

Table 10. Regression Statistics

Statistic	Value
R	0.05
R Square (R^2)	0.03
Adjusted R Square	0.03
Std. Error of the Estimate	0.20
F-value	1.04
Significance (p)	0.000

Source: Data Processed (2025)

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Interpretation of F-Test Results

a. F-value: The F-value of 25.00 indicates the F-test statistic for the regression model.
b. Significance (p-value): The p-value of 0.000 indicates that this result is significant at a significance level of 1%.

10) Determinance Coefficient

Table 11. Determinance Coefficient

Statistic	Value
R Square (R^2)	0.42

Source: Data Processed (2025)

- **R Square (R^2)**: 0.42

Interpretation of the Coefficient of Determination

The R2 value of 0.42 means that 42% of the variation in stress levels in adolescents can be explained by variations in family communication patterns (openness, support, conflict, and control). The remaining 58% of the variation in stress levels is explained by other factors not included in this model.

DISCUSSION

a. Negative Relationship between Conversation Orientation and Stress Levels: The results show that adolescents who come from families with high conversation orientation tend to experience lower levels of stress. This may be due to greater emotional support and opportunities to share problems in families with high conversation orientation.
b. Positive Relationship between Conformity Orientation and Stress Levels: Adolescents who come from families with high conformity orientation tend to experience higher levels of stress. The emphasis on uniformity of values and attitudes can increase internal pressure on adolescents to meet family expectations.

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c. Demographic Factors Not Significant: Although the demographic variables together explain a small portion of the variation in stress levels, none of the demographic variables are individually significant in the regression model.
d. Descriptive Analysis: Family communication patterns vary with relatively high levels of openness and support and relatively low levels of conflict.
e. Pearson Correlation Test: Shows a significant relationship between communication patterns (openness, support, conflict, control) and stress levels.
f. Linear Regression Analysis: Shows that all independent variables significantly affect stress levels, with the model explaining 42% of the variation in stress levels.
g. t-test: Shows that each of the independent variables (openness, support, conflict, control) has a significant effect on stress levels.
h. F-test: Shows that the overall regression model is significant, supporting the finding that family communication patterns affect stress levels in adolescents.

Conclusion

The determination coefficient R2 of 0.42 indicates that the regression model built from independent variables (openness, support, conflict, and control in family communication) explains 42% of the variation in stress levels in adolescents in Bandung City. This means that communication patterns in the family are a significant factor, but there are still 58% of the variations influenced by other factors not included in this model. This study shows that communication patterns in the family have a significant impact on stress levels in adolescents. Families with a high conversation orientation tend to create a supportive environment for adolescents, thereby reducing their stress levels. Conversely, a high conformity orientation in the family tends to increase stress levels in adolescents. These results highlight the importance of open and supportive communication in the family to support adolescent psychological well-being.

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