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Emotion Regulation and Prosocial Behavior among Eleventh-Grade Students at SMA Negeri 1 Talamau, Indonesia

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Abstract

Emotion regulation is widely assumed to support adolescents' prosocial behavior, yet evidence from Indonesian senior high schools remains inconsistent, particularly in rural settings. This study described emotion regulation and prosocial behavior among eleventh-grade students at SMA Negeri 1 Talamau, West Pasaman, Indonesia, and examined the relationship between these variables. A quantitative correlational design involved 65 students selected from a population of 187 through proportionate random sampling. Data were collected using Likert-type emotion regulation and prosocial behavior scales comprising 37 items (α = .918) and 38 items (α = .937), respectively. Descriptive percentage analysis and Pearson product-moment correlation were conducted following normality and linearity testing. Most students exhibited high emotion regulation (61.54%), while nearly half demonstrated very high prosocial behavior (49.23%). No students were classified in the low or very low categories. The correlation was positive but very weak and statistically nonsignificant (r = .185, p = .141). These findings provide no evidence of a statistically significant linear association within this sample and caution against assuming that higher emotion regulation necessarily corresponds to greater prosocial behavior in this school context. The study contributes contextual evidence to research on adolescent socioemotional development and recommends combining emotion regulation training with peer-based prosocial programs in school counseling. Future research should involve larger samples and examine empathy and school climate alongside emotion regulation.

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Keywords: Emotion Regulation; Prosocial Behavior; Adolescents; Senior High School Students; School Counseling

INTRODUCTION

Adolescence is a transitional period from childhood to adulthood marked by rapid physical, cognitive, emotional, and social change. One of the central developmental tasks of this period is the ability to build responsible and harmonious social relationships with peers, teachers, and the wider community. Prosocial behavior, namely voluntary actions intended to benefit others such as helping, sharing, cooperating, and comforting, is a core indicator of this social competence. Meta-analytic evidence shows that adolescents who behave more prosocially tend to display fewer externalizing behaviors and fewer internalizing symptoms (Memmott-Elison et al., 2020), and prosocial behavior can protect adolescents against antisocial conduct(Carlo et al., 2014). At the same time, adolescence is a pivotal period in which the capacity to regulate emotions is still maturing (Silvers, 2022), so difficulties in managing emotions may spill over into how adolescents treat others.

These concerns are visible in school settings. Preliminary observations and interviews with students at SMA Negeri 1 Talamau, West Pasaman Regency, West Sumatra, conducted in August 2026, indicated that some eleventh-grade students showed little concern for classmates facing difficulties, were reluctant to share, found it hard to cooperate in group tasks, rarely took the initiative to help, and tended to prioritize personal interests over common interests. Some students were also reported to help others only when they expected a personal benefit, to be less honest in completing tasks, and to struggle in forming good friendships with peers. These conditions suggest that students' prosocial behavior requires attention from school counselors.

Emotion regulation refers to the processes by which individuals influence which emotions they have, when they have them, and how they experience and express them (Gross, 1998). It involves conscious or unconscious efforts to maintain, increase, or decrease components of an emotional response, including subjective experience and behavior(Gross, 2015). Emotion regulation can operate explicitly, through deliberate monitoring and control, or implicitly, through automatic processes that occur without awareness (Gyurak et al., 2011). It is also multidimensional, encompassing awareness, understanding, and acceptance of emotions, the ability to control impulsive behavior when distressed, and access to effective

regulation strategies (Gratz & Roemer, 2004). Theoretically, well-regulated individuals are less likely to be overwhelmed by personal distress when witnessing others' needs and are therefore better able to attend to others and respond with helping behavior(Wentzel et al., 2007). Consistent with this view, self-regulation has been found to predict adolescents' prosocial behavior toward family and peers(Carlo & Randall, 2002) and emotion regulation has been shown to moderate the association between empathy and prosocial behavior (Lockwood et al., 2014).

Empirical studies generally support a positive link between the two variables, but the reported magnitudes vary. A weak positive correlation ($r = .26$) was found among 160 senior high school students in Semarang (Yusuf & Kristiana, 2017), and a similarly weak correlation between cognitive reappraisal and prosocial behavior ($r = .279$) was reported among 609 senior high school students in China (Xu et al., 2023). A moderate correlation ($r = .456$) was found among 177 senior high school students in Medan, North Sumatra (Hutahaean, 2020). Integrative emotion regulation has also been shown to predict early adolescents' prosocial behavior, both directly and through empathy toward classmates (Benita et al., 2017). This range suggests that the strength of the association may depend on the sample and school context. However, most previous studies were conducted in urban schools or involved large samples, and they seldom discussed the conditions under which the association may be weak. Evidence from rural senior high schools in West Pasaman is still lacking.

The present study addresses this gap by examining emotion regulation and prosocial behavior among eleventh-grade students in a rural public senior high school in West Pasaman. Its novelty lies in its research context and in its indicator-level description of both variables. Emotion regulation is operationalized through six characteristics of individuals with high emotion regulation: self-control, interpersonal relationships, conscientiousness, adaptability, tolerance, and a positive outlook(Memmott-Elison et al., 2020). Prosocial behavior is operationalized through three characteristics: it is performed voluntarily, it benefits others, and it is realized in concrete actions(Gross, 2015).

Accordingly, this study aimed to describe the level of emotion regulation among eleventh-grade students at SMA Negeri 1 Talamau, to describe the level of their prosocial behavior, and to examine the relationship between emotion regulation and prosocial behavior. The alternative hypothesis stated that there is a significant positive relationship

between emotion regulation and prosocial behavior among eleventh-grade students at SMA Negeri 1 Talamau.

METHODS

Research Design and Setting

This study employed a quantitative approach with a descriptive correlational design. The descriptive component was used to portray the levels of emotion regulation (X) and prosocial behavior (Y), while the correlational component was used to test the relationship between the two variables without manipulating either of them. The study was conducted at SMA Negeri 1 Talamau, Talamau District, West Pasaman Regency, West Sumatra, Indonesia, in August 2026. The school was selected because the preliminary observations revealed phenomena relevant to the research problem. The study was carried out with the permission of the school, and the data are reported only in aggregate form.

Participants and Sampling Technique

The population consisted of all 187 eleventh-grade students distributed across six classes. The sample size was determined using the Slovin formula with a 10% margin of error, $n = N / (1 + Ne^2) = 187 / (1 + 187 \times 0.01) = 65.16$, which was rounded to 65 students. The sample was allocated proportionally to the size of each class, and students within each class were selected randomly by lottery. The distribution of the population and sample is presented in Table 1.

Table 1. Population and Sample of Eleventh-Grade Students by Class

Class	Population	Sample
F1	31	11
F2	23	8
F3	32	11
F4	35	12
F5	34	12
F6	32	11
Total	187	65

Instruments and Data Collection

Data were collected using two questionnaires with a five-point Likert-type scale: *always*, *often*, *sometimes*, *rarely*, and *never*. Favorable items were scored from 5 to 1 and unfavorable items from 1 to 5. The emotion regulation scale was developed from six characteristics, namely self-control, interpersonal relationships, conscientiousness, adaptability, tolerance, and a positive outlook (Carlo et al., 2012), while the prosocial behavior scale was developed from three characteristics, namely voluntary action, benefiting others, and being realized in concrete actions (Eisenberg et al., 2015). Each scale initially contained 40 items and was tried out on 30 respondents before the main data collection. The questionnaires were then administered directly to the 65 sampled students in their classrooms.

Item validity was examined using Pearson product-moment item–total correlations, with a critical value of *r*-table = .361 ($df = 28$, $\alpha = .05$). For the emotion regulation scale, 37 items were valid and three items were discarded. The valid items were distributed across self-control (7 items), interpersonal relationships (6), conscientiousness (5), adaptability (7), tolerance (5), and positive outlook (7). For the prosocial behavior scale, 38 items were valid and two items were discarded, distributed across voluntary action (13 items), benefiting others (13), and concrete action (12). Reliability testing using Cronbach's alpha yielded $\alpha = .918$ for the emotion regulation scale and $\alpha = .937$ for the prosocial behavior scale, indicating high internal consistency.

Data Analysis Technique

Data were analyzed with Microsoft Excel and IBM SPSS Statistics. Descriptive analysis used frequencies and percentages, and scores were classified into five categories using ideal-score intervals. For emotion regulation (37 items; possible range 37–185), the categories were very high (157–185), high (127–156), moderate (97–126), low (67–96), and very low (37–66). For prosocial behavior (38 items; possible range 38–190), the categories were very high (158–190), high (128–157), moderate (98–127), low (68–97), and very low (38–67). Indicator scores were categorized using the same procedure.

Before hypothesis testing, the normality of the residuals was examined using the one-sample Kolmogorov–Smirnov test, and linearity was examined using the test for deviation from linearity; both assumptions were considered met when $p > .05$. The hypothesis was then tested using Pearson product-moment correlation (two-tailed, $\alpha = .05$). The strength of

the correlation was interpreted as very weak (0.00–0.199), weak (0.20–0.399), moderate (0.40–0.599), strong (0.60–0.799), or very strong (0.80–1.00) (Nasution, 2016).

RESULTS

Levels of Emotion Regulation

The distribution of students across the five categories for each variable and indicator is presented in Table 2. Overall, emotion regulation was predominantly in the high category: 40 students (61.54%) were classified as high, 10 students (15.38%) as very high, and 15 students (23.08%) as moderate. No students fell into the low or very low categories.

At the indicator level, most students were in the high or very high categories for interpersonal relationships (89.23%), tolerance (90.77%), conscientiousness (81.53%), and positive outlook (61.53%). In contrast, the self-control and adaptability indicators were evenly split between the high and moderate categories (43.08% each for self-control and 44.62% each for adaptability). Self-control was also the indicator with the largest proportion of students in the low category (4 students, 6.15%).

Table 2. Distribution of Emotion Regulation and Prosocial Behavior Categories (*N* = 65)

Variable/Indicator	Items	Very High	High	Moderate	Low	Very Low
Emotion regulation (overall)	37	15.38%	61.54%	23.08%	0.00%	0.00%
Self-control	7	7.69%	43.08%	43.08%	6.15%	0.00%
Interpersonal relationships	6	38.46%	50.77%	10.77%	0.00%	0.00%
Conscientiousness	5	35.38%	46.15%	16.92%	1.54%	0.00%
Adaptability	7	9.23%	44.62%	44.62%	1.54%	0.00%
Tolerance	5	41.54%	49.23%	7.69%	1.54%	0.00%
Positive outlook	7	15.38%	46.15%	36.92%	1.54%	0.00%
Prosocial behavior (overall)	38	49.23%	40.00%	10.77%	0.00%	0.00%
Voluntary action	13	58.46%	35.38%	6.15%	0.00%	0.00%
Benefiting others	13	56.92%	33.85%	9.23%	0.00%	0.00%
Concrete action	12	41.54%	41.54%	16.92%	0.00%	0.00%

Levels of Prosocial Behavior

Prosocial behavior was generally very high. Thirty-two students (49.23%) were in the very high category, 26 students (40.00%) in the high category, and 7 students (10.77%) in the moderate category, with none in the low or very low categories. The voluntary action (58.46% very high) and benefiting others (56.92% very high) indicators showed the strongest

profiles, whereas the concrete action indicator was evenly distributed between very high and high (41.54% each), with a larger moderate share (16.92%). Figure 1 compares the overall distributions of the two variables and shows that prosocial behavior was concentrated at the upper end of the scale more strongly than emotion regulation.

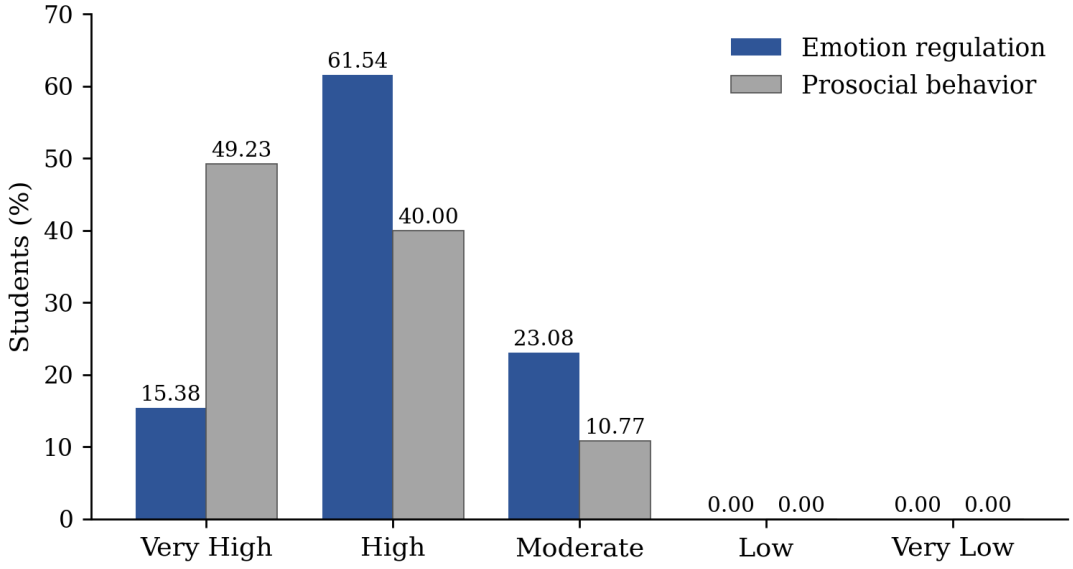


Figure 1. Distribution of Emotion Regulation and Prosocial Behavior Categories

Assumption Tests and Hypothesis Testing

As shown in Table 3, the Kolmogorov–Smirnov test on the unstandardized residuals produced a Z value of 0.844 with p = .475, indicating that the residuals were normally distributed. The test for deviation from linearity yielded $F(38, 25) = 1.251$ with p = .281, indicating that the relationship between the variables could be treated as linear. The assumptions for Pearson correlation were therefore met.

Table 3. Results of Assumption Tests and Pearson Correlation

Test	Statistic	p	Decision
Normality (Kolmogorov–Smirnov, residuals)	Z = 0.844	.475	Normal
Linearity (deviation from linearity)	F(38, 25) = 1.251	.281	Linear
Pearson correlation (X–Y)	r = .185; r^2 = .034	.141	Not significant; H_0 retained

The Pearson product-moment correlation between emotion regulation and prosocial behavior was r = .185 with p = .141 (two-tailed, N = 65). The coefficient was positive but fell in the very weak range, and the coefficient of determination (r^2 = .034) indicates that emotion regulation shared only about 3.4% of the variance in prosocial behavior. Because p > .05, the null hypothesis was retained and the alternative hypothesis was rejected; there was

no significant relationship between emotion regulation and prosocial behavior among eleventh-grade students at SMA Negeri 1 Talamau.

Divergent Findings

Two patterns in the data diverge from the expectations formulated at the outset. First, although the preliminary observations identified problems in students' prosocial behavior, the questionnaire data placed all students in the moderate to very high categories for both variables. Second, the linear component of the relationship was also not significant, $F(1, 25) = 2.563$, $p = .122$, which is consistent with the non-significant correlation. These findings are reported as they were obtained, and possible explanations are considered in the Discussion.

DISCUSSION

Analysis and Interpretation of Findings

This study found that eleventh-grade students at SMA Negeri 1 Talamau generally had high emotion regulation and very high prosocial behavior, yet the two variables were not significantly related. In practical terms, students who reported better emotion regulation did not report noticeably more prosocial behavior than their peers. The descriptive profile helps explain this result. Because no students scored in the low or very low categories on either variable, the scores were concentrated in the upper part of the scale. Such restriction of range reduces the variance that is available for covariation and tends to attenuate correlation coefficients, so a true association may appear weaker than it is.

The indicator-level results also suggest that the emotional competencies students reported most strongly, such as tolerance and good interpersonal relationships, may serve mainly to maintain harmony and avoid conflict rather than to motivate active helping. Conscientiousness may be directed more toward personal tasks and academic obligations, and adaptability may function more as a personal coping resource than as a driver of prosocial initiative. Meanwhile, the high level of prosocial behavior across almost all students suggests that helping and sharing at this school may be sustained by shared norms, peer expectations, and a communal school culture. This interpretation is consistent with evidence that adolescents' prosocial behavior is shaped by contextual cues and perceived expectations from peers and teachers(Wentzel et al., 2007). When helping is a widely shared norm,

individual differences in emotion regulation may play a smaller role in determining who helps.

Comparison with Theories and Previous Literature

The findings differ from most previous studies, which reported significant positive correlations ranging from weak to moderate (Hutahaean, 2020; Xu et al., 2023) and from international evidence that self-regulation predicts adolescents' prosocial behavior (Carlo et al., 2015). However, the direction of the present coefficient is the same, and its magnitude (r = .185) is not far from the weak correlation reported in a previous study (r = .26) (Yusuf & Kristiana, 2017). Part of the difference in statistical significance may therefore reflect sample size. With 65 participants, the study had only about 31% power to detect a correlation of this size, and roughly 227 participants would be needed to detect it with 80% power. The present result should thus be read as evidence of a weak association that could not be distinguished from zero in this sample, not as proof that the two variables are unrelated.

Theoretical perspectives also suggest that the effect of emotion regulation on prosocial behavior may be indirect. Emotion regulation may be important because it prevents empathic arousal from turning into self-focused personal distress(Silvers, 2022). Consistent with this perspective, emotion regulation was found to moderate the link between empathy and prosocial behavior rather than acting only as a direct predictor(Lockwood et al., 2014). Empathy and sympathy are robust predictors of adolescents' prosocial behavior (Carlo et al., 2015; Van der Graaff et al., 2018), while emotional distress has been linked to lower prosocial behavior among young adolescents(Wentzel et al., 2007). A general measure of emotion regulation that does not account for empathy may therefore underestimate its role.

Research Implications

Theoretically, the findings caution against assuming that emotion regulation is a sufficient direct predictor of prosocial behavior in every school context. Models of adolescent prosocial development should also consider empathy, sympathy, peer norms, and school climate. Practically, school counselors at SMA Negeri 1 Talamau can maintain the strong prosocial culture that already exists while strengthening the weaker emotional competencies, especially self-control and adaptability, through classical guidance and group guidance services. Emotion regulation training is likely to be more beneficial for social development when it is combined with peer-based cooperative and helping activities. School

leaders can support these efforts by cultivating a caring school climate, given that prosocial behavior protects adolescents against antisocial conduct(Carlo et al., 2014).

Research Limitations and Directions for Future Research

This study has several limitations. The sample was small and drawn from a single school, which limits statistical power and generalizability. The data were based entirely on self-report, which may be influenced by social desirability; the discrepancy between the preliminary observations and the high questionnaire scores points to this possibility. The instruments were developed by the researchers from Goleman's characteristics rather than from standardized emotion regulation and prosocial behavior measures, and the cross-sectional design does not permit causal inference. Future studies are encouraged to use larger multi-school samples, standardized instruments such as the Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004) and the Prosocial Tendencies Measure (Carlo et al., 2015), multi-informant data from teachers and peers, and longitudinal designs. They should also test empathy, peer relationships, and school climate as possible mediators or moderators of the relationship.

CONCLUSION

This study concludes that eleventh-grade students at SMA Negeri 1 Talamau generally have high emotion regulation and very high prosocial behavior. Among the emotion regulation indicators, interpersonal relationships, tolerance, conscientiousness, and positive outlook were mostly high, whereas self-control and adaptability were evenly split between high and moderate. Among the prosocial behavior indicators, voluntary action and benefiting others were very high, while concrete action was evenly distributed between very high and high. The relationship between emotion regulation and prosocial behavior was positive but very weak and not significant ($r = .185$, $p = .141$), indicating that in this context students' prosocial behavior is not primarily explained by their ability to regulate emotions.

The study contributes to the literature by providing evidence from a rural Indonesian senior high school that the association between emotion regulation and prosocial behavior is not uniform across contexts. It shows that when prosocial norms are strong and scores are concentrated at the upper end of the scale, individual differences in emotion regulation may have limited direct links with helping behavior. This finding supports models that

position emotion regulation alongside empathy and contextual factors rather than as a stand-alone predictor.

Future research is recommended to involve larger and more diverse samples across several schools, to use standardized and multi-informant measures, and to examine empathy, peer relationships, religious values, and school climate as mediating or moderating variables. Longitudinal or intervention designs would also clarify whether strengthening self-control and adaptability can increase prosocial behavior over time.

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