

Authoritarian Parenting and Peer Interaction as Predictors of Social Media Use and High School Students' Resilience

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Although peer interaction and authoritarian parenting are known to have an impact on teenage behaviour and resilience, their combined predictive power over social media use and resilience in Indonesia is still poorly understood. This study fills this knowledge gap by investigating the intricate connections between peer interaction, social media use, authoritarian parenting, and the resilience of high school students in the Indonesian context. Using a quantitative methodology, data were gathered from 500 secondary school pupils in Bogor, West Java, Indonesia. SEM-PLS (Structural Equation Modelling-Partial Least Squares) was used in the analysis. Important results indicate that authoritarian parenting directly reduces resilience ($\beta = -0.218$) and significantly predicts higher social media use ($\beta = 0.138$). On the other hand, peer interaction is a strong predictor of improved resilience ($\beta = 0.321$) and increased social media use ($\beta = 0.288$). Interestingly, social media use and resilience are not directly correlated ($\beta = -0.016$). There was no evidence to support the hypothesis that peer interaction and authoritarian parenting have an interaction effect. The study illustrates the opposing effects of these elements on Indonesian high school students: authoritarian parenting may increase social media use and directly hinder resilience, whereas peer interaction is a major factor in resilience development. The lack of a clear correlation between resilience and social

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media use points to the potential role of additional mediating or moderating factors. These findings underscore the pressing need for peer-focused interventions and context-specific family support programs to enhance the resilience of high school students in Indonesia.

Introduction

The increase in violence among adolescents is a social phenomenon that is increasingly worrying and shows an upward trend from year to year. According to statistics compiled by Ministry of Women's Empowerment and Child Protection (Kemen PPPA, 2025), adolescents in Indonesia experience various forms of violence, including physical violence (10.809 cases), psychological violence (9.998 cases), sexual violence (13.649 cases), exploitation (397 cases), trafficking (430 cases), and neglect (2.435 cases). At the provincial level, West Java exhibits significant case dynamics, with 1,981 victims recorded in 2023, decreasing to 1,208 in 2024, but increasing again to 2,103 in 2025 (Kemen PPPA, 2025). This trend suggests that high levels of adolescent resilience in the face of complicated societal constraints are structurally related to the prevalence of violence against adolescents.

A high level of adaptability is required during adolescence due to the rapid physical, psychological, and social changes that occur during this formative period. In this context, resilience becomes a key construct that enables adolescents to maintain positive psychosocial functioning even when in high-risk situations (Masten, 2021). According to Masten (2021), resilience is a constantly changing state that results from a combination of personal traits and environmental factors. Several studies have shown that academic pressure, particularly in environments that emphasize high achievement, contributes to increased loneliness and weakened social connections among adolescents (Lan et al., 2023). This pressure is often reinforced by peer influence, which significantly shapes adolescents' behaviour, emotional regulation, and social choices (Cutrín et al., 2021). In such conditions, resilience serves as a key protective factor, enabling adolescents to maintain their mental health and function adaptively (Zhang et al., 2023; Lin et al., 2022).

From a developmental ecological perspective, adolescent resilience cannot be separated from the family and social contexts in which adolescents interact. Arafat et al. (2022) found strong evidence that environmental factors including parental obligations and social support have a significant impact on teenagers' resilience. Parenting approaches have a significant impact on generating an emotional environment that either supports or hinders the development of resilience. Supportive and responsive parenting styles, such as authoritative parenting, are linked to better levels of resilience through improved emotional regulation and self-competence (Anasuyari & Latifah, 2023). Conversely, authoritarian parenting styles defined by high demands and inadequate responsiveness tend to increase psychological stress and weaken adolescents' self-esteem and emotional regulation, ultimately hindering the development of resilience (Pinquart, 2017; Kuo et al., 2024).

Although the classical theoretical framework distinguishes parenting styles into authoritarian, authoritative, and permissive, this study conceptually focuses its empirical analysis on authoritarian parenting. This focus is based on empirical evidence showing that authoritarian parenting consistently acts as the strongest and most stable family risk factor for various indicators of adolescent maladjustment, including low emotional regulation, increased psychological stress, and weakened resilience capacity (Pinquart, 2017; Kuo et al., 2024; Irzalinda et al. 2025a; Irzalinda, et al., 2025b; Irzalinda & Melly, 2023). From a developmental ecological perspective, authoritarian parenting reflects a source of structural



stress within the family microsystem that directly limits adolescents' ability to develop adaptive coping strategies, especially when interacting with external social contexts such as peer relationships and the digital environment (Bronfenbrenner, 1979; Politte-Corn et al., 2024).

Authoritative and permissive parenting styles remain theoretically recognized as relevant parenting approaches, particularly as potential protective factors. However, these parenting styles were not included in the empirical model because this study adopted a risk-focused model approach, which aims to identify the main risk pathways to adolescent resilience, rather than conducting a comprehensive comparison between parenting typologies. This focused approach allows for testing more parsimonious and precise structural mechanisms, especially in the context of collectivist societies (e.g., Indonesia) that are still characterized by high-control parenting practices and demands for obedience, which have been found to have important ramifications for teenagers' psychological well-being (Arafat et al., 2022; Du & Zou, 2024).

In addition to family, peer relationships become an increasingly dominant context for development during adolescence. Positive peer relationships support the growth of cooperative behavior, social competence, and conflict resolution abilities (Shao & Kang, 2022). In both the academic and psychosocial areas, adolescents who have positive peer interactions typically exhibit higher levels of resilience and more favorable adaptation outcomes (Yoon et al., 2020; Hasanah & Latifah, 2021; Anasuyari et al., 2023). Conversely, social rejection and involvement in dysfunctional peer relationships increase vulnerability to stress and mental health problems, emphasizing the importance of social relationship quality in supporting adolescent resilience (Murniasih & Irvan, 2023).

In the context of rapid digitalization, peer interactions are increasingly mediated by social media platforms. Adolescents now primarily use social media to create relationships, negotiate identities, and express emotions (Angelini et al., 2024). The research indicates that social media has conflicting effects on resilience and well-being. On the one hand, excessive and careless use is linked to higher levels of depression and anxiety (Twenge & Campbell, 2018). On the other hand, social media use that emphasizes skill development, emotional expressiveness, and social support is linked to increased levels of resilience (Angelini et al., 2024). These results demonstrate that social media serves as an active developmental setting that can directly impact adolescent resilience in addition to serving as a conduit for communication (Politte-Corn et al., 2024).

Based on Bronfenbrenner's ecological model (1979), social media use can be positioned as part of adolescents' mesosystem and exosystem that interact directly with the family and peer contexts. Therefore, modelling social media use as a direct predictor of resilience has a strong theoretical basis, as social media functions as a distinct social environment that provides both developmental resources and risks. This approach allows for testing the independent contribution of social media to resilience, without assuming that its role is always mediating or moderating. This is relevant, given that previous empirical findings have yielded inconsistent results regarding the role of social media as a mediator or moderator in the relationship between parenting and resilience (Politte-Corn et al., 2024).

The urgency of this research is further strengthened in the context of Indonesia, a collectivist society undergoing rapid digitalization. Social media penetration among adolescents aged 15–19 years reaches around 64 percent (Aulia & Putri, 2024), while Indonesian Internet Service

Providers Association (APJII, 2025) data shows that internet penetration among Indonesian adolescents has reached 89.22 percent, with West Java Province being one of the regions with high penetration rates (86.52%). This condition shows that Indonesian adolescents live in an intense digital ecosystem, where interactions with family, peers, and social media intertwine to shape adolescent development experiences.

Specifically, the city of Bogor in West Java Province, as a buffer zone for the capital, faces relatively higher social and environmental pressures. A study by Rachman et al. (2020) reveals that 29% of adolescents in Bogor City exhibit low levels of resilience, characterised by limited problem-solving skills and minimal family involvement in addressing difficulties. The study also demonstrates that peer relationships and parent-adolescent interactions have a significant impact on the resilience and mental health of teenagers.

Although global literature has shown that parenting styles and peer relationships are key determinants of adolescent resilience (Pinquart, 2017; Du & Zou, 2024; Kuo et al., 2024; Politte-Corn et al., 2024), several important gaps remain in the research. First, most studies have been conducted in Western, individualistic contexts, which limits the generalizability of findings to collectivistic contexts, such as Indonesia. Second, research in Indonesia tends to examine parenting, peer relationships, and social media use separately, without simultaneously testing their structural pathways. Third, the role of social media use in resilience models remains inconsistent, particularly regarding its position as a mediator, moderator, or independent predictor of resilience.

Thus, the purpose of this research is to develop an integrated conceptual model that looks at how teenage resilience and social media use are jointly predicted by peer relationships and authoritarian parenting. By demonstrating social media use as a direct predictor, this study expands the application of the ecological model of resilience to a non-Western digital environment. A better comprehension of the processes that underlie the development of resilience in Indonesian teenagers, especially in Bogor City, West Java Province, which exemplifies the nation's social and educational variety. The simultaneous testing of many paths produced by the use of Structural Equation Modeling–Partial Least Squares (SEM-PLS) allowed for this. Through the simultaneous analysis of many pathways using Structural Equation Modeling-Partial Least Squares (SEM-PLS), this work offers a deeper understanding of the resilience process in a population that has not gotten much attention.

Predictive Hypotheses (See Figure 1):

- (1) H1 = Peer interaction benefits from authoritarian parenting
- (2) H2 = Social media use is positively impacted by authoritarian parenting
- (3) H3 = Adolescent resilience is negatively impacted by authoritarian parenting
- (4) H4 = Social media use is positively impacted by peer interaction
- (5) H5 = Adolescent resilience is positively impacted by interaction with peers
- (6) H6 = Adolescent resilience is negatively impacted by social media use

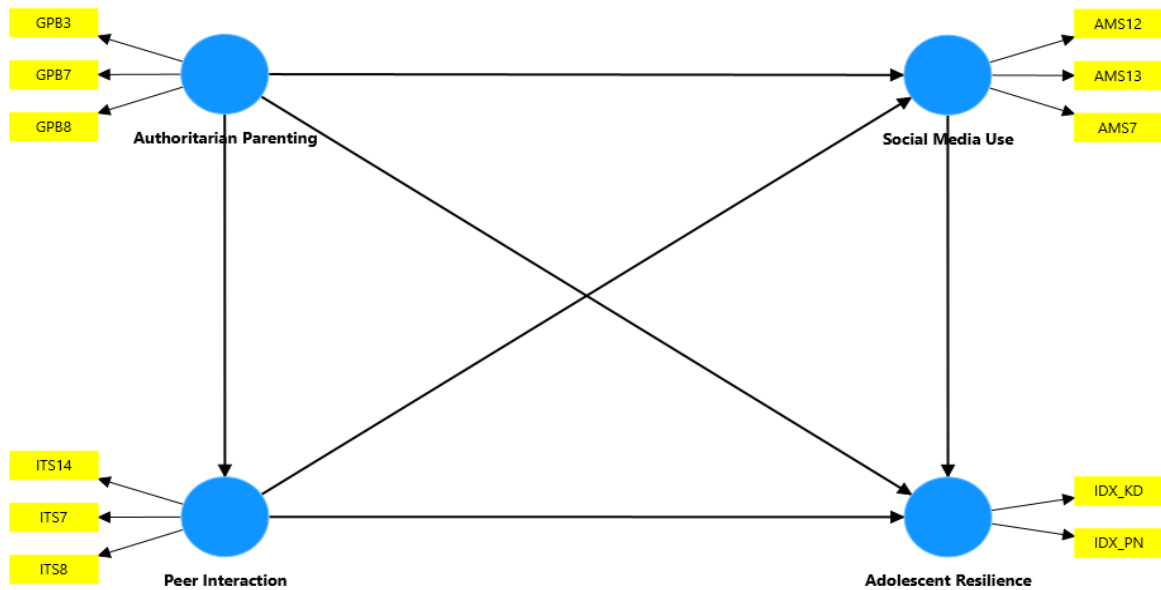


Figure 1. Hypothetical structural equation model for adolescent resilience

Method

Participants and Design

This investigation used a cross-sectional design. The survey strategy used a quantitative approach. The study's location is in Bogor City, specifically in schools that represent the city's diversity. The study's participants are junior and senior high school students from Bogor City, which is located in Indonesia's West Java Province. A total of 500 adolescent students from the city of Bogor were selected as samples, consisting of junior high school (200 students) and high school (300 students), with a distribution of males (227 adolescents) and females (273 adolescents). Based on the assumption that participants were high school students enrolled in junior and senior high schools, non-probability sampling—specifically, purposive sampling—was employed as the sampling strategy.

Instruments

The instrument for measuring authoritarian parenting styles was adopted and modified from Baumrind (1980) by the researchers. The instrument consisted of nine questions; however, after validity testing, two questions were found to be invalid, leaving seven questions for use. In addition, the researchers modified the measurement scale to include four answer choices: 1 = never, 2 = rarely, 3 = often, and 4 = always. The Cronbach's alpha test value was 0.622.

The peer interaction measurement instrument was adopted and modified from the Parent-Adolescent Communication Scale (Barnes & Olson, 1985). In this study, peer interaction is conceptualised as a relational process encompassing reciprocal communication, openness, and mutual understanding among peers; therefore, communication-based indicators were employed to operationalise this concept. This instrument was modified with language adaptation. This instrument consists of 20 questions. However, after validity testing, two questions were identified as invalid, resulting in 18 questions being retained for use. In addition, the researchers modified the measurement scale to include four answer choices: 1 =

strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. The Cronbach's alpha value of the trial was 0.675.

The social media usage measurement instrument was adopted and modified from Rahmawati and Latifah (2020), which was developed from Nikken and Schols (2015) and modified by the researcher. The instrument consisted of 17 questions; however, after the validity test, two questions were found to be invalid, and therefore, 15 questions were used for analysis. In addition, the researcher modified the measurement scale from five answer choices to four, consisting of 1 = never, 2 = rarely, 3 = often, and 4 = always. The Cronbach's alpha value in the trial was 0.781.

The instrument for measuring adolescent resilience was adopted and modified from The Connor-Davidson Resilience Scale (Connor & Davidson, 2003) by the researcher. The researcher made modifications in the form of language adjustments. The instrument consists of two dimensions, namely the dimension of self-competence and the dimension of acceptance. The instrument consists of 25 questions; however, after the validity test, one question was found to be invalid, so 24 questions were used in the analysis. There were 24 questions in this study. The answers to the questions were modified to consist of 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. The Cronbach's alpha value was 0.881.

Procedures

Before data collection, respondents read and signed an informed consent form that covered all the ethical aspects required for research in the social sciences. All materials and processes were evaluated and approved by the IPB University Research Ethics Committee for Studies Involving Human Subjects, with ethics approval number: 1078/IT3.KEPMSM-IPB/SK/2023.

Data Analysis

A series of steps, including editing, coding, scoring, input, cleaning, analysis, and interpretation, were applied to the collected data. Microsoft Excel, the Statistical Package for the Social Sciences (SPSS) for Windows, and Structural Equation Modeling-Partial Least Squares (SEM-PLS) were used to process the data. The features of the variables under investigation were examined using descriptive data analysis. Extremely low (<20), low (20–40), moderate (41–60), reasonably high (61–80), and high (>80) were the categories used to classify characteristics associated with parental style, peer involvement, social media use, and adolescent resilience. The impact of social media use, peer relationships, and authoritarian parenting on teenage resilience was examined using a SEM-PLS study.

Findings

This research involved 500 high school students with an average age of 15.1 years, reflecting the mid-adolescent population (13–17 years). The average daily allowance was IDR 25,388, with significant variation among individuals (SD = IDR 16,432), indicating socioeconomic disparities within the sample. The parents of the respondents had a homogeneous age and educational profile: fathers were 47.3 years old, with 12.9 years of education (equivalent to high school), while mothers were 43.2 years old, with 12.4 years of education. The average number of family members was 4.6, reflecting a nuclear family structure with 2–3 children. See Table 1.



Table 1. Respondent distribution

| No | Category | Total (Mean±Std) |
|----|--|---------------------|
| 1 | Child's age (years) | 15.1 ± 1.5 |
| 2 | Daily allowance (IDR) | 25,388 ± 16,432 |
| 3 | Age of the father (years) | 47.3 ± 5.9 |
| 4 | Age of the mother (years) | 43.2 ± 5.5 |
| 5 | Years of education of the father (years) | 12.9 ± 3.2 |
| 6 | Years of education of the mother (years) | 12.4 ± 3.1 |
| 7 | Number of family members (people) | 4.6 ± 1.1 |

In terms of parenting styles, authoritarian parenting showed a low average score (28.5%), with 79% of families falling into the low (20–40) or very low (<20) categories. This result suggests a dominance of democratic or permissive parenting styles in the sample. Meanwhile, the average level of peer interaction is moderate (56.3%), with 61.2% of respondents falling into this category. See Table 2.

Social media usage is generally low (36.9±7.3), with 64.6% of respondents in the low category (20–40) and 35.4% in the moderate category. No respondents fell into the high usage category (>60), indicating limited exposure to social media in this population. On the other hand, the level of adolescent resilience was relatively high (68.8±13.1), with 75.4% of respondents falling into the high (>80) or relatively high (61–80) categories. These results align with the current research, which links resilience to low-authority parenting styles and adequate social interaction. See Table 2.

Table 2. Distribution of respondents based on authoritarian parenting style, peer interaction, social media use, and adolescent resilience

| No | Variable | n | % |
|----|-------------------------|-------------|------|
| 1 | Authoritarian Parenting | | |
| | High (>80) | 0 | 0 |
| | Moderately high (61–80) | 13 | 2.6 |
| | Moderate (41–60) | 92 | 18.4 |
| | Low (20–40) | 247 | 49.4 |
| | Very low (<20) | 148 | 29.6 |
| | Mean±Std | 28.5 ± 14.2 | |
| 2 | Peer Interaction | | |
| | High (>80) | 12 | 2.4 |
| | Moderately high (61–80) | 148 | 29.6 |
| | Moderate (41–60) | 306 | 61.2 |
| | Low (20–40) | 148 | 6.4 |
| | Very low (<20) | 12 | 0.04 |
| | Mean±Std | 56.3 ± 11.7 | |
| 3 | Social Media Use | | |
| | High (>80) | 0 | 0 |
| | Moderately high (61–80) | 0 | 0 |
| | Moderate (41–60) | 177 | 35.4 |
| | Low (20–40) | 323 | 64.6 |
| | Very low (<20) | 0 | 0 |
| | Mean±Std | 36.9 ± 7.3 | |
| 4 | Adolescent Resilience | | |
| | High (>80) | 103 | 20.6 |
| | Moderately high (61–80) | 274 | 20.6 |
| | Moderate (41–60) | 119 | 54.8 |
| | Low (20–40) | 1 | 0.2 |
| | Very low (<20) | 3 | 0.6 |
| | Mean±Std | 68.8 ± 13.1 | |

Test of the influence of authoritarian parenting style, peer interaction, social media use, and adolescent resilience

The univariate normality analysis's findings show that all variables' skewness values fall between -2.0093 and $+11.0923$. Meanwhile, the kurtosis value range for all variables is between -0.5182 and $+7.6010$. This means that, in general, the kurtosis is usually distributed. The findings of this investigation are backed by Kim (2013), who states that data is usually distributed with a sample of more than 300 data points, in the skewness range ($< \pm 2$) and kurtosis ($< \pm 7$), as well as Kline (2011), who states that data is usually distributed in the skewness range ($< \pm 3$) and kurtosis ($< \pm 8$). However, in terms of skewness, the data are not normally distributed. PLS-SEM does not require multivariate normality, as it relies on non-parametric bootstrapping procedures for significance testing (Hair et al., 2019). PLS-SEM is thought to be a suitable analytical method given the data's non-normal distribution. See Table 3.

Table 3 shows that the 11 measurement items that comprise each variable have an outlier VIF of less than 5, indicating no multicollinearity between the measurement items (Hair et al., 2019).

Table 3. The outlier model's collinearity statistics (VIF)

| | VIF |
|--------|-------|
| AMS12 | 1.309 |
| AMS13 | 1.192 |
| AMS7 | 1.298 |
| GPB3 | 1.096 |
| GPB7 | 1.151 |
| GPB8 | 1.206 |
| IDX_KD | 1.236 |
| IDX_PN | 1.236 |
| ITS14 | 1.244 |
| ITS7 | 1.196 |
| ITS8 | 1.349 |

The measurement model demonstrates acceptable psychometric properties. Convergent validity is established since all constructs achieve an Average Variance Extracted (AVE) above the 0.50 threshold (Hair et al., 2019), indicating that the latent variables effectively explain the variance of their indicators. Discriminant validity, as established through cross-loadings (higher than 0.50), also implies that items load more heavily on their particular conceptions relative to others, ensuring the uniqueness of these variables (Fornell & Larcker, 1981). High reliability, with a Composite Reliability (CR) score above 0.70 and Cronbach's Alpha for adolescent resilience ($\alpha = 0.654$) at the minimum allowed threshold of 0.60, albeit significantly, implies high internal consistency (Hair et al., 2019).

The Standardized Root Mean Square Residual (SRMR) value of 0.095 for the global model fit (Table 4) is somewhat higher than the ideal cutoff of 0.08 (Henseler et al., 2014). However, it is still less than the cautious upper limit of 0.10 (Hu & Bentler, 1999). This value is considered acceptable in PLS-SEM for exploratory research situations, although reflecting a slight discrepancy between the calculated correlation matrix and that predicted by the model (Hair et al., 2019; Henseler et al., 2014). All things considered, these findings support the measurement model's reliability, validity, and sufficient structural fit, providing a solid foundation for concluding causality. See Table 4.



Table 4. Summary Measurement and Structural Model Fit Test

| Size Type | A Measure of The Degree of Match | Result | Information |
|-----------------------|---|-------------------------|-------------|
| Convergent validity | AVE and Communalities | AVE > 0.50 | Good Fit |
| Discriminant validity | Cross Loading | Cross Loading > 0.50 | Good Fit |
| Reliability | Composite Reliability (CR) | CR > 0.70 | Good Fit |
| | Cronbach Alpha | Cronbach's Alpha > 0.60 | Good Fit |
| Fit measures | Standardized Root Mean Square Residual (SRMR) | 0.095 > 0.080 | Acceptable |

The measurement model demonstrates acceptable reliability (Cronbach's Alpha > 0.60, CR > 0.70) and tested convergent validity (AVE > 0.50) for all constructs, supporting its use in structural models. However, the structural model exhibits limited predictive power for Peer Interaction ($R^2 = 0.000$), moderate explanatory power for Social Media Use ($R^2 = 0.102$), and moderate explanatory power for Adolescent Resilience ($R^2 = 0.151$). Although this model provides a basic understanding of Adolescent Resilience, the weak prediction for Peer Interaction requires significant theoretical consideration and model refinement. See Table 5.

Table 5. Cronbach's Alpha empirical model, Composite Reliability, and Value of Average Variance Extracted

| | Cronbach's Alpha | Composite Reliability | Average Variance Extracted (AVE) | R Square |
|-------------------------|------------------|-----------------------|----------------------------------|----------|
| Authoritarian Parenting | 0.625 | 0.755 | 0.508 | - |
| Peer Interaction | 0.632 | 0.802 | 0.575 | 0.000 |
| Social Media Use | 0.635 | 0.801 | 0.575 | 0.102 |
| Adolescent Resilience | 0.654 | 0.830 | 0.714 | 0.151 |

Table 6 and Figure 2 show that peer interaction is not significantly improved by authoritarian parenting ($\beta = 0.020$, $p > 0.05$). Authoritarian parenting had a significant favorable impact on social media use ($\beta = 0.138$, $p < 0.05$) and a significant negative impact on adolescent resilience ($\beta = -0.218$, $p > 0.05$). This result is in line with developmental psychology studies that demonstrates a negative relationship between high school kids' psychological resilience and controlling parenting techniques (Steinberg, 2001; Hair et al., 2019). Resilience ($\beta = 0.321$, $p \leq 0.05$) and social media use ($\beta = 0.288$, $p \leq 0.05$) among high school students are strongly predicted by peer interaction. These findings lend credence to the idea that peers have a major role in the development of digital behavior and resilience (Valkenburg & Peter, 2009). Social media use has no direct effect on adolescent resilience ($\beta = -0.016$, $p < 0.05$). Parenting style does not have an indirect influence on adolescent resilience through social media use ($\beta = 0.006$) or adolescent resilience itself ($\beta = 0.004$). Not all indirect effects are significant, further confirming the absence of a meaningful mediating pathway involving social media use in this model. Overall, these results highlight peer interaction as the most significant predictor of resilience ($\beta = 0.321$), while the negative impact of authoritarian parenting operates independently of peer or digital mediators.

Table 6. Effect test result

| Influence | Direct effect | Indirect effect | Information |
|---|---------------|-----------------|---------------|
| H1 = Authoritarian parenting style -> Peer interaction | 0.020 | | Not Supported |
| H2 = Authoritarian parenting style -> Social media use | 0.138** | 0.006 | Supported |
| H3 = Authoritarian parenting style -> Adolescent resilience | -0.218** | 0.004 | Supported |

| Influence | Direct effect | Indirect effect | Information |
|--|---------------|-----------------|---------------|
| H4 = Peer interaction -> Social media use | 0.288** | | Supported |
| H5 = Peer interaction -> Adolescent resilience | 0.321** | -0.005 | Supported |
| H6 = Social media use -> Adolescent resilience | -0.016 | | Not Supported |

**significant at $p \leq 0.05$

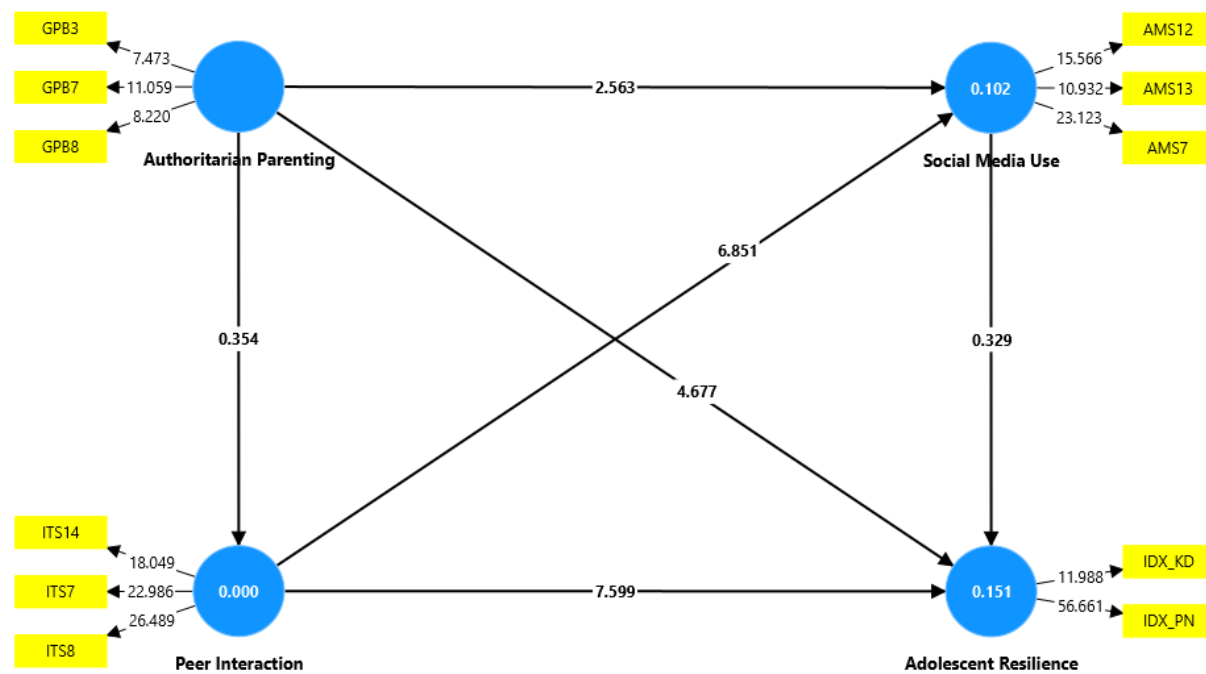


Figure 2. Adolescent resilience using a structural equation model

Result and Discussion

The finding that authoritarian parenting significantly predicts increased social media use can be understood theoretically as an adaptive response by adolescents to a family environment characterised by strict control and high demands. In this context, social media has the potential to serve as an alternative space for self-expression, emotional regulation, and the pursuit of social autonomy that is often less facilitated in family relationships. Previous studies have shown that adolescents with authoritarian parenting backgrounds tend to exhibit distinct patterns of emotional responses and social interactions on social media platforms, including heightened sensitivity to social feedback and involvement in specific online dynamics (Fitria, 2025; Choirunissa et al., 2023). Furthermore, the link between authoritarian parenting and attitudes toward cyberbullying indicates that parenting experiences shape how adolescents navigate social norms and relationships in online spaces (Amatulah & Hastuti, 2022; Rahmawati & Virlia, 2023).

Social media serves as an extension of offline social contacts, as seen by the beneficial impact of peer interactions on greater social media use. According to Nesi et al. (2018) and Ngo et al. (2024), adolescents who have strong peer relationships typically utilize social media to share experiences, ideas, and activities in order to sustain and grow their current social engagements. This approach is consistent with the social identification mechanism, in which teenagers modify their online preferences and behavior to fit in with the norms of their peer group. Social media serves as a platform for social attachment and collective identity



construction in addition to being a means of individual expression due to the reinforcement of prosocial norms and behaviors within peer networks (Nesi et al., 2018; Sherman et al., 2016). Therefore, it is better to think of social media use in peer contact as a relational phenomenon that is impacted by social status and influence dynamics.

Adolescent resilience has been demonstrated to be negatively impacted by authoritarian parenting approaches, which is consistent with earlier research. The development of adaptive coping strategies and problem-solving abilities required to handle developmental stressors can be hampered by a family setting that prioritizes obedience, punishment, and little emotional support (ManyaPundir, 2020; Mohammadi et al., 2018; Rivas et al., 2019; Irzalinda & Sasi, 2024). Growing up in such environments puts adolescents at risk for increased psychological discomfort, feelings of overwhelm, and diminished motivation, all of which weaken their ability to overcome obstacles in life (Mohammadi et al., 2018; Du & Zou, 2024). These results highlight how crucial strong emotional ties within the family are as a basis for teenage resilience.

Conversely, peer interactions play a significant protective role in adolescent resilience. Good peer interactions provide opportunities for social learning, emotional support, and a sense of belonging—all of which are essential for creating coping mechanisms that work (Sevil-Gülen & Demir, 2020; Yoon et al., 2020; Hasanah & Latifah, 2021). Peer support has been demonstrated to improve adolescents' ability to handle stress and lessen the effects of difficult life situations (McDonald-Harker et al., 2021; Danpho & Thommachot, 2025). Through supportive interactions, adolescents gain a safe space to explore emotions, test solutions to problems, and build self-confidence, all of which contribute to strengthening psychological resilience (Tang et al., 2022; Harmelen et al., 2017).

The study's main conclusion is that teenage resilience is not significantly impacted by social media use. These results need to be interpreted critically, rather than being understood as an absence of a relationship. One relevant explanation relates to measurement limitations, where social media use is generally measured without distinguishing between the quality of online experiences, such as positive versus negative interactions or active versus passive engagement. Research suggests that the impact of social media on psychological well-being depends on context and quality of use, not just intensity (Güçlü & Çam, 2022; Marciano et al., 2022; Mu et al., 2020).

Furthermore, the characteristics of data distribution also need to be considered. If social media use is a normative behaviour among respondents, limited variation may reduce the model's ability to detect significant relationships with resilience. In such conditions, social media does not function as a stand-alone risk or protective factor, but rather as a medium whose effects depend on the social relationships and psychological resources that adolescents possess. This finding aligns with research that social media can function ambivalently—both as a source of risk and as a means of social support and emotional expression—depending on the context of its use (O'Reilly et al., 2022; Prasetya & Chow, 2023; Choirunissa et al., 2023).

Although this discussion touches on the characteristics of Indonesia's collective culture, such as the strong role of social relations and group orientation, it is essential to note that cultural orientation was not directly measured in this study. Therefore, culture-based interpretations should be understood as a contextual conceptual framework, not as verified empirical conclusions. The absence of explicit measurement of collectivist values limits the strength of cultural inference; therefore, these findings require further testing through studies that directly

measure respondents' cultural orientation and social values.

Overall, the findings of this study support a model in which authoritarian parenting styles directly reduce adolescent resilience, while peer interactions contribute positively to strengthening resilience. However, the relatively low R^2 values for the constructs of peer interactions and social media use suggest that other factors—such as socioeconomic status, school environment quality, and digital literacy—likely play a significant role in shaping adolescent resilience. Other limitations include the use of self-report data, which has the potential to introduce perceptual bias. Therefore, future research is recommended to use a longitudinal design, involve multiple informants, and include broader moderators and contextual variables to strengthen causal inferences and construct validity.

Conclusion and Recommendations

This study reveals that authoritarian parenting and peer contact have varied effects on Indonesian high school students' social media use and resilience. Resilience is directly decreased and social media participation is much increased by authoritarian parenting. Conversely, peer connection predicts greater resilience and more social media use. Deterministic beliefs about the psychological impacts of digital technology are called into doubt by the intriguing finding that social media use does not directly correspond with resilience. Further evidence that various social ecologies function separately in this setting comes from the lack of a connection between peer contact and authoritarian parenting.

Our findings emphasize the importance of a culturally adapted resilience framework. The strong role of peer interactions (despite coexisting with authoritarian parenting) suggests that collectivist values (e.g., communal support) may be more effective in mitigating family stressors in Indonesia than in individualistic environments. Policy recommendations include culturally adapted parenting programs that integrate non-authoritarian strategies rooted in local values. Schools should leverage peer influence through structured initiatives (e.g., mentoring circles, cooperative learning) to develop validated dimensions of resilience (self-efficacy, acceptance). Policymakers should develop critical digital literacy curricula that teach high school students how to reduce online risks without linking reduced use to increased resilience. Further research using longitudinal designs should investigate causal pathways, particularly whether resilient high school students seek positive peer interactions or vice versa. Further investigation into cultural mediators (e.g., religiosity, communal ethos) explaining the null finding between social media and resilience is also needed.

Declarations

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Data availability: The data of this study are not publicly available. The data are, however, available from the authors upon reasonable request

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