



**DIGITAL EMPATHY AND BULLYING AWARENESS AMONG ADOLESCENTS: A  
QUANTITATIVE STUDY IN BUNGO REGENCY**

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**ABSTRACT**

Generation Alpha adolescents are growing up in a digital ecosystem, making them highly vulnerable to the psychological impacts of social media, including cyberbullying. This study aims to explore the relationship between age, gender, digital empathy, and knowledge of bullying among adolescents in Bungo Regency. Using a quantitative design, data were collected from 150 junior high school students in Pasar Bungo through random sampling. The research data was collected in the form of a survey and pre-test and post-test questionnaires were administered to 150 junior high school students, then the data were analyzed in the form of descriptive and bivariate analysis using a correlation test to determine the strength and direction of the correlation of each variable. Results showed that 60% of respondents had good knowledge about bullying, yet only 48.7% had high digital empathy. Bivariate analysis revealed a moderately strong correlation between age and both bullying knowledge ( $r = 0.450$ ) and digital empathy ( $r = 0.652$ ). Female students showed stronger empathy and understanding of bullying behavior than males. These findings highlight the need to strengthen empathy-based digital education as a preventive approach to cyberbullying and to improve adolescent mental health.

**Keywords:** adolescent mental health; alpha generation; bullying prevention; cyberbullying; digital empathy

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**INTRODUCTION**

Adolescent mental health, particularly among Generation Alpha, has become a serious concern in today's digital era. This generation has grown up within a technology-driven ecosystem since birth, making them highly vulnerable to the negative impacts of social media (Yusuf M. et al., 2022; A. K. Cohen et al., 2023; A. Höfrová et al., 2024). Studies have shown that excessive exposure to social media can trigger anxiety, depression, and even social isolation (Supriyatno et al., 2021; R. Armitage, 2021; Ministry of Health RI, 2023; Febriani & Hariko, 2023). Technology, which is meant to facilitate access to information, has ironically introduced new challenges, including cyberbullying—a form of non-physical violence committed online through hurtful posts, threats, or digital harassment (Kowalski et al., 2014; Grauman et al., 2023; Galán-Arroyo et al., 2023).

Globally, bullying remains a serious issue, with many cases inadequately addressed in school environments (Qian et al., 2020; Pratiwi, 2020; Gabrielli et al., 2021). Indonesia ranks fifth out of 79 countries with the highest incidence of bullying (Abdillah, 2020). Over the past 15 years, adolescents involved in cyberbullying—either as perpetrators or victims—have shown greater vulnerability to academic, emotional, and behavioral difficulties (Bochaver et al., 2021). Data from the Center for Cyberbullying Research (2021) indicates that over 20% of Indonesian adolescents have been exposed to cyberbullying, with 6% experiencing repeated incidents. In Bungo Regency,

this phenomenon is increasingly prevalent, especially among junior high school students, often resulting in long-term psychological trauma for victims.

Although the community literacy index in Bungo Regency is relatively good (55.63%), mental health literacy among adolescents remains low, at only 32.3% (BPS Kab. Bungo, 2023). This disparity contributes to a lack of awareness in building a healthy and supportive digital environment. Other studies have also revealed significant differences in social interaction patterns between adolescents living in urban centers and those in suburban areas—differences influenced by social pressure, suboptimal parenting, low family mental health literacy, and inadequate play environments (Rizanatul F. et al., 2023; Aminah et al., 2023; Akbar et al., 2021). Poor interpersonal communication between parents and children, along with weak self-control, are also contributing factors to bullying behavior.

In response to these conditions, the concept of digital empathy emerges as a promising transformative solution. Digital empathy is defined as the ability to understand and appropriately respond to others' emotions in digital environments. Research indicates that enhancing digital empathy can reduce online conflict and improve the quality of adolescents' social relationships (Aznar-Díaz et al., 2021; Alda-Vidal et al., 2022). Moreover, empathy-based interventions have been shown to effectively improve psychological resilience and prosocial behavior among young people who actively use social media (Moreno et al., 2022; Kumar et al., 2024). However, Indonesia's current educational curriculum has yet to explicitly integrate digital empathy as part of its cyberbullying prevention strategy. In fact, developing this aspect is highly relevant to the developmental needs of Generation Alpha (Murtiningrum & Rachmawati, 2023; Kemdikbudristek, 2023). Local studies emphasize that school- and community-based interventions incorporating empathy approaches can significantly enhance students' engagement in healthy conflict resolution (Utami et al., 2021; Susanti et al., 2024). This study aims to determine the proportion of digital empathy and bullying awareness among adolescents in the alpha generation group in bungo district.

## **METHOD**

This study employed a quantitative research design to provide a proportional overview of cyberbullying and mental health among Generation Alpha adolescents in Bungo Regency. The research was conducted in the Pasar Bungo sub-district, which was selected as the study site because all reported and exposed bullying incidents were concentrated in this area. The population consisted of Generation Alpha adolescents (born in 2010 or later) residing in Pasar Bungo. A total of 150 students were selected using random sampling to allow the findings to be generalized across the entire Bungo Regency. The research data was collected in the form of a survey and pre-test and post-test questionnaires were administered to 150 junior high school students, then the data were analyzed in the form of descriptive and bivariate analysis using a correlation test to determine the strength and direction of the correlation of each variable.

## **RESULT**

Table 1 shows that among the 150 adolescent respondents at the junior high school (SMP) level, the youngest age recorded was 15 years, the oldest was 16 years, with an average age of 15.35 years. In terms of gender, the majority of respondents were female, totaling 80 individuals (53%), while the remaining 70 individuals (47%) were male. Based on the data collected from the research questionnaire, it was found that adolescents' level of knowledge about bullying was relatively good. A total of 90 respondents (60%) demonstrated a strong understanding of bullying, while the remaining 60 respondents (40%) showed a lower level of knowledge, mainly due to a lack of clarity regarding what constitutes bullying. However, the variable measuring the level of digital empathy revealed that the majority of adolescents still had a low level of empathy, with 77 respondents (51.3%) falling into this category. The remaining 73 respondents (48.7%) were found to have a good level of digital empathy.

Table 1.  
Respondent Characteristics (n= 100)

| Variabels                         | Minimum | Maximum | Mean  | f  | %    |
|-----------------------------------|---------|---------|-------|----|------|
| Descriptive Data                  |         |         |       |    |      |
| Teenagers Age                     | 15      | 16      | 15,35 |    |      |
| Categorical Data                  |         |         |       |    |      |
| Gender                            |         |         |       |    |      |
| Man                               |         |         |       | 70 | 47,0 |
| Woman                             |         |         |       | 80 | 53,0 |
| Level of Knowlodge about Bullying |         |         |       |    |      |
| Poor                              |         |         |       | 60 | 40,0 |
| Good                              |         |         |       | 90 | 60,0 |
| Level of Digital Emphaty          |         |         |       |    |      |
| Poor                              |         |         |       | 77 | 51,3 |
| Good                              |         |         |       | 73 | 48,7 |

Table 2.  
Bivariat Analysis (n= 100)

| Independent Variabel | R Correlation Level               |                          |
|----------------------|-----------------------------------|--------------------------|
|                      | Level of Knowledge about Bullying | Level of Digital Emphaty |
| Teenagers Age        | 0.450                             | 0.652                    |
| Gender               | 0.678                             | 0.560                    |

The bivariate analysis presented in Table 2 using correlation tests shows a moderately strong relationship between age (>15 years) and the level of knowledge about bullying ( $r = 0.450$ ). A similarly strong correlation was also found between age (>15 years) and the level of digital empathy ( $r = 0.652$ ). These findings indicate that female respondents tend to have greater understanding, awareness, and empathy toward emotions, attitudes, and actions that may trigger bullying compared to male respondents. Furthermore, the correlation test between the gender variable (female) and the level of knowledge about bullying revealed a correlation coefficient of  $r = 0.560$ , indicating a moderately strong relationship. A similar strength of correlation was also found between gender and digital empathy ( $r = 0.678$ ). These results suggest that females are more likely to comprehend, interpret, and respond empathically to situations and behaviors that could lead to bullying than their male counterparts.

## DISCUSSION

The bivariate analysis in this study revealed a moderately strong correlation between adolescents aged >15 years and their level of knowledge about bullying ( $r = 0.450$ ), as well as a strong correlation with their level of digital empathy ( $r = 0.652$ ). These findings indicate that as adolescents grow older, their understanding of bullying and capacity for digital empathy tend to increase. This aligns with theories of adolescent cognitive and social development, which assert that individuals aged 15–18 begin to develop abstract thinking, perspective-taking abilities, and more complex moral reasoning (Steinberg, 2021).

A study by Moreno et al. (2022) supports this, stating that older adolescents are more aware of the risks associated with online interactions, including cyberbullying, and exhibit greater emotional regulation and supportive communication in digital spaces. Kumar et al. (2024) further found that combining digital literacy with empathy-based education is particularly effective for adolescents over 15, who are more cognitively and emotionally mature. Gender differences were also significant, with female adolescents showing stronger correlations with both bullying knowledge ( $r = 0.560$ ) and digital empathy ( $r = 0.678$ ). This suggests that females tend to have a higher capacity to understand, recognize, and emotionally respond to actions that may lead to bullying, compared to males. Aznar-Díaz et al. (2021) found similar results, noting that females score higher in digital empathy and are more sensitive to online violence and gender-based harassment.

Psychologically, females have been found to possess greater affective empathy, contributing to their heightened sensitivity to others' emotional experiences (Christov-Moore et al., 2020). A national study by Rizanatul Fadhillah et al. (2023) also observed that female students are more likely to identify bullying behavior and express rejection of such acts, especially in digital environments. These tendencies are influenced by early gender-role learning, cultural expectations, and stronger interpersonal communication skills. Beyond age and gender, these findings highlight the need to revisit digital literacy approaches, which often focus solely on technical skills and online safety. Alda-Vidal et al. (2022) emphasized that effective digital literacy must also address emotional intelligence, particularly empathy, which significantly reduces the incidence of cyberbullying among students. Therefore, school-based digital literacy programs should include empathy training, assertive communication, and prosocial conflict resolution strategies.

The findings also point to the limited integration of empathy-based character education in formal curricula. While some developed countries have incorporated anti-cyberbullying and digital empathy modules into national education systems, Indonesia's current efforts—such as the Ministry of Education's Anti-Bullying Module for junior high schools—remain under-implemented and lack specific content on digital empathy (Kemdikbudristek, 2023). This calls for collaboration among educators, parents, and local governments to develop contextually relevant curricula for adolescents in regions like Bungo Regency. Lastly, sociocultural factors must be considered in understanding adolescents' responses to bullying and empathy. Bungo Regency, characterized by urbanizing communities and social diversity, faces unique challenges in fostering a healthy digital environment. Indonesia's strong collectivist culture can promote social solidarity but may also enable silence or tolerance of bullying if not addressed critically. Hence, this study underscores the need for community- and culture-based interventions that involve local leaders, educators, and peer groups as agents of behavioral change in digital contexts (Utami et al., 2021; Susanti et al., 2024).

## **CONCLUSION**

This study found a moderately strong correlation between age and gender with the level of knowledge about bullying and digital empathy. Adolescents over the age of 15 and female students tend to have greater understanding and empathy in responding to bullying situations. These findings highlight the importance of empathy-based digital education in preventing cyberbullying and strengthening adolescent mental health. In Bungo Regency, interventions tailored to age, gender, and local context are essential to creating a safe and supportive digital environment for Generation Alpha.

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