

Do gender, age, and emotional intelligence affect the emotional regulation of adolescents involved in cyberbullying?

Nia Agustiningsih¹, Ah Yusuf², Ahsan Ahsan³, Dwi Indah Iswanti⁴, I Made Moh. Yanuar Saifudin⁵

¹Department of Nursing, Universitas Kepanjen, Malang, Indonesia

²Faculty of Nursing, Airlangga University, Surabaya, Indonesia

³Faculty of Health Science, Brawijaya University, Malang, Indonesia

⁴Faculty of Nursing and Health Science, Universitas Karya Husada Semarang, Semarang, Indonesia

⁵Department of Nursing, Faculty of Medicine, Universitas Tanjungpura, Pontianak, Indonesia

Article Info

Article history:

Received Dec 12, 2023

Revised Oct 15, 2024

Accepted Jan 15, 2025

Keywords:

Adolescent

Bullying

Cyberbullying

Emotional intelligence

Emotional regulation

Mental health

ABSTRACT

The objective of this study was to explore how age, gender, and emotional intelligence impact emotion regulation in adolescents participating in cyberbullying. A cross-sectional study was conducted in January 2023, involving 108 teenagers selected through purposive sampling. Data, gathered through a demographic questionnaire, Revised Cyberbullying Inventory II, and an emotional intelligence questionnaire, were analyzed using descriptive and multiple regression methods. The findings revealed that age, gender, and emotional intelligence collectively influence situation modification, accounting for a 2.52% impact ($p\text{-value}=0.024$). Emotional intelligence demonstrated effects on both situation modification and attentional deployment in individuals playing the roles of victims and perpetrators ($p\text{-value}=0.018$). In the case of adolescents acting as perpetrators, age, gender, and emotional intelligence collectively exhibited significant influence on attention deployment, contributing to a 9.83% impact ($p\text{-value}=0.01$). For adolescents who abstain from participating, the modulation response is simultaneously affected by age, gender, and emotional intelligence ($p\text{-value}<0.001$), resulting in a 4.44% influence. Notably, age, gender, and emotional intelligence were identified as factors influencing emotion regulation at various stages, depending on whether adolescents played the roles of victims, victims-perpetrators, or perpetrators. It is recommended that mental health nurses implement tailored emotion regulation interventions for adolescents involved in cyberbullying.

This is an open access article under the [CC BY-SA](#) license.



Corresponding Author:

Nia Agustiningsih

Department of Nursing, Universitas Kepanjen

Trunojoyo Street 16 Kepanjen, Malang, 65163, Indonesia

Email: anisa.hanifa1115@gmail.com

1. INTRODUCTION

The phases of childhood and adolescence signify periods characterized by both development and a rising inclination toward taking risks [1]. In these stages, adolescents, influenced by peer pressures and heightened emotions, frequently encounter challenges in upholding self-control in unfamiliar circumstances. This makes them more susceptible to making poor decisions compared to adults. Factors such as impulsivity, seeking sensation, and individual variations play a role in adolescents resisting standardized risk interventions [2].

Around one-third of internet users worldwide consist of children and adolescents under the age of 18. This is attributable to the emergence of digital technology, which brings forth novel modes of interpersonal communication [3], [4]. Nevertheless, the era of the internet has a negative aspect, manifested

in cyberbullying, where young individuals might participate in or fall prey to harmful behaviors within the online realm [5], [6]. The concept of cyberbullying is commonly defined as bullying carried out through electronic media. More specifically, among children and adolescents, it entails deliberate and repetitive harm inflicted by one or more peers in the online environment, facilitated by computers, smartphones, and other devices. In recent years, new forms of cyberbullying behaviors have surfaced, such as cyberstalking and online dating abuse [7], [8].

A prior study demonstrated that emotional intelligence serves as a crucial protective factor against social conflicts, violence, and cyberbullying [9], [10]. This entails the acknowledgment and regulation of emotions, contributing to well-being and the mitigation of psychopathologies. In terms of gender differences, females often demonstrate higher scores in emotional skills. In the context of cyberbullying, those who engage in such behavior typically display lower emotional regulation, attention, and understanding of emotions. On the contrary, adolescents with higher emotional abilities are less likely to participate in cyberbullying, as these abilities foster empathy and adaptive responses to conflicts [11], [12].

Furthermore, research suggests noticeable gender differences in strategies for regulating emotions [13]. Women tend to utilize a range of strategies for emotional regulation, showcasing heightened emotional awareness, which contributes to gender distinctions. However, the tendency for women to ruminate more may be a factor in the elevated rates of depression and anxiety observed in the female population. Conversely, men are more likely to resort to alcohol as a coping mechanism or to suppress emotions, leading to various negative consequences [14], [15]. Although age has a substantial impact on emotion management scores, gender does not exhibit a significant influence. However, when considering latent emotion regulation scores, an interaction effect between age and gender becomes apparent, indicating that girls tend to score higher than boys in younger age groups but lower in older ones [16].

As interest in adolescent cyberbullying perpetration grows, existing research primarily focuses on risk and protective factors in isolation. To deepen understanding and improve the development of school-based prevention and intervention programs, a more intricate explanatory mechanism is required. Therefore, the aim of this study was to examine how age, gender, and emotional intelligence collectively influence emotion regulation in adolescents involved in cyberbullying.

2. METHOD

2.1. Design

The design of this study was cross-sectional. A cross-sectional design is particularly suitable for studies aimed at exploring associations between variables, such as the relationships between gender, age, emotional intelligence, and emotional regulation in the context of cyberbullying. The data were collected through an online survey, ensuring a broad reach among adolescents.

2.2. Research question

This study seeks to investigate the impact of demographic and psychological factors on adolescents' ability to regulate their emotions in the context of cyberbullying, whether as perpetrators or victims. Gaining insight into these connections can guide the development of effective intervention strategies aimed at enhancing emotional regulation among young people. Additionally, the findings may assist educators and policymakers in designing targeted programs to mitigate cyberbullying and its adverse emotional effects on adolescents. The specific research question is: Do gender, age, and emotional intelligence affect the emotional regulation of adolescents who are involved in cyberbullying?

2.3. Sample and settings

The study focuses on high school students in East Java Province, Indonesia. The calculated minimum sample size is 384 respondents, determined using the Raosoft sample size calculator (<https://www.raosoft.com/samplesize.html>). This calculation considers a population of 537,715 high school students in East Java Province, with a 5% margin of error and a 95% confidence level. The research took place in two East Java province high schools, involving a total of 575 students. The sample was selected through purposive sampling, with 398 students who returned the questionnaire screened based on specific inclusion criteria: i) active use of social media platforms (WhatsApp, Instagram, Facebook, or other social media); ii) adolescents who have been victims (not responding to perpetrators) of cyberbullying in the past six months; iii) adolescents who have been victims of cyberbullying and responded to perpetrators in the last six months; iv) adolescents aged 15-19 willing to participate as respondents. Exclusion criteria included: i) adolescents who have received care from someone other than their biological parents; ii) adolescents who did not complete the instrument. A total of 108 respondents met the sample criteria and obtained informed consent from their parents. The determination of this number involved assessing all information and criteria

gathered from student data in the questionnaire. Informed consent from the students' parents was obtained simultaneously when the students returned the completed questionnaires from home.

2.4. Variables/instruments

The researcher created the demographic characteristics questionnaire, which includes variables such as age, gender, length of time using social media, number of social media accounts owned, and duration of time using social media in hours per day. To assess students' involvement in cyberbullying a questionnaire was developed and modified from [17]. Revised Cyberbullying Inventory II (RCBI II) was used. This quiz comprises nine questions designed to help you identify as a victim or offender of cyberbullying. Scores are assigned as follows: 1=never, 2=once, 3=twice to three times, and 4=more than three times. The overall score is derived by summing the scores from each form for cyberbullying victims and perpetrators who are classified as i) Cyberbullying perpetrators are those who have a score of more than 9 on the cyberbullying form and a score of 9 on the cyberbullying victim form; ii) Cyberbullying victims if the score on the cyberbullying victim form is greater than 9 and the total score on the cyberbullying perpetrator's form is greater than 9; iii) Victims and perpetrators if they produce a score greater than 9 on the forms of cyberbullying perpetrators and cyberbullying victims; iv) Not involved if scores on both forms of cyberbullying perpetrators and cyberbullying victims totaled 9. The Cyberbullying Victims and Perpetrators Screening Questionnaire was declared valid with $r_{\text{count}} > r_{\text{table}}$ (0.312). Cronbach's $\alpha=0.908$ was used to estimate the reliability of the cyberbullying victim screening questionnaire, while Cronbach's $\alpha=0.904$ was used to estimate the reliability of the cyberbullying victim screening questionnaire.

The emotional intelligence questionnaire adapted from the Wong and Law Emotional Intelligence Scale (WLEIS) consists of 12 statements [18]. The rating score for each statement item is 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, and 7=strongly agree. Interpretation is done by adding up all the scores from each subscale. Questionnaires used were declared valid with $r_{\text{count}} > r_{\text{table}}$ (0.312) and Cronbach's $\alpha=0.945$ is used to estimate the reliability of the questionnaire. The emotion regulation instrument consists of five questionnaires adapted, developed and modified by the researcher.

The instrument for the ability to choose a situation is adapted from the situation selection scale [19] which consists of six statements. The instrument for the ability to pay attention was adapted and developed from the self-compassion scale [20] with a total of nine statements. The cognitive change instrument was adapted and developed from the questionnaire adapted and developed from the Emotion Regulation Questionnaire (ERQ) [21] and the Cognitive Emotion Regulation Questionnaire (CERQ) [22] which consists of six statements. The modulation response instrument adapted from the questionnaire was adapted and developed from the ERQ, which consists of nine statements. The score is done by giving a number 1=never, 2=sometimes, 3=often, 4=always. The questionnaires used were declared valid with $r_{\text{count}} > r_{\text{table}}$ (0.312). Cronbach's α is used to estimate the reliability of the questionnaire. Sequentially Cronbach's α from the emotion regulation questionnaire is 0.965, 0.962, 0.977, 0.980, and 0.963.

2.5. Data collection

The researchers, assisted by six research assistants, conducted the primary data collection for this study. In January 2023, they administered questionnaires directly to teenagers in two high schools situated in the Kepanjen sub-district, Malang district, East Java province. A total of 575 questionnaires were distributed, but within one week, only 108 respondents returned the completed questionnaires to the class teacher. Consequently, the response rate for this study is approximately 18.78%. The authors acknowledge the limited understanding of cyberbullying prevalence in these two schools, and recognizing the sensitive nature of bullying, they deem the collected sample size to be sufficient under these circumstances.

2.6. Data analysis

Respondent demographic data, characteristics data, and adolescents' involvement in cyberbullying are presented in descriptive statistics with proportions; for age, data are presented in mean and standard deviation. To determine the effect of the variables age, gender, and emotional intelligence on emotion regulation using multiple regression analysis, the significance level is set at 5%. Statistical analysis was performed using IBM SPSS version 24.

2.7. Ethical consideration

Approval of the research's ethical feasibility was obtained from the health research ethics commission, Faculty of Nursing, University of xxx with number 2726-KEPK on December 22, 2022. The researcher ensured that the data collection had been carried out anonymously and had been completed with informed consent, approved by the student's parent or guardian.

3. RESULTS

The study focused on specific research questions, including "Do gender, age, and emotional intelligence affect the emotional regulation of adolescents who are involved in cyberbullying?" To address this question, the authors provide the following findings.

3.1. Respondents' characteristics

According to Table 1, from the 108 adolescents involved in this study, the average age was 16.2 years ($SD=0.961$), most were female [96 (88.9%)], more than half of adolescents used social media >3 years [64 (59.26%)], and most teenagers had more than one social media, namely 2-3 and more than three social media, respectively [49 (45.37%)], [40 (37.04%)]. And [44 (40.74%)] adolescents have used social media per day for more than 2-5 hours and more than five hours for youth who are involved as pure victims and are not involved in cyberbullying roles, respectively [36 (33.23%)].

Table 2 shows that of the 108 adolescents, they have a good category of emotional intelligence [55 (50.9%)] and a high category of emotional regulation [41 (38%)]. Based on the stages in emotion regulation, it shows out of 108 teenagers those who have abilities in the high category at the stages of situation selection [41 (38%)], situation modification [58 (53.7%)], attentional deployment [79 (73.1%)], cognitive change [66 (61.1%)], and response modulation [62 (57.4%)].

Table 3 explains that the roles as victims, victims-perpetrators, perpetrators, and not involved are mostly women because the largest number of respondents are women, most have used social media for more than three years, the number of social media accounts is between 2-3 and more than three, the length of time spent on social media per day is more than 2-5 hours and more than five hours per day, and emotional intelligence shows that most are in a good category. Situation selection, situation modification, attention deployment, cognitive change, and response modulation in all roles are in the high category.

Table 1. Participants demographic characteristics (n=108)

Aspect	Category	f	%
Gender	Man	12	11.1
	Woman	96	88.9
Long using social media	<1 years old	6	5.56
	1-3 years old	38	35.18
	>3 years old	64	59.26
Number of social media	1	10	9.26
	2-3	49	45.37
	>3	49	45.37
Length of using social media (hours/days)	1-2 Hours	24	22.22
	>2-5 Hours	40	37.04
	>5 Hours	44	40.74
Role in cyberbullying	Victim	36	33.33
	Perpetrator	6	5.66
	Victim-Perpetrator	30	27.78
	Not involved	36	33.23

Table 2. Emotional intelligence and emotion regulation in adolescents

Aspect	Category	f	(%)
Emotional intelligence	Not enough	8	7.4
	Enough	11	10.2
	Good	55	50.9
	Very well	34	31.5
Emotion regulation	Low	28	25.9
	Moderate	39	36.1
	High	41	38.0
Situation selection	Low	28	25.9
	Moderate	39	36.1
	High	41	38.0
Modification situation	Low	12	11.1
	Moderate	38	35.2
	High	58	53.7
Attention deployment	Low	9	8.3
	Moderate	20	18.5
	High	79	73.1
Cognitive change	Low	12	11.1
	Moderate	30	27.8
	High	66	61.1
Response modulation	Low	8	7.4
	Moderate	38	35.2
	High	62	57.4

Table 3. Data on the characteristics and involvement of teenagers in cyberbullying

Aspect	Category	Cyberbullying victims (n=36)		Victims–cyberbullying perpetrators (n=30)		Cyberbullying perpetrators (n=6)		Not involved cyberbullying (n=36)	
		F	(%)	f	(%)	f	(%)	f	(%)
Gender	Man	3	8.3	4	13.3	1	16.7	4	11.1
	Woman	33	91.7	26	86.7	5	83.3	32	88.9
Long using social media	<1 year old	3	8.3	2	6.7	1	16.7	0	0
	1-3 years old	11	30.6	13	43.3	2	33.3	12	33.3
	>3 years old	22	61.1	15	50.0	3	50.0	24	66.7
Number of social media	1	3	8.3	0	0	1	16.7	6	16.7
	2-3	17	47.2	18	60.0	1	16.7	13	36.1
	> 3	16	44.4	12	40.0	4	66.6	17	47.2
Length of using social media (Hours/Days)	1-2 Hours	10	27.8	5	16.7	0	0	9	25.0
	>2-5 Hours	8	22.2	15	50.0	2	33.3	15	41.7
	>5 Hours	18	50.0	10	33.3	4	66.7	2	33.3
Emotional intelligence	Not enough	1	2.8	2	6.7	1	16.7	1	16.7
	Enough	1	2.8	6	20.0	1	16.7	1	16.7
	Good	18	50.0	15	50.0	2	33.3	2	33.3
Situation selection*	Very well	16	44.4	7	23.3	2	33.3	2	33.3
	Low	9	25.0	3	10.0	1	16.7	8	41.7
	Moderate	12	33.3	13	43.3	1	16.7	13	36.1
Modification situation*	High	15	41.7	14	46.7	4	66.6	15	22.2
	Low	2	5.6	4	13.3	2	33.3	4	11.1
	Moderate	13	36.1	11	36.7	1	16.7	13	36.1
Attention deployment*	High	21	58.3	15	50.0	3	50.0	19	52.8
	Low	2	5.6	1	3.3	1	16.7	5	13.9
	Moderate	5	13.8	6	20.0	0	0	9	25.0
Cognitive change*	High	29	80.6	23	76.7	5	83.3	22	61.1
	Low	2	5.6	4	13.3	1	16.7	9	13.9
	Moderate	8	22.2	7	23.3	1	16.7	14	38.9
Response modulation*	High	26	72.2	19	63.4	4	66.6	17	47.2
	Low	0	0	1	3.3	1	16.7	6	16.7
	Moderate	14	38.9	11	36.7	1	16.7	12	33.3
	High	22	61.1	18	60.0	4	66.6	18	50.0

*Emotion regulation (situation selection, modification situation, attention deployment, cognitive change, response modulation)

3.2. Adolescents as cyberbullying victims

In the group of adolescents who are victims of cyberbullying, based on multiple linear regression analysis of the variables age, gender, and emotional intelligence on the five aspects of emotion regulation (situation selection, situation modification, attentional deployment, cognitive change, and response modulation), it is explained that it has no partial effect ($p\text{-value}>0.05$) or simultaneous ($p\text{-value}>0.05$) on situation selection, attentional deployment, cognitive change, and modulation response to emotion regulation. However, in situation modification, the results of the emotional intelligence analysis have a $p\text{-value}=0.014$ (<0.05) which influences situation modification on emotion regulation. Based on the results of the $f\text{-test}$, age, gender, and emotional intelligence simultaneously ($p\text{-value}=0.024<0.05$) have an effect on situation modification on emotion regulation with a percentage of influence of 2.52%.

3.3. Adolescents as victims-cyberbullying perpetrators

Based on multiple linear regression analysis of the variables age, gender, and emotional intelligence on five aspects of emotion regulation (situation selection, situation modification, attentional deployment, cognitive change, and response modulation), it was found that they had no effect partially ($p\text{-value}>0.05$) as well as simultaneously ($p\text{-value}>0.05$) on situation selection, attentional deployment, cognitive change, and response modulation on emotion regulation. However, in situation modification and attentional deployment, the results of the regression analysis on emotional intelligence have a $p\text{-value}$ of 0.018 (<0.05).

3.4. Adolescents as cyberbullying perpetrators

In the group of perpetrators, the results of the regression analysis on age, gender, and emotional intelligence partially show that gender has a $p\text{-value}$ of 0.022 (<0.05) in attention deployment, while the $p\text{-value}$ in the ANOVA is 0.10 (<0.05), which means that age, gender, and emotional intelligence simultaneously have an influence on attention deployment with an influence percentage of 9.83%. The inability of adolescents to control their emotions and control themselves, both in male and female adolescents and at any age, will make it easy for adolescents to engage in negative behavior such as becoming perpetrators of cyberbullying. Adolescent emotional intelligence needs to be developed from an early age so that adolescents have a good mindset and can have constructive attitudes and behavior.

3.5. Adolescents who are not involved in cyberbullying

In the group of adolescents who were not involved, the results of the regression analysis on age, gender, and emotional intelligence partially showed that gender had an influence on cognitive change with a

p-value of 0.036 (<0.05). While the results of the regression analysis on age, gender, and emotional intelligence on the modulation response partially show that emotional intelligence has an influence on the modulation response with a p-value of 0.000 (<0.05) and from the p-value in the ANOVA table ($0.000<0.05$), which means age, gender, and emotional intelligence simultaneously affect the modulation response with a percentage of influence that is 4.44%. In adolescents who are not involved in cyberbullying, they tend to have good emotional intelligence, namely being able to think positively in adolescent social life. The ability of adolescents to think positively will make adolescents able to act and behave constructively toward other adolescents.

4. DISCUSSION

The main aim of this research was to investigate the influence of age, gender, and emotional intelligence on emotion regulation in adolescents involved in cyberbullying. Our findings indicate that age, gender, and emotional intelligence have partial and simultaneous effects on emotion regulation. Further elaboration on these findings is provided in the subsequent subsection.

4.1. Adolescents as cyberbullying victims

In the model summary table, the Nagelkerke R square value is 0.024, indicating that age, gender, length of time having social media, number of social media accounts, and daily duration of social media use collectively account for 2.4% of the variance in the likelihood of being a cyberbullying victim. This suggests that while these factors do have an influence, their impact is relatively small. These findings align with previous research indicating that excessive social media use is linked to a higher risk of cyberbullying victimization, as greater exposure increases the likelihood of encountering harmful interactions online [23]–[25].

In this study, based on the results of the f test, age, gender, and emotional intelligence simultaneously (p-value=0.024 (0.05) have an effect on situation modification on emotion regulation with an influence percentage of 2.52%, which means that there are other variables that affect situation modification. Emotional intelligence and emotion regulation are two conceptually related approaches to understanding the emotional experiences that people have [26]. Situation modification is an individual's ability to change situations by regulating emotions and setting certain expected goals [27]. In cyberbullying incidents, victims of cyberbullying, as shown in Table 3, have high situation modification abilities. Based on the results of the study, it was explained that there was a positive relationship between emotional intelligence and emotional regulation, including at the situation modification stage. Individuals with high emotional intelligence will take steps to change unfavorable situations by using social skills and their aptitude for expressing emotions to encourage situation modification [28]. Therefore, individuals with high emotional intelligence will use constructive conflict resolution rather than avoidance. Individuals with high emotional intelligence can use indirect modification strategies by seeking and obtaining help from others. Situation modifications can help increase judgments of control and, in turn, reduce anxiety and anger when adolescents make meaningful modifications to achievement situations.

4.2. Adolescents as victims-cyberbullying perpetrators

For adolescents as victims of cyberbullying perpetrators, age, gender, and emotional intelligence simultaneously influence situation modification and attention deployment. Situation modification is a form of problem-focused coping that involves taking practical actions that have a direct impact on the situation. Forms of situation modification include seeking support and conflict resolution [29], [30]. Seeking support involves seeking the help of others in changing the situation (for example, asking for help from classmates or reporting cyberbullying to the teacher or to parents and family. Conflict resolution involves taking steps to change or defuse conflict situations [30]. Many different strategies can be used in conflict resolution, but not all of them are efficient at dealing with conflict [30], [31]. For adolescents who are involved as victims and perpetrators of cyberbullying, one of the efforts of the victim in modifying the situation is to defuse the conflict by taking revenge on or counterattacking the perpetrator in the hope that the cyberbullying situation will subside. In their teens, both boys and girls have a tendency to take these actions because teenagers feel ashamed or do not accept cyberattacks carried out by perpetrators. Apart from that, it is related to the unstable emotions of adolescents, so this is related to the emotional intelligence of adolescents in responding to situations, namely in modifying situations. The form of situation modification carried out by adolescents in emotion regulation will be related to the next stage of emotion regulation, namely attention deployment [30], [31].

Adolescents with high emotional intelligence tend to exhibit more positive traits, such as focusing on positive stimuli and experiences while being less inclined to dwell on negative events [32], [33]. Furthermore, these adolescents are more likely to direct their attention toward activities or thoughts that help them experience desired emotions, and they actively avoid situations that might trigger unwanted emotions. This ability to regulate their focus contributes to a more balanced emotional experience.

4.3. Adolescents as cyberbullying perpetrators

Based on the results, the type of software has a partial effect on attention deployment. This is in accordance with the explanation of the results of the study, which show that both men and women have a tendency to spread attention [16]. Forms of attention deployment consist of: distraction (diversion), namely focusing attention on a different aspect of the situation or diverting attention from a stimulus that evokes emotion to a stimulus that reduces emotion [34]. Distraction involves shifting attention, either away from the situation altogether or away from the emotional aspects of the situation. This includes physical provocation (hiding unwanted body parts) or internal attention-seeking (such as focusing on the non-emotional aspects of a situation or thinking about something else that is pleasurable). Rumination is related to the persistence to focus on thoughts and feelings associated with events that cause negative emotions. This can increase the duration and intensity of negative emotions that can lead to depression. Based on several research results, it is possible that men will also do the same thing [35].

Mindful attention awareness is an effort that absorbs cognitive resources by remembering emotional events to describe emotions convincingly. This is the beginning of controlled emotions, while another form of distributed attention directed at feelings is contemplation [36]. Mindfulness involves paying full attention to the present in a non-harmful way. This is done by observing and without judging what is inside a person (thoughts, motives, emotions, bodily sensations) and the outside world. The results of the study explain that mindfulness increases happiness and reduces negative influences such as stress, anxiety, or depression [37]. The balance between internal concern (what I think or feel) and external concern (what I do) is very important. For cyberbullying perpetrators, it could be that their cyberbullying behavior is a form of attention deployment from other unpleasant things so that the perpetrator diverts it by carrying out attacks via cyberspace (cyberbullying) on other teenagers.

4.4. Adolescents who are not involved in cyberbullying

One example of response modulation is expressive suppression, in which a person tries to inhibit ongoing behavior from expressing negative or positive emotions [27]. The use of suppression can be maladaptive and have a negative impact because there is no handling of an event and it is just blocked. Stress can lead to an increased stress response and is associated with higher rates of psychological problems such as depression [38]. In adolescents who are not involved in cyberbullying, the tendency for adolescents to have a positive modulation response is by sharing emotions, namely intrapersonal motives (practicing expressing), socio-cognitive (receiving clarification of meaning, suggestions, solutions), socio-affective (getting empathy, support, comfort), and prosocial (giving information, warning). People with high emotional intelligence report less emotional suppression because they have reached the desired emotional state and/or because they value genuine emotional expression.

4.5. Strengths and limitations

The strength of this research is that data collection is carried out directly by distributing questionnaires to adolescents, taking into account elements of research ethics such as anonymity and the fact that the researcher is not waiting for the filling out of the questionnaire so that the respondent has enough time to fill in the actual data. The limitations in the study were the low response rate and the low number of respondents, which could be caused by students not attending school when re-collecting the questionnaire at the specified time or students choosing not to fill out the questionnaire. Furthermore, a notable limitation is our inability to effectively control confounding variables. External factors influencing observed relationships were challenging to control comprehensively. This limitation may impact internal validity, emphasizing the need for cautious result interpretation. Acknowledging this, future research should employ advanced methods for better confounding variable control.

4.6. Implications for practice

The study underscores the significance of addressing emotional intelligence and its impact on cyberbullying dynamics among adolescents. Interventions targeting emotional intelligence development may prove instrumental in preventing and mitigating cyberbullying incidents. Educators and policymakers should consider incorporating programs that enhance emotional intelligence skills, including effective emotion regulation, mindfulness, and positive modulation responses. By fostering emotional intelligence, there is potential to equip adolescents with adaptive strategies for handling conflicts and navigating social interactions, ultimately contributing to a healthier online environment and reducing the prevalence of cyberbullying.

5. CONCLUSION

Age, gender, and emotional intelligence partially and simultaneously affect emotion regulation. However, there are still many other variables such as parenting style, parent-child communication, parental support, other variables in adolescents and environmental variables that affect emotional regulation in adolescents that need to be studied. Therefore, the presence of the role of mental health nurses is very

important in providing education related to other variables related to emotion regulation not only to adolescents but also to parents and the environment around adolescents.





REFERENCES

- [1] R. P. Ang, "Adolescent cyberbullying: a review of characteristics, prevention and intervention strategies," *Aggression and Violent Behavior*, vol. 25, pp. 35–42, 2015, doi: 10.1016/j.avb.2015.07.011.
- [2] V. F. Reyna and F. Farley, "Risk and rationality in adolescent decision making," *Psychological Science in the Public Interest*, vol. 7, no. 1, pp. 1–44, 2006, doi: 10.1111/j.1529-1006.2006.00026.x.
- [3] G. A. Budiayati, N. Purwaningrum, Y. 'Adawiyah, and I. M. M. Y. Saifudin, "Characteristics and addiction of gadget in adolescent during the COVID-19 pandemic," *Jurnal Penelitian Perawat Profesional*, vol. 3, no. 4, pp. 829–836, 2021.
- [4] Nursalam, D. I. Iswanti, N. Agustiniingsih, F. Rohmi, B. Permana, and R. A. Erwansyah, "Factors contributing to online game addiction in adolescents: a systematic review," *International Journal of Public Health Science (IJPHS)*, vol. 12, no. 4, pp. 1763–1770, 2023, doi: 10.11591/ijphs.v12i4.23260.
- [5] H. J. Thomas, J. P. Connor, and J. G. Scott, "Integrating traditional bullying and cyberbullying: challenges of definition and measurement in adolescents-a review," *Educational Psychology Review*, vol. 27, no. 1, pp. 135–152, 2015, doi: 10.1007/s10648-014-9261-7.
- [6] D. Olweus and S. P. Limber, "Some problems with cyberbullying research," *Current Opinion in Psychology*, vol. 19, pp. 139–143, 2018, doi: 10.1016/j.copsyc.2017.04.012.
- [7] C. L. Huang, S. C. Yang, and L. S. Hsieh, "The cyberbullying behavior of taiwanese adolescents in an online gaming environment," *Children and Youth Services Review*, vol. 106, 2019, doi: 10.1016/j.childyouth.2019.104461.
- [8] L. A. Reed, L. M. Ward, R. M. Tolman, J. R. Lippman, and R. C. Seabrook, "The association between stereotypical gender and dating beliefs and digital dating abuse perpetration in adolescent dating relationships," *Journal of Interpersonal Violence*, vol. 36, no. 9–10, pp. NP5561–NP5585, 2021, doi: 10.1177/0886260518801933.
- [9] I. Zych, D. P. Farrington, and M. M. Ttofi, "Protective factors against bullying and cyberbullying: a systematic review of meta-analyses," *Aggression and Violent Behavior*, vol. 45, pp. 4–19, 2019, doi: 10.1016/j.avb.2018.06.008.
- [10] M. Garaigordobil and A. Peña-Sarrionandia, "Effects of an emotional intelligence program in variables related to the prevention of violence," *Frontiers in Psychology*, vol. 6, no. Jun, 2015, doi: 10.3389/fpsyg.2015.00743.
- [11] C. Yudes, L. Rey, and N. Extremera, "The moderating effect of emotional intelligence on problematic internet use and cyberbullying perpetration among adolescents: gender differences," *Psychological Reports*, vol. 125, no. 6, pp. 2902–2921, 2022.
- [12] N. Sánchez-Álvarez, N. Extremera, and P. Fernández-Berocal, "The relation between emotional intelligence and subjective well-being: a meta-analytic investigation," *Journal of Positive Psychology*, vol. 11, no. 3, pp. 276–285, 2016, doi: 10.1080/17439760.2015.1058968.
- [13] A. C. Santos, C. Simões, C. Cefai, E. Freitas, and P. Arriaga, "Emotion regulation and student engagement: age and gender differences during adolescence," *International Journal of Educational Research*, vol. 109, 2021, doi: 10.1016/j.ijer.2021.101830.
- [14] L. Zhang, J. Lu, B. Li, X. Wang, and C. Shanguan, "Gender differences in the mediating effects of emotion-regulation strategies: forgiveness and depression among adolescents," *Personality and Individual Differences*, vol. 163, 2020, doi: 10.1016/j.paid.2020.110094.
- [15] K. E. Goubet and E. G. Chrysikou, "Emotion regulation flexibility: gender differences in context sensitivity and repertoire," *Frontiers in Psychology*, vol. 10, no. APR, 2019, doi: 10.3389/fpsyg.2019.00935.
- [16] A. Sanchis-Sanchis, M. D. Grau, A. R. Moliner, and C. P. Morales-Murillo, "Effects of age and gender in emotion regulation of children and adolescents," *Frontiers in Psychology*, vol. 11, 2020, doi: 10.3389/fpsyg.2020.00946.
- [17] A. Arslan, O. Bilgin, and I. Murat, "A study on developing a cyberbullying scale for high school students," *OPUS International Journal of Society Researches*, vol. 15, no. 1, pp. 4723–4738, 2020.
- [18] A. B. B. Martín, M. D. M. M. Jurado, M. D. C. Pérez-Fuentes, N. F. O. Ruiz, Á. M. Martínez, M. D. M. S. Márquez, J. J. G. Linares, "Interpersonal support, emotional intelligence and family function in adolescence," *International Journal of Environmental Research and Public Health*, vol. 18, no. 10, p. 5145, 2021, doi: 10.3390/ijerph18105145.
- [19] T. L. Webb, K. A. Lindquist, K. Jones, A. Avishai, and P. Sheeran, "Situation selection is a particularly effective emotion regulation strategy for people who need help regulating their emotions," *Cognition and Emotion*, vol. 32, no. 2, pp. 231–248, 2018.
- [20] K. D. Neff *et al.*, "Development and validation of the self-compassion scale for youth," *Journal of Personality Assessment*, vol. 103, no. 1, pp. 92–105, 2021, doi: 10.1080/00223891.2020.1729774.
- [21] M. Benita, M. Benish-Weisman, L. Matos, and C. Torres, "Integrative and suppressive emotion regulation differentially predict well-being through basic need satisfaction and frustration: a test of three countries," *Motivation and Emotion*, vol. 44, no. 1, pp. 67–81, 2020, doi: 10.1007/s11031-019-09781-x.
- [22] M. T. Chamizo-Nieto, L. Rey, and N. Sánchez-álvarez, "Validation of the spanish version of the cognitive emotion regulation questionnaire in adolescents," *Psicothema*, vol. 32, no. 1, pp. 153–159, 2020, doi: 10.7334/psicothema2019.156.
- [23] N. Marengo *et al.*, "Cyberbullying and problematic social media use: an insight into the positive role of social support in adolescents-data from the health behaviour in school-aged children study in italy," *Public Health*, vol. 199, pp. 46–50, 2021.
- [24] C. Liu, Z. Liu, and G. Yuan, "Cyberbullying victimization and problematic internet use among chinese adolescents: longitudinal mediation through mindfulness and depression," *Journal of Health Psychology*, vol. 26, no. 14, pp. 2822–2831, 2021.
- [25] A. Cebollero-Salinas, S. Orejudo, J. Cano-Escoriaza, and T. Íñiguez-Berrozpe, "Cybergossip and problematic internet use in cyberaggression and cybervictimisation among adolescents," *Computers in Human Behavior*, vol. 131, no. January, p. 107230, Jun. 2022.
- [26] M. Bucich and C. MacCann, "Emotional intelligence and day-to-day emotion regulation processes: examining motives for social sharing," *Personality and Individual Differences*, vol. 137, pp. 22–26, 2019, doi: 10.1016/j.paid.2018.08.002.
- [27] J. J. Gross and B. Q. Ford, *Handbook of emotion regulation*, Second., vol. 298, no. 15. London: The Guilford Press, 2014.
- [28] B. Van Bockstaele, L. Atticciati, A. P. Hiekkaranta, H. Larsen, and B. Verschuere, "Choose change: situation modification, distraction, and reappraisal in mild versus intense negative situations," *Motivation and Emotion*, vol. 44, no. 4, pp. 583–596, 2020.
- [29] L. Rey, C. Quintana-Orts, S. Mérida-López, and N. Extremera, "Emotional intelligence and peer cyber-victimisation in adolescents: gender as moderator," *Comunicar*, vol. 26, no. 56, pp. 09–18, 2018, doi: 10.3916/C56-2018-01.
- [30] J. J. Gross and R. A. Thompson, *Handbook of emotion regulation*. The Guilford Press, 2007.
- [31] A. Peña-Sarrionandia, M. Mikolajczak, and J. J. Gross, "Integrating emotion regulation and emotional intelligence traditions: a meta-analysis," *Frontiers in Psychology*, vol. 6, no. FEB, 2015, doi: 10.3389/fpsyg.2015.00160.
- [32] M. C. Martínez-Monteagudo, B. Delgado, J. M. García-Fernández, and E. Rubio, "Cyberbullying, aggressiveness, and emotional intelligence in adolescence," *International Journal of Environmental Research and Public Health*, vol. 16, no. 24, 2019.
- [33] C. Quintana-Orts, S. Mérida-López, L. Rey, M. T. Chamizo-Nieto, and N. Extremera, "Understanding the role of emotion regulation strategies in cybervictimization and cyberaggression over time: it is basically your fault!," *Cyberpsychology*, vol. 17, no. 2, 2023, doi: 10.5817/CP2023-2-1.





- [34] G. M. Bebkko, S. L. Franconeri, K. N. Ochsner, and J. Y. Chiao, "Attentional deployment is not necessary for successful emotion regulation via cognitive reappraisal or expressive suppression," *Emotion*, vol. 14, no. 3, pp. 504–512, 2014, doi: 10.1037/a0035459.
- [35] M. A. Gruhn and B. E. Compas, "Effects of maltreatment on coping and emotion regulation in childhood and adolescence: a meta-analytic review," *Child Abuse and Neglect*, vol. 103, 2020, doi: 10.1016/j.chiabu.2020.104446.
- [36] G. Wadley, W. Smith, P. Koval, and J. J. Gross, "Digital emotion regulation," *Current Directions in Psychological Science*, vol. 29, no. 4, pp. 412–418, 2020, doi: 10.1177/0963721420920592.
- [37] R. Sun, Y. Ren, X. Li, Y. Jiang, S. Liu, and J. You, "Self-compassion and family cohesion moderate the association between suicide ideation and suicide attempts in chinese adolescents," *Journal of Adolescence*, vol. 79, pp. 103–111, 2020.
- [38] M. McLafferty *et al.*, "The mediating role of emotion regulation strategies on psychopathology and suicidal behaviour following negative childhood experiences," *Children and Youth Services Review*, vol. 116, 2020, doi: 10.1016/j.childyouth.2020.105212.

BIOGRAPHIES OF AUTHORS







Nia Agustini Sih     is a Lecturer at Sekolah Tinggi Ilmu Kesehatan Kepanjen, Malang. Scientific focus on mental health nursing in the areas of mental disorders, psychosocial problems, and mental health in adolescents. Research focuses in mental health and psychosocial problems in adolescents. She can be contacted at email: anisa.hanifa1115@gmail.com.







Ah Yusuf     is a Professor of nursing at Universitas Airlangga. Completed his Ph.D. at Universitas Airlangga in 2012. His research field in the area of nursing and mental health nursing. He can be contacted at email: ah-yusuf@fkip.unair.ac.id.







Ahsan Ahsan     is a senior lecturer of nursing, at the Faculty of Health Sciences at Universitas Brawijaya. His research field is in the area of nursing management and nursing education. He can be contacted at email: ahsanpsik.fk@ub.ac.id.



Dwi Indah Iswanti     She is Senior Lecturer in the Faculty of Nursing and Health Science, Universitas Karya Husada Semarang. Her research interests are mainly focused in Community Mental Health Nursing. Active member of donesian Mental Health Nurses Association/*Ikatan Perawat Kesehatan Jiwa Indonesia (IPKJI)*. She can be contacted at email: misskey.indah@yahoo.com.



I Made Moh. Yanuar Saifudin     He is a lecturer in the Nursing Department, Faculty of Medicine, Universitas Tanjungpura, Pontianak, Indonesia. Completed Master's in Nursing at the Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia. Currently pursuing Doctoral degree at the same university. Published several articles in national and international journal, in field of nursing and public health. He can be contacted at email: yanuar.ikadek@mail.ugm.ac.id.