Research Paper

Adverse Childhood Experiences Among University Students and The Relationship With Depression

Bagas Rahmatullah[1*], Adelia Nurul[2], Channia Hasgat[3], Ginta Sellia Putri[4], Inggrid Nathania Tambunan[5], Siti Hawa Annisa Mantika[6], Andi Tenri Faradiba[7]
[1,2,3,4,5,6,7] Pancasila University, Indonesia

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Abstract

Numerous studies have shown that childhood trauma can have severe and long-lasting effects on an individual's physical and mental health, even in adulthood. Therefore, this research aimed to investigate the correlation between childhood trauma and depression in college students. The study collected data from 499 participants, who were students from different universities and regions. The research utilized the Adverse Childhood Experiences-IQ to assess childhood trauma, while depression was evaluated using the Patient Health Questionnaire-9. The findings showed that there is a positive correlation between Adverse Childhood Experiences and the tendency towards depression in college students ($r=.43$; $p < .001$). These results provide additional support to previous studies that found a similar relationship between ACE exposure and depression. While the research has contributed to a better understanding of the connection between childhood trauma and depression, more studies are required to fully explore the relationship concerning gender and age differences. The study highlights the importance of addressing childhood trauma in the student population and providing support to those suffering from depression or similar mental health concerns. The results may assist in the development of effective interventions aimed at preventing and managing depression among individuals who have experienced childhood trauma. The research emphasizes the need for increased awareness of the link between childhood trauma and depression, which could lead to appropriate intervention strategies to support individuals in need. The research findings may also have implications beyond the student population, as childhood trauma and depression are prevalent concerns across various age groups and populations. Therefore, the study's findings could have significant implications for the development of appropriate intervention strategies for a wide range of individuals who have experienced childhood trauma.

Keywords: *Adverse Childhood Experiences, Depression, College Student*

INTRODUCTION

Childhood Trauma in childhood is a phenomenon that often occurs in individuals without realizing that traumatic events will have a negative impact on individuals in the future. According to Dye (2018), the existence of childhood trauma has a long-term impact on individuals, which can have several negative impacts, such as psychological, physiological, emotional, and neurological impacts. Bad experiences in the past can trigger the emergence of the phenomenon of Adverse Childhood Experiences, namely a traumatic incident in childhood or in adolescence which includes violent behavior, both verbal and sexual abuse, and other problems related to mental health problems that occur at home or within a certain community (Roque-Lopez et al., 2021). In a study by Hillis et al. (2016), globally, around the world, there are 1 billion children with an age range of 2-17 years who experience ACE in various forms, such as sexual harassment, emotional violence, and neglect. Traumatic experiences in childhood can potentially have negative effects that affect health and well-being in the long term. This ACE phenomenon can increase the risk of mental health disorders (Clemens et al., 2021), such as depression and anxiety disorders, to suicide (Hughes et al., 2017; Karatekin & Ahluwalia, 2020). Other studies have found that childhood trauma can have a negative impact on individuals in their later adulthood; research has found that individuals who have experienced childhood trauma often face mental health issues such as alcohol addiction, drug use, denial of the negative impacts they feel, and errors in self-perception In addition, it was also

Corresponding author's email: bagasrahmatullah456@gmail.com

found that they have risk factors for low cell esteem, depression, anxiety, and feelings that are difficult to control (Downey & Crummy, 2022).

Biologically, the impact of childhood trauma can increase symptoms of PTSD and stress; this is shown in the appearance of dysregulation in the amygdala, ventral affective processing, and reward circuits in the brain; on the results of a CT scan, it was found that individuals who experienced childhood trauma have impaired network default mode, change in negative thinking & internal narrative, impaired cognitive function & social cognition, and disassociation occurs (DE Bellis, 2001). In other studies, it was found that not only had an impact on biological aspects, childhood trauma also had an impact on individual social interaction patterns; this study found that childhood trauma had an impact on individual satisfaction in terms of social interaction in adulthood (Stain et al., 2014). Other studies have found that trauma experienced by individuals can have an impact on epigenetic aspects; when exposure to trauma occurs, it will affect sex-specific DNA. This shows that trauma does affect not only social interaction and mental health but also biological aspects can be affected (Dalvie & Daskalakis, 2021). This research shows that childhood trauma is not a small matter that can be considered easy to solve but a phenomenon that can have a long-term impact on individuals from social, cognitive, behavioral, biological, physiological, and psychological aspects. Of the many causes of depression and anxiety with factors that have caused traumatic experiences in the past, some studies proved a significant correlation between ACE and the emergence of depressive disorders (Tsehay et al., 2020). Another study of 4,382 respondents stated that 21% of respondents experienced three or more traumatic experiences that caused symptoms of depression (Iob & Steptoe, 2019). According to Giano et al. (2021), in their research, past individuals' bad experiences, such as family violence, sexual abuse, and family members with mental disorders, can increase a person's prevalence of depression. This certainly shows that there has been a lot of evidence of the relationship between ACE and depression levels.

Furthermore, previous research conducted had a significant positive correlation between ACE and mental health disorders (Karatekin & Ahluwalia, 2020). Other studies have also revealed that those who experience higher ACE have greater levels of stress and lower levels of social support (Karatekin & Ahluwalia, 2020). In addition, other studies have found that the impact of ACE can cause individuals to use illegal drugs (Forster et al., 2018). In addition to the impact on mental health, ACE also has an impact on individual physical health; this has an impact on individual eating patterns and body weight (Hazzard et al., 2021). Research conducted in America on 45,287 children showed that 22.5% of children faced economic difficulties, 21.9% of children with divorced parents, 34.7% of non-Hispanic African-American children, 37.2% of children living in poverty, and 30.5% of children living in vulnerable rural areas experiencing parental divorce (Crouch et al., 2019). Based on research conducted by Silver et al. (2018), trauma greatly affects mental and physical health; this is found in individuals who experience trauma associated with several conditions of physical disorders, stress, and cause symptoms of mental health disorders. Trauma exposure is also known to cause symptoms of somatic disease, and it is also known that individuals exposed to trauma tend to have weaker physical health conditions (López-Martínez et al., 2018).

Mental health issues, including depression, are a common concern among college students, and researchers have recently focused on studying the correlation between Adverse Childhood Experiences (ACE) and depression in this demographic. College students are particularly susceptible to mental health problems, and understanding the link between ACE and depression can provide valuable insights into their mental well-being. Moreover, this information is essential for effectively addressing mental health issues among college students in Indonesia. Through research on the relationship between ACE and depression in college students, new scientific discoveries can be made and contribute to the existing literature on childhood trauma and

depression. This research can also shed light on the mental health of college students and how ACE specifically correlates with depressive symptoms in this population. This can help healthcare providers, policymakers, and educators create more effective interventions and preventative measures for college students who may be struggling with depression.

The high prevalence of depression among college students in Indonesia makes this research particularly relevant to this demographic. By understanding the connection between ACE and depression in Indonesian college students, interventions and support services can be tailored to address the unique challenges faced by this population. This research can also highlight the need for greater attention to mental health concerns in the Indonesian educational system and inform the development of policies and programs that promote better mental health outcomes for students.

It is important to note that this research is not comprehensive in explaining differences in levels of ACE exposure and depression in male and female sexes, nor in explaining the level of ACE exposure and depression per age group. However, the research findings support previous studies that have demonstrated a correlation between ACE and depression. By increasing awareness of this link, research can contribute to a better understanding of the issue and promote appropriate intervention strategies to support individuals in need, especially in the student population. Based on the presentation and explanation of the existing problems, the researcher intends to conduct further research regarding the relationship between ACE and depression in college students.

LITERATURE REVIEW

Adverse Childhood Experiences (ACEs) can be defined as traumatic events that occur before the age of 18, which can take various forms, such as neglect, poor parenting, aggression towards children, and family dysfunction. These events can negatively affect individuals' physical and mental health, as established in various studies. According to Felitti et al. (1998), ACEs can have a lasting impact on an individual's overall well-being, causing mental and physical health problems that can persist throughout their lives. The study conducted by Hughes et al. (2017) also supported this, indicating that ACEs can affect both the physical and psychological aspects of an individual. The physical effects of ACEs are broad, with research demonstrating a link between ACEs and declining health conditions, including obesity, diabetes, cancer, and other chronic diseases. Individuals who have experienced ACEs may also engage in risky behaviours such as drug use and alcohol problems (Hughes et al., 2017). These negative physical outcomes can contribute to a decreased quality of life and a shortened lifespan. In addition to physical effects, ACEs can have long-lasting psychological impacts on individuals. Depression and behavioural disorders are commonly associated with ACEs, with some studies showing changes in brain structure and function as well (Herzog & Schmahl, 2018; Hunt et al., 2017). The impact of ACEs on mental health has also been demonstrated in numerous studies, showing a strong correlation between ACEs and a range of mental health disorders, such as anxiety, post-traumatic stress disorder, and substance abuse disorders. Given the significant negative effects of ACEs, it is important to identify individuals who have experienced them and provide appropriate interventions to support their mental and physical well-being. Healthcare providers should consider the history of ACEs when assessing patients and tailor treatments accordingly. This can help to mitigate the long-term effects of ACEs and improve individuals' overall health outcomes. Additionally, addressing the root causes of ACEs, such as improving parenting practices and addressing family dysfunction, can help prevent their occurrence in the first place. Overall, understanding the impacts of ACEs is critical in developing effective strategies to prevent and treat the negative consequences of these traumatic experiences.

The ACE Questionnaires developed by Felitti et al. (1998) was used to measure individual ACE exposure. The questionnaire consists of 10 questions describing the participants' ACE exposure. The following are examples of questions in the ACE Questionnaire:

1. Were your parents/caregivers often drunk or under the influence of drugs in your care?
2. Did you live with a family member who had depression, mental illness, or attempted suicide?
3. Have you seen or heard of your parents or family members being slapped, kicked, punched, or beaten?

Depression is one of the most prevalent mental disorders and can be treated regularly by a wide spectrum of healthcare providers. Depression, according to Kroenke et al. (2001), is divided into four levels, namely, symptoms of mild depression, mild depression, moderate depression, and major depression. Thus, to determine the level of depression, Kurt Kroenke made a psychotherapy instrument, namely PHQ-9, which consists of 9 short questions guided by the criteria for depression in DSM-IV. The levels of depression, according to the instrument, can be divided into five, namely:

1. Minimal Depression (a score of 0-4). In PHQ-9, if someone has a score range of 0-4, they are in the category of minimal depression.
2. Mild depression (a score of 5-9). In the PHQ-9, someone with a score range of 5-9 falls into mild depression.
3. Moderate depression (a score of 10-14). In the PHQ-9, someone with a score in the range of 10-14 is in the category of moderate depression.
4. Moderately Severe Depression (a score of 15-19). In the PHQ-9, someone with a score in the 15-19 range falls into the category of moderately severe depression.
5. Severe depression (a score of 20-27). In PHQ-9, someone who has a score of 20-27 is in the category of moderately severe depression or acute depression

RESEARCH METHOD

The research recruited 499 student participants and collected data using a Google form distributed through social media platforms. The selection of participants was based on the research questions posed in the study's introduction. This research adopted a quantitative research design, where numerical data, calculations, and formulas were used to collect and analyze data. The study was non-experimental, as it did not involve manipulation and randomization. Instead, it relied on measuring tools to observe the relationships between variables. Two measuring instruments were used in this study: the Adverse Childhood International Questionnaire to measure participants' exposure to childhood violence and the Patient Health Questionnaire 9 to measure their level of depression.

The Adverse Childhood International Questionnaire assessed the severity of violence participants experienced, while the Patient Health Questionnaire 9 used a Likert scale to score participants' responses. The Adverse Childhood International Questionnaire was used to measure the participants' exposure to childhood violence. The more exposure to violence participants receives, the greater the severity of violence that participants experience. An example of this item is, "Have you often or several times seen or heard your parents or family members being beaten or injured with an object, such as a stick (or rattan), bottle, knife, whip, etc.?"

Patient Health Questionnaire 9 was used to measure the participant's level of depression. They were asked to fill in several questions with answers on a Likert scale of 0-3. Each answer has a different score. The participant chose 0 if they had never experienced something. They chose 1 if they thought they felt something for a few days. If it was more than half the time in question, they should choose 2. Meanwhile, 3 indicated that they experienced something almost every day. An example of this measuring instrument item is feeling moody, gloomy, or hopeless.

Based on the results of the validity and reliability tests of the ACE-IQ and PHQ-9, a Cronbach

alpha score of 0.6 was obtained (Paramita & Faradiba, 2020). In the PHQ 9 measuring instrument, the Cronbach alpha result was 0.885, indicating that the instrument was considered reliable (Dian et al., 2022)

FINDINGS AND DISCUSSION

Data were taken in November-December 2021. This study involved 519 participants, but 499 data were accepted. Table 1 shows that most of the participants were female, with a percentage of 78.36%, and male at 21.64%. Furthermore, most participants in terms of age were at the age of 19 years, with a percentage of 40.30%, while for the distribution of the generation, the largest was in the population of the 2020 batch, as much as 42.70%.

Table 1 shows that the highest prevalence of ACE exposure was in the aspect of emotional neglect, as all participants received its exposure. Furthermore, 33.87% of the participants experienced psychological violence, and 56.11% experienced bullying. In terms of depression, most participants suffered from moderately severe depression, with a total percentage of 29.46%, 25.85% experienced moderate depression, and 24.25% experienced severe depression.

Table 1. Participant Demographics

Participants Data	**F**	**%**
Gender		
Male	108	21,64%
Female	391	78.36%
Age		
18	105	20,20%
19	209	40,30%
20	96	18,50%
21	65	12,50%
22	26	5%
23	9	1,70%
24	5	1%
25	4	0,80%
Year of college		
2015	5	1%
2016	12	2,30%
2017	17	3,30%
2018	49	9,60%
2019	71	13,90%
2020	218	42,70%
2021	139	27,20%
Parent's marital status		
Married	464	89,40%
Divorced	55	10,60%
ACE prevalence		
Emotional neglect	499	100%
Physical neglect	6	1,20%
Alcohol and/or drug abusers in the household	20	4,01%
A family member who is chronically depressed, mentally ill, institutionalized or suicidal	49	9,82%
Incarcerated family member	33	6,61%
One or both parents passed away, separated, or divorced	1	0,20%
A family member received abuse	57	11,42%
Psychological/emotional abuse	169	33,87%
physical abuse	84	16,83%

Sexual abuse	24	4,81%
Bullying	280	56,11%
Community violence	47	9,42%
Collective violence	2	0,40%
Depression Prevalence		
Minimal Depression	16	3,21%
Mild Depression	86	17,23%
Moderate Depression	129	25,85%
Moderately Severe Depression	147	29,46%
Severe Depression	121	24,25%

Furthermore, referring to Table 2, based on the correlation test results on the ACE and depression variables, it was found that there was a correlation between them.

Table 2. Correlation Test

		ACE	**Depression**
ACE	Pearson Correlation	1	439**
	Sig. 2(tailed)		.000
Depresi	Pearson Correlation	439**	1
	Sig. 2(tailed)	.000	

The results of the Pearson correlation analysis indicate that there is a significant positive correlation between adverse childhood experiences (ACE) and the tendency to develop depression, with a correlation coefficient of r=.43 and p < .001. The findings of the statistical analysis suggest that past negative experiences are associated with a greater likelihood of experiencing depressive symptoms. This is consistent with previous research that identifies ACE as a risk factor for depression and difficulties with emotion regulation (Honkalampi et al., 2020). A study conducted with 546 adolescents found that over half of them reported experiencing ACE during childhood, and the severity of depressive symptoms was found to be associated with the degree of exposure to ACE (Tsehay et al., 2020). Similarly, a survey conducted with 889 women in Pakistan found that 58% of them reported experiencing at least one traumatic event during their childhood, with domestic violence accounting for 38% of the incidents. This highlights the significant association between ACE and depressive disorders (LeMasters et al., 2021). Furthermore, a study conducted in Uganda also demonstrated a statistically significant correlation between ACE and depression (Satinsky et al., 2021). Taken together, these findings suggest that individuals who have experienced ACE are at increased risk of developing depression. It is important to acknowledge the impact of negative childhood experiences on mental health outcomes and to provide appropriate support and interventions for individuals who have been exposed to such events. Further research is needed to understand the mechanisms underlying the relationship between ACE and depression and to develop effective interventions for this population.

CONCLUSIONS

The results of this study suggest that there is a correlation between exposure to ACE and an increased tendency to experience depression in college students. These findings are consistent with previous research that has also found a link between childhood trauma and mental health outcomes, particularly depression, among students (Li et al., 2022). Longitudinal studies have also shown that ACE can have a lasting impact on an individual's mental health, particularly their risk for depressive symptoms. For example, a study conducted in Indonesia with 419 college students found a significant positive relationship between ACE and depression (Salma et al., 2019). Another recent study conducted by Paramita & Faradiba (2020) reported that ACE was positively correlated

with symptoms of depression and anxiety, with many participants reporting exposure to emotional abuse, emotional neglect, and physical abuse. Moreover, ACE was found to have an impact on reducing physical and mental health and lowering the quality of life and well-being of university students (Davies et al., 2022). A descriptive study conducted with 409 college students also found a significant correlation between high ACE scores and increased rates of depression, anxiety, and stress (Hedrick et al., 2021). Further research conducted in Indonesia using the Indonesia Global Early Adolescent Study, which analyzed data from 4684 participants in three provinces, found that ACE was associated with depression in early adulthood (Mustikaningtyas et al., 2022). Recent studies have also reported that college students who have experienced ACE are more likely to experience depressive symptoms and suicidal ideation (Muwanguzi et al., 2023). These findings suggest that exposure to ACE can have a significant impact on the mental health outcomes of college students, particularly their risk for depression. As such, it is important for universities and mental health professionals to acknowledge the impact of childhood trauma on mental health and provide appropriate support and interventions for affected individuals. Further research is needed to better understand the mechanisms underlying the relationship between ACE and depression in college students and to develop effective interventions for this population.

Trauma is a significant factor that can impact the mental health of students. However, it is important to note that there are numerous factors that can affect the health condition of students. Therefore, it is imperative for various parties to pay attention to the mental well-being of students by providing mental health support services. This will help to empower students and promote their overall well-being. During the developmental phase of their lives, students require more attention in terms of mental health care. The university or faculty can facilitate this process by providing various support programs, including peer counseling, student counseling facilities, and other supporting facilities. These programs can help students to cope with any mental health issues that they may be experiencing and support their overall development. It is crucial to note this finding and provide access to mental health support services for students in the future. Students should have access to resources that promote mental well-being and support their development. By doing so, we can ensure that students have the right to be mentally healthy and lead successful lives. In conclusion, students' mental health is a crucial aspect of their overall well-being, and trauma is just one factor that can affect it. By providing mental health support services, universities, and faculties can empower students and promote their overall development. It is essential to note this finding to ensure that students have access to the resources they need to be mentally healthy and successful in life.

LIMITATION & FURTHER RESEARCH

The main objective of this study was to examine the association between Adverse Childhood Experiences (ACE) and the tendency of depression in students. Previous research has also reported a strong scientific link between ACE and depression. The current study has further consolidated the previous findings and has also revealed a positive correlation between ACE and depression (Honkalampi et al., 2020; Iob & Steptoe, 2019; Satinsky et al., 2021; Tsehay et al., 2020). Moreover, the current study has extended the current knowledge base by examining a student population in Indonesia. However, the study is limited in its ability to fully explain the gender-based differences in ACE exposure and depression levels. Similarly, the study could not adequately explain the differences in ACE exposure and depression across different age groups. Therefore, future research should be conducted to examine these differences comprehensively. In doing so, it would be beneficial to design more specific research questions that target these differences and use a more diverse and representative sample of the population.

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