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Examining Adolescent Resilience Through MBSA-CR+

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ABSTRACT: *This research investigates the effectiveness of an MBSA-CR8 intervention on enhancing adolescent resilience in Indonesia. Pretest and post-test analyses indicate a significant reduction in stress levels and substantial improvements in resilience and mindfulness following the intervention. The regression analysis underscores the central role of resilience in predicting positive outcomes, emphasizing its impact on their resilience. These findings align with existing research, highlighting the need to address resilience challenges among Indonesian adolescents. The study contributes valuable insights, suggesting that interventions fostering resilience can effectively mitigate stress and enhance overall well-being. This research provides actionable guidance for educators and policymakers seeking to support the psychological health of adolescents in educational settings, especially during challenging circumstances such as the pandemic.*

KEY WORDS: overextension, overregularisation, overimitation, overconceptualisation.

INTRODUCTION

The adolescent period is a transitional phase in the human lifespan that bridges childhood and adulthood (Hurlock, 2012). Pubertal development occurs between the ages of 12 and 21, with ages 12 to 15 representing early adolescence, 15 to 18 as mid-adolescence, and 18 to 21 as late adolescence (Monks, 2009). Good communication skills and self-regulation are crucial for adolescents, aligning with one of the developmental tasks related to social adjustment. The younger generation must be able to express their opinions and ideas openly and firmly without losing confidence. In reality, the behavior of the younger generation does not always meet expectations. Faced with a problem, many teenagers give up and take shortcuts.

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Adolescents are constantly confronted with various events or issues that evoke physical or

psychological reactions, or a combination of both. Different individuals react differently to events. Some passively accept them, while others actively resist. The multitude of issues faced by adolescents requires active intervention. This is essential for an individual to remain consistent and not easily influenced by unfavorable circumstances. Assertive individuals consistently find themselves in positive and confident states, secure, stable, strong, or determined. Aggressive adolescents can say "no" to negative and unwanted things. They can express their emotions appropriately without being aggressive or indulgent.

According to Ungar (2008), resilience is the ability that enables an individual to endure and thrive in difficult circumstances. Resilience can also be defined as the ability to successfully overcome changes and difficulties. In other words, resilience is the ability to bounce back and continue life after a fall (Wagnild, 1993). Two factors influence an individual's resilience: threat factors and protective factors.

Threats are events or life experiences related to increased problematic behavior. Threats can come from the adolescent themselves, their family, and society, serving as early predictors of adverse outcomes, vulnerabilities, incapacitating variables, or vectors causing problematic behavior (Kaplan, 1999). Threats are the first mediators that can lead to problematic or maladaptive behavior. Some previous studies have found that threat factors impacting negatively on a child's healthy development include negative life experiences such as abuse, violence, persecution, lack of parental attention, etc., and minority status (Masten, 1998). The accumulation of these risks throughout a child or adolescent's life can lead to negative outcomes, including illicit drug use, violent behavior, poor academic performance, dropout, teen pregnancy, and adolescent delinquency that can manifest as mental and emotional disorders (Fergus, 2005).

In contrast to threats, protective factors are elements that help protect adolescents from threats (Masten, 1998). Protective factors tend to reduce the chances of adolescents engaging in negative behaviors and can enhance positive adolescent behavior. Protective factors are divided into two areas: internal protective factors and external protective factors. Internal protective factors may originate from the adolescent themselves, while external protective factors come from outside the individual and are reflected in the form and quality of relationships within and outside the family (C., 2000). External protective factors include family, school, peer relationships, and community, as well as adolescents' participation in activities both inside and outside the home.

The following statements describe factors influencing resilience, including impulse control, emotion regulation, optimism, cause-and-effect analysis, self-efficacy, empathy, and a sense of achievement (Reivich, 2002). This study investigates internal factors such as emotion regulation and optimism in resilience. The current external factor is family support. Emotional control refers to an individual's ability to remain calm under pressure. Those with resilience and endurance use well-developed skills to control their emotions, attention, and behavior. Individuals who cannot regulate their emotions regularly experience negative emotions such as being easily offended, anxious, and having difficulty maintaining relationships. The ability to self-regulate is crucial for building close relationships with others and maintaining physical health. The emotional regulation aspect is outlined by Thompson (2011) as emotional monitoring, emotional assessment, and emotional modification. Emotional monitoring refers

to the ability to understand and comprehend all internal processes of an individual, including basic emotions, thoughts, and actions. Furthermore, emotional assessment is an individual's ability to manage and balance positive and negative emotions, especially negative emotions such as sadness, anger, and disappointment. Emotional modification is an individual's ability to entirely change their emotions to strive to express the appropriate emotions when in emotional states such as sadness, despair, or anger (Thompson, 2011). This opinion can be summarized as emotional regulation being an individual's effort to cope with negative or positive emotions that can influence behavior.

The research by Maharani and (Shintia, 2021) indicates that students in Jakarta's secondary school institutions experience a decline in resilience among a total of 388 (77.6%) respondents. This study is also supported by the fact that as many as 58 (86.6%) adolescents in a school in Jambi City have low resilience (Mawarti & Mutmainnah, 2020). Another study shows that student resilience in a Sukoharjo high school only reaches 55% (Kustiaverawati, 2021). Based on observations made at the beginning of the 2020 pandemic, researchers found several issues related to resilience among adolescent students in SMP/SMA/SMK in Skoharjo Regency. These issues include a decrease in learning motivation marked by a reluctance to pay attention to lessons during online learning. Increased stress, anxiety, and uncontrolled emotions became apparent. Becoming irritated over trivial matters. Sadness due to too many school tasks, manifested in behaviors such as complaining about too much work, easily feeling tired, sleeping more than engaging in activities at home, and procrastinating on completed tasks. Feeling bored because all activities are at home and unable to meet friends in person.

Efforts to improve adolescent resilience can be supported by researching factors influencing adolescent resilience. Resilience research in Indonesia is still relatively new. Based on some previous studies, it is evident that victims of natural disasters (Volia, 2007), drug users (Fergus, 2005), and children with physical limitations or serious illnesses (Alriksson-Schmidt, 2007) can measure an individual's health resilience in facing difficulties. Additionally, resilience studies can be conducted on a group of people in normative situations. In this case, resilience is seen as a personal investment that may be effective when individuals face difficulties.

Previous research on the independent variable mindfulness is the same as the variable in the researcher's study. However, there is a component that the researcher will add, introducing mindfulness-based cognitive behavior therapy (CBT) by developing an online application (MBSA-8 CR) to maintain present awareness, accept reality with an open, tolerant attitude, non-judgmental, and to reduce avoidance behavior based on experience, alleviate anxiety and fear, and enhance resilience skills for adolescents in Indonesia-Timor Leste. Also, Hidayatullah's research (2011) on therapy applications with Lovaas method-based interactive multimedia. Acknowledged as the most effective method, utilizing information technology, and developing multimedia applications can create entertaining and functional tools with flexibility in use. Therefore, this research aims to meet these needs by studying mindfulness training with cognitive behavior therapy (CBT) developed with an online application. Several previous studies on the resilience dependent variable are similar to the research the researcher intends to conduct. The difference in Nurdian & Anwar's study (2014) lies in the use of counseling services, research subjects, and research design. This study used group counseling services, with research subjects being physically disabled or paralyzed students, and the research design employed a one-group pre-test-post-test design. The difference with the

research the researcher intends to conduct lies in the intervention service, where this study employs the development of the Mindfulness-based CBT app (MBSA-8 CR) intervention on skills with research subjects being adolescents in Indonesia.

METHODS

This study will adopt a quantitative approach, specifically a pre-experimental one-group design, where only one group will receive the treatment. The design of the Mindfulness-Based CBT App (MBSA-CR8) will be disseminated to junior high and high school students in grades 7-12 in East Java who have already established a Memorandum of Agreement (MoA) with the Faculty of Education of Surabaya State University (FIP Unesa).

Mindfulness Training Design

At this stage, the training is designed to test the MBSA-8 CR application and provide adolescents with a strong understanding of the benefits of mindfulness exercises. This is done to enhance resilience skills, especially in facing the pandemic era, shifting old perspectives, and activating new ones, positioning resilience as a lifestyle model. The researcher, as the instructor, will emphasize to adolescents via online Zoom sessions that the competencies learned can be applied in every aspect of their lives, whether at home, school, or during socializing with peers. The training will take place every weekend for a month, with a frequency of approximately twice a week, and a duration of 8 hours per session (from 09:00 to 17:00 with a one-hour break for lunch).

This trial will provide intervention through the MBSA-8 CR application, accompanied by experts in the fields of mindfulness and hypnotherapy. The study utilizes a CBT intervention method combined with mindfulness and hypnotherapy, particularly for adolescents experiencing psychological trauma.

Data analysis techniques

The chosen data analysis techniques align with the quantitative nature of the study and the pre-experimental one-group design. The analysis will primarily focus on evaluating the effectiveness of the Mindfulness-Based CBT App (MBSA-CR8) intervention on adolescents' resilience. (1) Descriptive statistics will be employed to provide a clear summary of the main features of the dataset. Measures such as mean, median, and standard deviation will be calculated to describe the central tendency and variability of the data. (2) A pretest-posttest comparison will be conducted to assess any changes in the resilience levels of adolescents before and after the intervention. Paired-samples t-tests or non-parametric alternatives will be applied, depending on the distribution of the data. (3) Regression test. These technical analysis methods will be integrated to provide a robust evaluation of the impact of the Mindfulness-Based CBT App (MBSA-CR8) intervention on adolescent resilience, offering valuable insights for both research and practical applications.

RESULT AND DISCUSSION

Penelitian ini melibatkan 159 siswa usia 11-19 tahun berjenis kelamin laki-laki (n=68) dan

perempuan (n=91). Adapun sebaran usianya diantaranya usia 11 tahun (n=1), usia 12 tahun (n=28), usia 13 tahun (n=48), usia 14 tahun (n=54), usia 15 tahun (n=25), usia 16 tahun (n=2), usia 17 tahun (n=1). Semua partisipan mengerjakan angket tingkatan stress, resiliensi, dan mindfulness, via google form yang akan digunakan sebagai instrumen pretest dan post test. Berikut adalah hasil pretest per indikator yang diukur.

Tabel 1. Descriptive Statistics Pretest

	N	Minimum	Maximum	Mean	Std. Deviation
Stress level	159	23	78	54,86	13,412
Resilience level	159	5	25	17,08	3,761
Mindfulness level	159	13	52	32,74	8,517

The presented descriptive statistics in Table 1 offer valuable insights into the initial conditions of the 159 participants across stress level, resilience level, and mindfulness level. The stress levels, ranging from 23 to 78, exhibit a moderate average of 54.86 (SD = 13.412). This suggests a baseline moderate level of stress among the participants. The spread, as indicated by the standard deviation, signifies some variability in stress experiences within the group. Participants demonstrate a resilience level ranging from 5 to 25, with an average of 17.08 (SD = 3.761). This points to a moderate baseline resilience level, implying a varied but generally balanced capacity to cope with stress. The standard deviation suggests some diversity in resilience levels among the participants. The mindfulness levels, spanning from 13 to 52, show an average of 32.74 (SD = 8.517). This signifies a moderate baseline mindfulness level within the group, while the standard deviation indicates some dispersion in mindfulness practices among participants.

Tabel 2. Descriptive Statistics Post test

	N	Minimum	Maximum	Mean	Std. Deviation
Stress level	159	13	74	37,73	16,177
Resilience level	159	14	25	22,81	1,995
Mindfulness level	159	35	52	46,29	2,941

The descriptive statistics in Table 2 provide a comprehensive overview of the post-test results for stress level, resilience level, and mindfulness level among the 159 participants. Post-test stress levels range from 13 to 74, with a mean of 37.73 (SD = 16.177). The average stress level has significantly decreased compared to the pretest, indicating a notable reduction in stress among participants. However, the standard deviation suggests some variability in stress reduction outcomes. Participants' post-test resilience levels range from 14 to 25, with a mean of 22.81 (SD = 1.995). The average resilience level has increased from the pretest, reflecting a positive impact of the intervention on participants' ability to cope with stressors. The narrow standard deviation suggests a more consistent improvement in resilience among participants. Post-test mindfulness levels vary from 35 to 52, with a mean of 46.29 (SD = 2.941). The average mindfulness level has notably increased compared to the pretest, indicating a substantial enhancement in participants' mindfulness practices. The relatively low standard

deviation suggests a consistent improvement in mindfulness among participants. In summary, the descriptive statistics for the post-test results reveal a positive impact of the intervention on stress reduction, resilience enhancement, and mindfulness improvement among the participants. The reduced variability in resilience and mindfulness outcomes suggests a more uniform positive response to the intervention across the participant group.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,436[a]	,190	,175	1,813

a. Predictors: (Constant), Mindfulness, Stress level, Resilience

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	119,669	3	39,890	12,140	,000[b]
	Residual	509,287	155	3,286		
	Total	628,956	158			

a. Dependent Variable: resilience post test result

b. Predictors: (Constant), Mindfulness, Stress level, Resilience

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	18,421	,915		20,144	,000
	Stress level	,004	,011	,028	,367	,714
	Resilience	,219	,041	,413	5,306	,000
	Mindfulness	,013	,019	,054	,655	,513

a. Dependent Variable: resilience post test result

The regression model explores the relationship between the dependent variable resilience post test result and the predictors (Constant), Mindfulness, Stress level pre, and Resilience. The model summary indicates 19% of the variability in the dependent variable (resilience post test result) is explained by the predictors. After adjusting for the number of predictors, the adjusted R Square remains at 17%, suggesting a reasonable fit of the model. The standard error of the estimate is 1.813, representing the average amount that actual scores may deviate from predicted scores. The analysis of variance (ANOVA) assesses a significance level of 0.000 ($p < 0.05$). These results suggest that the regression model significantly predicts the dependent variable (resilience post test result). The coefficients represent the contribution of each predictor to the dependent variable. With a value of 18.421, it indicates the expected value of

resilience post test result when all predictors are zero. The small coefficient (0.004) and non-significant p-value (0.714) suggest stress level pre has a minimal impact on resilience post test result. The coefficient (0.219) and significant p-value (0.000) indicate a positive and substantial impact of resilience on resilience post test result. The coefficient (0.013) and non-significant p-value (0.513) suggest a minimal impact of mindfulness on resilience post test result. Overall, the regression model is statistically significant, suggesting that the combined predictors significantly predict resilience post test result. Resilience stands out as a robust predictor, positively influencing resilience post test result. However, stress level and mindfulness on pretest show minimal or non-significant impacts on resilience post test result in this context.

The research, as indicated by the regression analysis, sheds further light on these resilience challenges among adolescents, underscores the crucial role of resilience, with the variable showing a significant positive impact on the dependent variable (resilience). This aligns with the observed issues in Sukoharjo Regency during the 2020 pandemic, where a decline in learning motivation, increased stress, anxiety, and uncontrolled emotions were evident. The regression results affirm that bolstering resilience can be a key factor in addressing these challenges and fostering positive outcomes for adolescent well-being.

CONCLUSION

In conclusion, the research conducted has focused on exploring the effect of intervention using MBSA-CR8+ on stress, resilience, and mindfulness level among adolescents in Indonesia. The analysis of pretest and post-test results revealed a significant reduction in stress levels and notable improvements in resilience and mindfulness following the intervention. The regression analysis highlighted the pivotal role of resilience in predicting the observed outcomes, emphasizing its positive impact on the adolescents resilience. These findings align with and contribute to existing research, showcasing the importance of addressing resilience challenges among adolescents in Indonesian schools. The research suggests that interventions emphasizing resilience-building strategies can effectively mitigate stress and enhance overall well-being among students. This study provides valuable insights for educators, policymakers, and practitioners aiming to support the psychological health of adolescents in educational settings, particularly during challenging circumstances such as the pandemic.

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