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The Effectiveness of "Kancani": An REBT-Based Web Application on Junior High Students' Subjective Well-Being

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Abstract. The high prevalence of mental health issues among Indonesian adolescent students signifies persistently low levels of subjective well-being. Junior high school students tend to engage in negative thinking and experience a decline in positive feelings, contributing to mental health issues, as well as low life satisfaction. To address this, enhancing socio-emotional abilities such as emotion regulation, especially in dealing with irrational thoughts as the root of the problem, becomes crucial. This research aims to evaluate the effectiveness of the "Kancani" web app, which implements Rational-Emotive Behavior Therapy (REBT)-based interventions on the subjective well-being of junior high school adolescents. A quasi-experimental one-group pretest-posttest design was employed with 22 junior high school participants aged 12-15 who received the intervention for 2 weeks. The research instruments used were a 25-item Subjective Well-Being scale measuring positive affect (a = 0.861), negative affect (a = 0.861), and life satisfaction (a = 0.828). Data were tested using the paired samples t-test technique. Data were analyzed using paired samples t-test showed that the Kancani web app, with REBT-based interventions, effectively increased the subjective well-being of junior high school students, particularly in the aspects of positive affect and life satisfaction (p = 0.004 < 0.05), although not significantly in reducing negative affect (p = 0.104 > 0.05). Nevertheless, the improvement in the subjective well-being of students after the intervention is still reflected in the descriptive analysis of the mean differences, indicating an increase in positive affect and life satisfaction, as well as a decrease in negative affect.

Keywords: Adolescents; junior high school; REBT; subjective well-being; web application.

INTRODUCTION

Adolescence, from 10-19 years old, is a phase where individuals experience significant changes and transitions (WHO, 2019). Adolescents experience drastic changes in psychological, cognitive, social, sexual, and moral aspects, which are influenced by factors such as puberty, the search for identity, and the development of autonomy (Gaete, 2015). Various transformations influence and change teenagers' thinking patterns, emotional development, decision-making abilities, and social interactions with their environment (Santrock, 2018; Peterle, 2022). Conditions of emotional fluctuation and behavioral changes in adolescents are often the focus of attention and concern from parents and schools, underscoring the importance of providing appropriate social

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emotional skills for adolescents (Valizadeh, 2018; Kusuma et al., 2021). Relationships with peers and others around adolescents are essential to development (Beck, 2006; Santrock, 2018).

Unfortunately, various transitions that occur during adolescence can be the root of the problem of low subjective well-being of adolescents. Subjective well-being (SWB) is an individual's assessment of happiness and life satisfaction (American Psychological Association, n.d.), which can be seen from their various mental problems. In the Indonesian context, in 2018, more than 19 million teenagers experienced emotional disorders, and more than 12 million experienced depression (Kementrian Kesehatan Republik Indonesia, 2021). Findings from the Indonesia-National Mental Health Survey (2022) revealed that 15.5 million adolescents reported experiencing mental health problems, with anxiety disorders being the most prevalent (26.7%). The increase in the mental health burden on adolescents has become increasingly visible during the pandemic, causing 4.6% of Indonesian adolescents to report increased feelings of anxiety (Center for Reproductive Health, 2022). These statistics reflect the serious mental health problems faced by Indonesian teenagers and illustrate their low level of well-being.

The poor quality of adolescent welfare is also reflected in the prevalence of the phenomenon of self-harm, where 20.21% of Indonesian adolescents are reported to have committed self-harm (Faradiba et al., 2021). Incidents that occurred in 2023, such as the "barcode trend" or the act of cutting arms, reported that 76 students in Magetan and 50 junior high school students in North Bengkulu had incision marks on their arms, which were associated with life's burdens such as family or romantic problems (Kompas TV, 2022; Zulfikar, 2023). Research suggests that a significant number of adolescents perceive self-harm as the only viable coping mechanism for managing life stress (Bailey et al., 2017). Acts of self-harm are often triggered by burdens (school exams, family conflicts, etc.) and teenagers' lack of ability to manage emotions (Andover & Morris, 2014), reflecting the low quality of their mental well-being (Le et al., 2023). The problem of low individual subjective well-being emphasizes the importance of targeted interventions to improve the well-being of the adolescent age group.

Compared to childhood, adolescence shows a relatively lower quality of subjective well-being (Liu et al., 2016; Singh et al., 2015). Junior high school adolescents (those in grade 7, 8 and 9) often experience a drastic decline in positive feelings (Ronen et al., 2016). Previous research highlights that junior high school adolescents tend to have negative thought patterns compared to other levels of education (Shackman, 2016), which then leads to anxiety and depression (Young et al., 2019), which indicates relatively lower subjective well-being. Subjective well-being is an individual's evaluation of feelings of happiness and satisfaction with the quality of life they live (APA, n.d.), which is characterized by the dominance of positive affect over negative affect and a positive evaluation of life (Diener, 2009; Dolan et al., 2017). Adolescents with strong self-regulation skills exhibit higher levels of subjective well-being (Kraiss et al., 2020). This finding suggests that interventions targeting self-regulation development may be beneficial in promoting positive mental health outcomes (Cicchetti et al., 1995).

To improve the quality of adolescents' subjective well-being, WHO (2019) emphasized the importance of providing education regarding social-emotional abilities and ensuring easy access to mental health services. Adolescents need accurate information and learning opportunities to develop emotional regulation skills, especially in school and community environments that provide support (UNICEF, n.d.). Adolescents who have difficulty managing their emotions well are at risk of experiencing anxiety disorders, depression, self-harming behavior, and even thoughts of suicide (Pedrini et al., 2021). Considering that the ability to regulate emotions is correlated with the level of subjective well-being in adolescents (Rahayu, 2020; Pratistsi & Rini, 2016; Balzarotti et al., 2016),

Indonesian adolescents require education on social-emotional skills that are easy to comprehend, enabling them to develop improved regulatory abilities and enhance their well-being.

Several psychological approaches, including rational-emotive behavior therapy (REBT), are often used to improve subjective well-being. Rational Emotive Behavior Therapy (REBT) has emerged as a potentially more effective approach for adolescents experiencing emotional problems compared to cognitive-behavioral therapy (CBT) (David et al., 2018). This advantage may stem from REBT's focus on correcting irrational beliefs associated with negative thoughts and feelings about life experiences (Bernard et al., 2020). The REBT approach emphasizes debating and replacing irrational thoughts with more rational ones (Ellis, 1994). REBT, which focuses more on evaluative beliefs as the root of the problem, is effective in adolescents with anxiety (Schenk, 2020), helping adolescents to be more tolerant of new challenges (Popa & Predatu, 2019). The ability to replace irrational beliefs with rational ones enables individuals to reduce anxiety, establishing rational beliefs as a protective factor against mental health issues and supporting overall well-being (Oltean and David, 2018; Balkis and Duru, 2019). REBT-based interventions delivered to adolescents through video media have demonstrated effectiveness in reducing depressive symptoms (Iftene et al., 2015; Păsărelu, 2018), addressing anxiety in Indonesian adolescents (Syah, 2020), and enhancing selfesteem (Selvia & Siregar, 2023; Hasibuan & Wulandari, 2015).

Internet-based digital media can serve as an effective tool for educating adolescents about mental health issues and preventing more serious mental health problems. As adolescents value privacy and anonymity when discussing personal issues (Garrido et al., 2019), leveraging internet-based digital media presents an effective solution to address this need. The fact that teenagers aged 13-18 are the group most actively accessing the Internet (Association of Indonesian Internet Service Providers, 2022) also supports the effectiveness of this approach. Several suggestions from parents (who have children aged 11-15 years) and various professional health workers in Indonesia regarding providing psychoeducation to increase mental health literacy are: 1) presenting intervention content in animation or cartoon format involving quizzes, 2) using a which involves elements of gamification, and 3) utilizes technology to provide interventions with easy access for teenagers (Brooks et al., 2021). This type of intervention is effective in reducing symptoms of depression and anxiety in adolescents (Välimäki et al., 2017; Gladstone et al., 2020; Pasarelu et al., 2021). Providing intervention content using the REBT approach via digital media is highly accepted by adolescents (12-16 years). It can be used for preventive intervention against various symptoms of mental health problems (Pasarelu et al., 2021).

The REBT intervention program delivered via digital media has been proven to be successful in overcoming mental health problems in adolescents (Păsărelu et al., 2021). However, internet-based media with a REBT approach specifically aimed at overcoming the mental health problems of Indonesian teenagers is still limited, and there are no digital media-based interventions. So far, research in Indonesia testing REBT-based interventions for adolescents has been conducted through various methods, including group counseling (Selvia & Siregar, 2023; Fauziah et al., 2020; Hadi, 2020; Imamah, 2022), individual counseling (Rahmawati, 2022; Nuritawati et al., 2022), and cyber-counseling via WhatsApp (Fakhriyani et al., 2022). Interventions to improve adolescents' subjective well-being often involve mindfulness programs (Primasari et al., 2016; Aulia et al., 2019), traditional mental health education (Izzah et al., 2020), and therapy (Hartato et al., 2018). While a previous study by Rahmadiana et al. (2018) utilized internet-based media as an intervention tool for addressing depression and anxiety, that intervention was targeted towards university students. To address the emotional needs of adolescents, a web-based application called "Kancani" was developed. Kancani aims to provide support for daily emotional experiences and

assist schools in facilitating social-emotional learning (SEL) among Indonesian teenagers. The application's features are designed to cultivate social-emotional skills, including self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (CASEL, 2015). Kancani also presents a series of REBT-based interventions through videos, quizzes, and reflective exercises to help teenagers develop emotional regulation skills, hoping to achieve psychological well-being.

There are still a limited number of studies in Indonesia examining the effectiveness of REBT-based digital media innovations in improving adolescents' subjective well-being. Seeing the complexity of the problems described above, this research was conducted to investigate the effectiveness of the Kancani web application based on the REBT approach on the subjective wellbeing of junior high school adolescent students.

METHOD

This research is quasi-experimental, where participants are grouped without a control group (Miller et al., 2020). The research variables involved include the level of subjective well-being as the dependent variable and the Kancani web application as the independent variable.

Table 1. Research Method

T1	X	T2
Pretest	Internet-based REBT intervention with Kancani	Posttest

This research was approved by the Health Research Ethics Committee of RSUD Dr. Moewardi (Number: 352/III/HREC/2023). The research design applied was a one-group pretestposttest design (Table 1), where treatment was given to one group only, and measurements were carried out before and after giving the intervention (Seniati et al., 2015).

The participants were selected using purposive sampling with the following inclusion criteria: 1) are active students at Junior High School (SMP) level at Lazuardi Al-Falah GCS Klaten and Lazuardi Kamila GCS Surakarta; 2) able to read and write fluently in Indonesian; 3) have access to the internet and a device (smartphone); 4) not actively participating in the delivery of other interventions (psychotherapy, medications, etc.); and 5) willing to follow the REBT-based intervention series in the Kancani web application to completion. The participants involved in this research were 22 active teenage students from SMP Lazuardi Al-Falah GCS Klaten and SMP Lazuardi Kamila GCS Surakarta.

Rational Emotive Behavior Therapy (REBT)-based intervention was delivered through an internet-based progressive web application (PWA) named "Kancani" (https://kancani.id). The intervention spanned two weeks, with participants instructed to complete a series of intervention tasks within the "Thoughts & Choices" module of the Kancani Exercise feature. Throughout the intervention period, participants were also allowed to utilize additional support features. Notably, all participants received REBT-based psychoeducational content consistently through the Kancani web application, regardless of the intervention setting or monitoring method that mention in Figure 1.

The experiment was conducted in collaboration with two schools: SMP Lazuardi Kamila (May 22nd to June 9th, 2023) and SMP Lazuardi Al-Falah Klaten (May 29th to June 14th, 2023). The setting and monitoring method for intervention completion differed between the schools. In SMP Lazuardi Kamila, participants completed the intervention series from their homes with

progress monitored through a WhatsApp group. In SMP Lazuardi Al-Falah Klaten, participants completed the intervention series under direct supervision of the researchers.

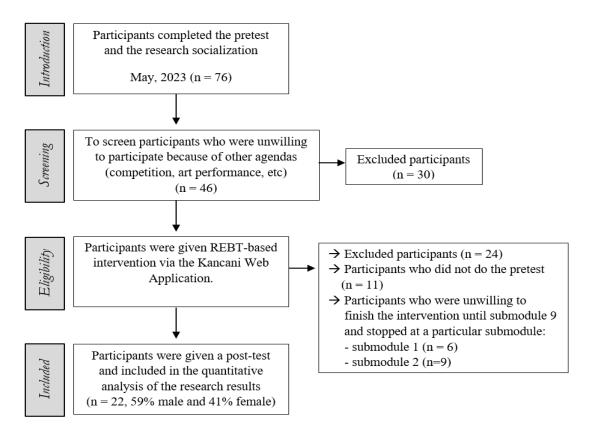


Figure 1. Research Sample Determination Diagram

"Kancani" is designed to help schools facilitate the social-emotional learning of their students. The "Kancani" features were developed to support the development of social-emotional competencies: self-awareness, self-management, social awareness, relationship skills, and the ability to make responsible decisions (CASEL, 2015). Through "Kancani," users can: 1) recognize, identify the cause and intensity, and express various daily emotions (Emotion Check-in, Mood in Pixels); 2) self-manage and reflect on their beliefs and feelings through reflection exercises and digital journals (Exercise and "KancaDiary"); 3) become more aware of the social environment in the virtual world and practice empathy through social media-like features ("KancaTime"); 4) hone relationship skills by providing support with positive language; and 5) gain knowledge through psychoeducational materials in the form of videos ("KancaVids") and articles ("KancaInfo").

The Kancani web application provides REBT interventions through the Exercise feature, the "Thoughts and Choices" module. It involves psychoeducational materials and reflective exercises to help teens change irrational thoughts to rational ones. The content aims to help teenagers understand: 1) Internalizing symptoms and emotional problems; 2) Anxiety, depression, and the importance of relaxation to reduce physical tension; 3) the ABCDE model (Activating Events, Beliefs, Consequences, Disputation, Effect) to differentiate irrational and rational beliefs, as well as the importance of this process as a solution to emotional problems; and 4) Challenging irrational beliefs and replacing them with more rational beliefs. Psychoeducational materials are presented through animated videos and infographics, and participants are encouraged to take quizzes and

reflective exercises every time they complete new information from the psychoeducational content.

The features within Kancani are designed to support emotion regulation by employing both emotive and cognitive techniques grounded in Rational Emotive Behavior Therapy (REBT). Cognitive techniques, such as those implemented in the modules available in the Exercise feature, utilize psychoeducation and reflective practice to facilitate cognitive restructuring (DiGiuseppe et al., 2013). The Check-in Emosi feature assists adolescents in identifying emotional triggers, thereby enhancing their emotion management abilities (Bernard et al., 2020). Emotive techniques, reinforced by the Check-in Emosi, KancaDiary, and KancaMusik features, promote the emotional modification of negative thoughts (Ugwuanyi et al., 2022). Research indicates that listening to music can effectively reduce negative emotions and foster positive emotions in adolescents (Chen, 2013), while games can serve as a distraction from negative emotions (Pallavicini et al., 2021).



Figure 2.Overview of Intervention Content and Supporting Features of the Kancani Web Application

REBT intervention is located in the "Thoughts and Choices" Module inside the Excercise feature (Figure 2), comprised of nine submodules: 1) Introduction: Program description and goals (videos and texts); 2) Emotion: Psychoeducation on problem internalization and kinds of emotion (videos, quiz, and reflection); 3) Anxiety & Depression: Identification of signs of anxiety and depression (videos, quiz, and reflection); 4) Relaxation: Relaxation and respiratory training (videos, quiz, and reflection); 5) Mindset: Identify, challenge, and change irrational beliefs with the ABCDE model (video, quiz, and reflection); 6) Overcome Negative Emotions: cope with irrational thoughts with STAR (infographics and reflection); 7) Problem-Solving: Steps on practical problem-solving (infographics and reflection); 8) Positive Emotion: Learn how to focus on positive emotions (infographics and reflection); 9) Manage Emotions Independently: material reviews, making first aid mental health kit (infographics and texts). Supporting features: Subjects were allowed to use REBT-based supportive features to develop their socio-emotional skills: 1) Check-in Emosi: Identify the intensity and causes of felt emotions; 2) KancaDiary: Digital diary to express emotions; 3) KancaMusik: Recommended music video compilations; 4) Kanca Virtual-Pet: Virtual animal-raising game for entertainment.

Adolescents' subjective well-being was assessed using the Subjective Well-being measure by Akhtar (2019), which measures positive and negative affect using the Positive Affect Negative Affect Schedule (PANAS; Watson et al., 1988) and life satisfaction using the Satisfaction with Life Scale (SWLS; Diener et al., 1985). These measures have been translated into Indonesian and comprise a total of 25 items. All scales in this study employed a Likert scale. The scale measuring affective dimensions (positive and negative affect; PANAS) utilized a Likert scale to assess the frequency of situations, with a range of 1=Almost Never, 2=Rarely, 3=Sometimes, 4=Often, and 5=Almost Always. In contrast, the scale measuring the cognitive dimension (life satisfaction; SWLS) employed a Likert scale to gauge individuals' agreement (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree).

The scale measuring negative and positive effects in this research has a Cronbach's Alpha reliability for a positive effect of 0.861 and a negative effect of 0.853 (Akhtar, 2019). Adolescent participants were asked to rate items based on how often they felt positive and negative effects during the past week. There are ten items to measure the positive effect and ten other items to measure the negative effect. Meanwhile, five items aim to measure individual life satisfaction, with a Cronbach's Alpha reliability of 0.828 (Akhtar, 2019). An individual's subjective well-being value is calculated by adding the positive affect score, subtracting the negative affect score, and adding the life satisfaction score (Afiatin et al., 2016).

Hypothesis testing was performed using parametric analysis techniques, as it is justified by the normal distribution of the data (p>0.05). The technique used was a paired sample t-test to evaluate the effectiveness of the Kancani web application with REBT-based interventions on the level of subjective well-being of junior high school adolescents. The paired samples t-test was conducted to test differences in pretest and post-test scores in the same group of participants (Kim, 2015). A hypothesis analysis was carried out using IBM SPSS Statistics version 27 for Mac. An effect size test with Cohen's d was also carried out to see how much influence the intervention provided had on the subjective well-being of junior high school teenagers.

RESULTS AND DISCUSSION

Based on the results of the answers from junior high school teenage participants in this study, descriptively, of the 22 total participants, there were 18 teenagers (81.82%) who experienced an increase in positive affect (Figure 3) and life satisfaction (Figure 4), and 12 teenagers (54.55%) who experienced a decrease in negative affect (Figure 5) after the intervention.

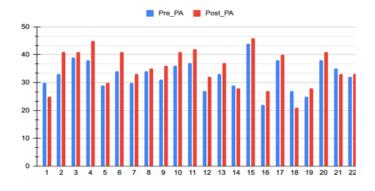


Figure 3.Comparison of Pretest and Post-test Positive Affect

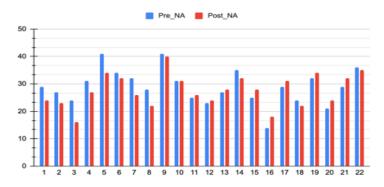


Figure 4.Comparison of Pretest and Post-test Negative Affect

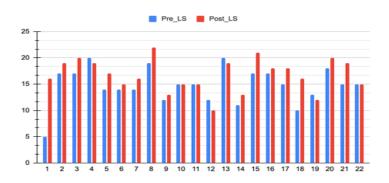


Figure 5.Comparison of Pretest and Post-test Life Satisfaction

Table 2.Paired Samples Statistics Test

		1			
Category	Pre-Post	Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_PA	32.7727	22	5.22751	1.11451
	Post_PA	35.2727	22	6.83953	1.45819
Pair 2	Pre_NA	29.0000	22	6.32456	1.34840
	Post_NA	27.6818	22	5.88288	1.25423
Pair 3	Pre_LS	14.7727	22	3.49056	0.74419
	Post_LS	16.7273	22	3.08887	0.65855

Descriptive statistical results from the t-test show the average pretest and post-test scores for the participants' positive affect, negative affect, and life satisfaction (Table 2). Analysis involving 22 participants showed differences in mean scores between the pretest and post-test for positive affect (35.27 > 32.77), negative affect (27.68 < 29.00), and life satisfaction (16.73 > 14.77). Descriptively, it can be seen that there are differences in the pretest and post-test scores for the subjective well-being of junior high school adolescent participants.

The paired samples t-test shows the analysis results for pairs of pretest and post-test scores on each aspect of subjective well-being (positive affect, negative affect, and life satisfaction). Positive affect (PA): Sig value. (2-tailed) For the positive affect aspect, the number t(21)=0.004; p=0.005. The absolute value of the calculated t(3.249) is greater than the t table (2.080). This indicates a significant difference between participants' pretest and post-test scores on the positive affect aspect of their subjective

well-being. Negative affect (NA): Sig value. (2-tailed) for the negative affect aspect shows t(21)=0.103; p=0.005) The calculated t's absolute value (1.703) also shows a smaller number than the t table value (2.080). So, it can be said that there is no significant difference between the participants' pretest and post-test scores on the negative affect aspect of their subjective well-being. Life satisfaction (LS): Sig value. (2-tailed) For the life satisfaction aspect, the number t(21)=0.004; p=0.005). Looking at the absolute value of the calculated t (3.251), which is also greater than the t table value (2.080), it can be said that there is a significant difference between the participant's pretest and post-test scores in the life satisfaction assessment aspect of their subjective well-being based on Table 3.

Table 3.Paired Samples Statistics Test (95% Confidence Interval of the Paired Differences)

Category	Pre-Post	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig (2-tailed)
Pair 1	Pre_PA - Post_PA	-2.50000	3.60885	0.76941	-4.10008	-0.89992	-3.249	21	0.004
Pair 2	Pre_NA - Post_NA	1.31818	3.63038	0.77400	-0.29144	2.92780	1.703	21	0.103
Pair 3	Pre_LS - Post_LS	-1.95455	2.81961	0.60114	-3.20469	-0.70440	-3.251	21	0.004

The magnitude of the influence of the "Kancani" web application on the subjective well-being of junior high school teenagers can be seen through the effect size test with Cohen's d, with the criteria 0.20=Small; 0.50=Medium; 0.80=Large (Lakens, 2013; Fritz et al., 2012). The following are the results of calculations using Cohen's d formula that mention on Table 4.

Table 4.Cohen's d Calculation Results for Effect Size

Aspects	Pretest Mean	Post-test Mean	Std. deviation between pretest and post-test	Cohen's d	Effect Size
Potisive Affect	32.7727	35.2727	3.60885	0.6927	Medium
Negative Affect	29.0000	27.6818	3.63038	0.3630	Small
Life Satisfaction	14.7727	16.7273	2.81961	0.6932	Medium

Based on the data analysis results, it can be concluded that the Kancani web application, which involves rational-emotive behavior therapy-based interventions (REBT), effectively improves the subjective well-being of junior high school teenagers, especially in terms of positive affect and assessments of their life satisfaction.

The results of data analysis from the t-test show that the "Kancani" web application involving REBT-based interventions is practical in increasing aspects of positive affect and life satisfaction of the subjective well-being of junior high school adolescents but is ineffective in reducing negative affect in adolescents. Overall, the results of this study show a significant influence of the REBT-based "Kacanani" web application on participants' subjective well-being, in line with previous research findings (Ede et al., 2023; Onyishi et al., 2021). The action-based REBT intervention was successful in improving the psychological and social well-being of children with low self-esteem, changing irrational beliefs through the ABCDEF model (with Functional emotions and behaviors (F)) (Ellis, 2000). The ability to replace irrational beliefs supports healthier negative feelings, such as

frustration, that boost productivity, even when reality does not match expectations. REBT is effective for a variety of mental health problems in diverse populations (David et al., 2005; O'Kelly & Collard, 2016). Integrating REBT principles in the school curriculum to prevent mental health problems and improve students' social and emotional well-being is highly recommended (Caruso et al., 2018).

The results of this research descriptively prove that the REBT intervention via the "Kancani" web application effectively increases the average value of positive affect, reduces negative affect, and increases individual life satisfaction. These findings are consistent with similar research by Păsărelu et al. (2021), which shows that REBT intervention through digital media can reduce levels of depression, anxiety, and negative thought patterns, as well as increase positive feelings. In this research, REBT has been proven to be effective in significantly improving the subjective well-being of adolescent students, especially in the aspects of positive affect and life satisfaction. This is also in line with several previous studies that prove that REBT can increase self-esteem in adolescents (Ede et al., 2023; Kaur et al., 2022), where self-esteem is a direct predictor of positive affect (Joshanloo, 2022). REBT has also been found to increase self- cceptance in adolescents (Sumarwiyah, 2023; DiGiuseppe et al., 2002), where self-acceptance is closely correlated with positive affect and life satisfaction (Bernard et al., 2020).

The non-significant decrease in negative affect can be explained by the main principle of REBT, which emphasizes unconditional self-acceptance (Ellis, 2003). Individuals with unconditional self-acceptance tend to have better subjective well-being (Armstrong, 2020). This is because selfacceptance is directly correlated with happiness and optimism (Oltean, 2019), which are part of positive affect and life satisfaction (Bernard et al., 2020). In other words, REBT emphasizes cognitive restructuring to increase an individual's positive affect and life satisfaction (David et al., 2018; Dryden, 2005). The complexity of the emotional problem can explain the effectiveness of REBT in reducing negative emotions, the individual's level of resistance to change, and other contextual factors (David et al., 2018). Thus, REBT targeting unconditional self-acceptance can increase adolescent's positive affect but does not automatically reduce their negative affect to the same extent because the scale used also measures positive and negative affect as separate and unrelated constructs (Tran, 2020).

The insignificant reduction in negative affect as part of the well-being of junior high school students can be influenced by several contextual factors. The research was conducted when students had almost completed all their assessment obligations (exams, projects, etc.) in the second semester of the 2022/2023 academic year. This could affect adolescents' acceptance of REBT-based intervention materials, with the context being less supportive of receiving new information ahead of the end of the school year holidays. Although descriptively, the average negative affect score of the participants decreased, it should be noted that this could also be influenced by anticipation of the holidays, which could be a factor causing reduced negative emotions (Ma, 2022). In previous research by Păsărelu et al. (2021), the intervention was carried out for six weeks with the participation of 15 teenagers who accessed the intervention platform independently. Therefore, the lack of significant reduction in negative affect scores in the current study may be related to the shorter intervention duration (2 weeks) compared with the previous study (6 weeks). The effectiveness of REBT appears to be more significant when the intervention is carried out over a more extended period (Gonzalez et al., 2004). However, the descriptive increase in subjective well-being in a short period provides a positive indication of the use of REBT-based digital media to overcome adolescent mental health problems.

The main limitation of this study is the research design that did not include a control group and randomization, which could affect internal validity. The limited sample size also limits the

generalizability of the study results to the larger population and prevents subgroup analysis. Sample selection was based on participant's willingness to complete the intervention series, indicating the presence of self-selection bias (Khazaal et al., 2014). The lack of qualitative feedback also limits understanding of the benefits of Kancani on the subjective well-being felt by students. However, this research focuses on testing the efficacy of REBT-based interventions via internet-based media (web application "Kancani") on junior high school students. This research provides empirical evidence that REBT-based intervention through Kancani can be an approach that supports improving the subjective well-being of junior high school students. Future research could consider increasing the sample size, including a control group, and investigating short- and long-term impacts (follow-up).

This research confirms that the REBT-based Kancani web application effectively improves student's subjective well-being. These results can be a practical guide in providing preventive interventions in adolescent populations, especially in educational settings, to prevent mental health problems and improve subjective well-being. The use of gamification elements in REBT digital interventions has proven to be more significant in changing the behavior of adolescents aged 10-16 years (David et al., 2021; Fleming et al., 2020). The involvement of game elements in digital media is recognized as more effective and capable of motivating adolescents to adopt behavioral changes (Dugas et al., 2020). Therefore, the suggestion for this or subsequent research is to develop digital-based interventions by including games in every stage of psychoeducation to prevent mental health problems and improve adolescents' holistic, subjective well-being (David et al., 2021; Fleming et al., 2020).

CONCLUSION

The Kancani web application, employing REBT-based interventions, demonstrated effectiveness in enhancing subjective well-being among junior high school students. This effect was particularly pronounced for positive affect and life satisfaction. T-tests revealed significant pretest and post-test score differences for these domains, indicating a moderate intervention effect. However, the impact on negative affect was not statistically significant and showed only a negligible influence. Interestingly, descriptive analyses indicated an increase in average scores for both positive affect and life satisfaction, accompanied by a decrease in negative affect scores. This suggests a potential for continued improvement in subjective well-being, even for the negative affect domain.

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