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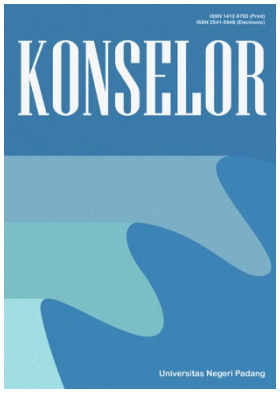

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A Pre-Experimental Study on The Use of Group Counseling with Self-Management Techniques to Reduce Gadget Addiction among High School Students

Alber Tigor Arifyanto, Erma Pratiwi Nufi♦, Dodi Priyatmo Silondae, La Ode Ahmad Haidir, & M. Ridwan Tahir

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Abstract: The high prevalence of gadget addiction among adolescents, driven by uncontrolled device usage, highlights the need for alternative intervention methods. Group counseling offers students the opportunity to share experiences, provide mutual support, and learn new skills within a structured setting. Self-management is an essential skill for adolescents to regulate their time, emotions, and habits. Integrating self-management techniques into counseling sessions provides students with practical tools to independently control their gadget use, offering benefits both in the present and for long-term well-being. This study aims to examine the effectiveness of group counseling employing self-management techniques in reducing gadget addiction among students at SMA Negeri 5 Kendari, Southeast Sulawesi, Indonesia. A pre-experimental approach with a one-group pretest-posttest design was used. The participants consisted of 430 students who completed a gadget addiction scale. A purposive sampling technique was applied to select 9 students with high gadget addiction scores. Group counseling sessions were conducted six times, with each session lasting 90 minutes. Gadget addiction data were collected using a pre-test during the first session and a post-test in the sixth session. The counseling sessions addressed increasing awareness of healthy gadget use, understanding the adverse effects of gadget addiction, practicing self-management techniques, evaluating progress, strengthening commitment to sustained self-regulation, and creating a follow-up action plan. The results showed a significant decrease in gadget addiction scores from an initial average (pre-test) of 134.44 (63.41%) to a post-test score of 105.88 (49.94%), reflecting a reduction of 28.55 points or 13.46%. Inferential statistical analysis using the Wilcoxon Signed Rank test with a significance level of $\alpha = 0.05$ yielded a P-value of 0.008. Since the P-value was less than α ($0.008 < 0.05$), the alternative hypothesis (Ha) was accepted, and the null hypothesis (Ho) was rejected. Therefore, it can be concluded that group counseling with self-management techniques is proven effective in reducing gadget addiction levels among students at SMA Negeri 5 Kendari.

Key Words: Gadget addiction; Group counseling; Self-management; Adolescents; Intervention effectiveness

INTRODUCTION

A gadget is a portable electronic device designed to facilitate access to information, communication, and entertainment, equipped with a user-friendly interface and increasingly advanced

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computing capabilities (Oulasvirta et al., 2012). Gadgets have evolved beyond mere communication tools; they have become devices that reshape social interactions, lifestyles, and even users' mediated identities (Ling, 2012). One distinguishing feature of gadgets compared to other electronic devices is their inherent "novelty," as they continuously introduce the latest technologies designed to make human life increasingly easy and practical.

Gadgets have become inseparable elements of modern life, especially among students. Their presence no longer functions solely as communication tools, but also as primary media for supporting learning processes. Through gadgets, students can easily access a wide range of learning resources and educational materials in real-time, anytime and anywhere, without the limitations of space and time. Moreover, various educational applications, e-learning platforms, and interactive features available on gadgets help enhance students' engagement in learning, broaden their horizons, and assist in developing 21st-century skills such as critical thinking, collaboration, and digital literacy. In other words, gadgets play a crucial role in driving the transformation of education towards a more modern, flexible, and technology-responsive system. Previous studies have demonstrated both positive and negative impacts of gadget use. On the positive side, Raymon (2014) noted that gadgets can increase reading frequency through easy and affordable access to information, thereby playing a significant role in promoting literacy and educational access. Additionally, research by Calderón-Garrido et al. (2022), Guerrero et al., (2016), and Jacob & Issac, (2007) reported that gadget use can positively enhance students' motivation, participation, learning opportunities, communication, and positive student-teacher relationships, while also supporting academic flexibility. Similarly, Wang et al., (2023) found a positive correlation between students' gadget use and their academic performance. Conversely, excessive gadget use can result in several negative effects, such as poor sleep quality (Sunday et al., 2021), academic burnout and procrastination (Hong et al., 2021), reduced social relationship quality (Primack et al., 2017), decreased concentration, and declining academic performance (McCoy, 2013). Overuse of gadgets negatively affects students' academic achievements, mental health, and social interactions (Kuss & Griffiths, 2017; J. L. Wang et al., 2015).

The use of gadgets typically begins at an exploratory stage, where individuals use them for basic needs such as communication, entertainment, or information access. At this stage, users still maintain good control over the frequency and duration of use. However, over time, when gadgets are increasingly used for leisure or as an escape from stress, users may enter a stage of excessive use. According to Kuss et al., (2013), this phase is marked by the use of gadgets for mood modification, one of the early indicators of behavioral addiction. If left unchecked, this excessive use can develop into psychological dependence, characterized by symptoms such as tolerance (needing more time to feel satisfied), withdrawal when not using gadgets, and loss of control. Lin et al., (2016) emphasized that gadget addiction occurs when individuals can no longer regulate their usage despite recognizing its negative impacts on social, academic, or emotional life. This stage is marked by disruptions in daily functioning and increased dominance of gadgets in daily activities. Thus, gadget addiction is a gradual process, beginning from functional use and progressing to compulsive and maladaptive behaviors.

Lin et al., (2016) identified twelve symptoms of gadget addiction: (1) using gadgets longer than intended, (2) failing to reduce or stop use, (3) feeling anxious, angry, or sad when unable to use gadgets, (4) using gadgets to avoid problems or negative moods, (5) losing interest in other activities, (6) continuing excessive gadget use despite knowing its negative effects, (7) lying to others about usage time, (8) using gadgets to escape feelings of guilt, (9) neglecting work or study responsibilities, (10) preferring gadgets over social interactions, (11) experiencing conflicts due to gadget use, and (12) feeling unhappy without gadgets. In addition to these twelve symptoms, gadget addiction is also indicated by four functional impairments: (1) social impairment, (2) academic or work-related problems, (3) disruption of time and daily activities, and (4) psychological issues. A person is considered addicted to gadgets if they meet at least three of the twelve symptoms, at least two of the four functional impairments, and if the condition persists for a minimum of three months. Quantitatively, gadget addiction can be measured by daily usage duration. For adolescents aged 6–18 years, gadget use is considered normal if under two hours per day. Usage of 2–3 hours per day may lead to increased anxiety and reduced concentration (Twenge & Campbell, 2018), 4–6 hours per day is categorized as at risk, and more than 8 hours per day is classified as addiction. The prevalence of gadget addiction in Indonesia, as

reported in the State of Mobile 2024 survey released by Data.ai (Nano, 2024), reveals that Indonesians spend an average of 6.05 hours daily on gadgets in 2023 the highest rate globally.

Among senior high school students, gadget addiction particularly affects learning. Students addicted to gadgets often lose valuable study time due to excessive device use. Previous research has shown that excessive gadget use adversely affects students, leading to addiction. A study by Simsir-Gokalp & Akyurek, (2024) found a correlation between gadget addiction and low self-control. Self-control is a vital prerequisite for effective self-management a personal process that can be trained and developed. Gadget addiction among students largely results from low self-control, particularly in time management, emotional regulation, and productivity.

A study by Wang et al., (2024) concluded that: (1) physical activity positively influences subsequent self-control, (2) physical activity negatively affects subsequent gadget addiction, (3) self-control negatively affects subsequent gadget addiction, and (4) physical activity indirectly influences gadget addiction through increased self-control. These findings emphasize the essential role of self-control in reducing gadget addiction and the potential of physical activities to indirectly lessen addiction by enhancing self-control. Similarly, studies by Hoong (2021) and Jiang & Zhao (2016) reported a significant negative relationship between excessive gadget use and self-control due to users' limited capacity for self-management. In the field of guidance and counseling, efforts to reduce gadget addiction can be addressed through responsive services, particularly group counseling combined with self-management techniques. Group counseling is a structured intervention led by a school counselor to assist small groups of students (typically 5–10 participants) in addressing academic, social, emotional, or behavioral issues through collaborative discussions and therapeutic activities (ASCA, 2019; Corey, 2016). The goals of group counseling include skill development, emotional support, behavioral problem prevention, behavioral change, and academic improvement. Self-management is an individual's ability to independently monitor, evaluate, and regulate behavior, cognition, and emotions to achieve specific goals (Bandura, 1991). The primary components of self-management, according to Kanfer & Gaelick, (1991), include self-monitoring, goal setting, self-evaluation, and self-reinforcement. Self-monitoring, in particular, has been empirically proven as one of the most effective techniques for habit change (Michie et al., 2009).

Integrating group counseling with self-management techniques within the ASCA National Model framework (ASCA), 2019) creates a comprehensive approach that combines social support and personal empowerment to achieve sustainable behavior change. Through a structured group environment, school counselors can facilitate self-monitoring, goal setting, and peer accountability, while group dynamics strengthen participants' self-efficacy through observational learning and collaborative feedback. A study by Dinda Asmidar & Syargawi, (2025) emphasized that group counseling incorporating self-management techniques focuses on self-discovery and addressing individual problems. This technique centers on developing personal potential, self-acceptance, deeper self-understanding, enhancing self-control skills, and fostering group member relationships. Self-management techniques can be applied within group counseling to assist students in managing their addictive behaviors. These techniques emphasize individuals' abilities to regulate, control, and modify behavior through self-awareness, goal setting, and effective time management. By implementing self-management strategies, students can learn to limit gadget use and allocate their time more productively for activities such as studying and socializing. Natasya Husnurrida & Ilhamuddin (2024) demonstrated that group counseling services using self-management techniques effectively reduced excessive TikTok use among adolescents. A study conducted at MAN 1 Jombang involving seven students over seven sessions revealed a statistically significant decrease in TikTok usage after the intervention. Thus, self-management techniques can assist students in better controlling excessive app use, offering valuable applications within school guidance and counseling programs.

METHOD

The fundamental framework and main stages of this pre-experimental study followed a one-group pre-test, treatment, and post-test design, as proposed by Sugiyono (2023). This design represents a straightforward approach to examining the preliminary effects of an intervention without a control

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group. The procedure began with administering a pre-test to assess the participants' baseline condition regarding gadget addiction. Following the pre-test, participants received the treatment (X), which consisted of a structured intervention in the form of group counseling sessions incorporating self-management techniques, conducted over six meetings. After completing the treatment, a post-test was administered to evaluate changes in the gadget addiction variable following the intervention. Both the pre-test and post-test utilized the Gadget Addiction Scale (SAS) questionnaire to measure the level of gadget addiction before and after the intervention. The treatment itself consisted of six group counseling sessions applying self-management techniques, specifically goal setting and self-monitoring strategies. The post-test, using the same instrument as the pre-test, was conducted after the final session to compare the participants' gadget addiction scores and assess the effectiveness of the intervention.

Participants

The population in this study refers to the generalization area encompassing research objects or subjects possessing specific qualities and characteristics as defined by the researcher for the purpose of drawing conclusions (Sugiyono, 2023). The target population of this study consisted of Grade XI students at SMA Negeri 5 Kendari in the 2024/2025 academic year, totaling 430 students. The sample was selected using purposive sampling, targeting students identified as having high to very high levels of gadget addiction based on predetermined criteria (Creswell & Clark, 2018). The participant selection process for the trial sample followed these criteria: (a) students actively enrolled at SMA Negeri 5 Kendari; (b) students categorized as having high or very high levels of gadget addiction; and (c) students who expressed willingness to voluntarily participate in group counseling sessions using self-management techniques.

The sample is a subset of the population selected as the research subjects. It must adequately represent the population, and thus its selection should be based on appropriate methods and relevant considerations (Sugiyono, 2023). This study employed a purposive sampling technique, which involves selecting samples based on specific criteria aligned with the research objectives. The criteria in this study included students identified as having high and low levels of gadget addiction, determined through a preliminary screening questionnaire. A total of nine students from class XI.7 of SMA Negeri 5 Kendari were selected, consisting of seven students in the high-addiction category and two in the low-addiction category. The researcher specifically chose eleventh-grade students based on interviews with the school counselor, who reported that issues related to social interaction were particularly prevalent within this cohort.

The sample represents a subset of the population chosen to serve as research subjects. The selection aimed to ensure that the sample accurately represented the population, with sampling conducted based on appropriate methods and relevant considerations (Sugiyono, 2023). This study employed purposive sampling, a method of selecting participants based on specific criteria aligned with the research objectives. The criteria included students with high levels of gadget addiction identified through a screening questionnaire. The final sample consisted of nine students with high gadget addiction scores, all from Grade XI.7 at SMA Negeri 5 Kendari. The decision to focus on Grade XI students was based on preliminary interviews with the school's Guidance and Counseling teacher, who reported that issues related to gadget addiction were most prevalent within this grade level.

Instrumentation

This quantitative study employed a measurement instrument in the form of a gadget addiction scale developed by the researcher, based on the identification of five key indicators of gadget addiction. The scale aimed to measure the level of gadget addiction among students. The indicators were adapted from Kwon et al., (2013), as follows: 1. Daily-life disturbance: including difficulties concentrating, wrist and neck pain, and sleep disturbances. 2. Withdrawal: including feelings of anxiety, impatience, dependency on proximity to a gadget, and difficulty in ceasing its use. 3. Cyberspace-oriented relationship: a tendency to feel closer to online acquaintances than to people in real life, excessive feelings of loss when not using a gadget, and compulsive checking behavior. 4. Overuse: characterized by uncontrolled gadget usage and a preference for seeking information via gadgets rather than from

people nearby. 5. Tolerance: attempts to limit gadget use that consistently fail. Respondents were asked to complete the gadget addiction scale, indicating their current condition using a four-point Likert scale: Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). Before its application, the scale, initially consisting of 80 items, underwent validity and reliability testing using two primary approaches: item-total correlation analysis and expert judgment. The item-total correlation test examined the extent to which each item correlated with the total score, where items with a correlation coefficient of ≥ 0.30 (Sugiyono, 2023) were considered valid and retained. Reliability was assessed using Cronbach's Alpha coefficient, with a minimum threshold of 0.70 to ensure internal consistency. Additionally, expert judgment involved three psychology experts who evaluated the instrument for theoretical construct alignment, language clarity, and contextual relevance to the study. As a result of these assessments, 27 items were deemed invalid, leaving 53 valid items with reliability values exceeding Cronbach's Alpha of 0.70, confirming the instrument's reliability and suitability for measuring gadget addiction among students.

Procedures

The research procedures began with identifying the research problem, selecting research subjects, and determining the appropriate group counseling approach and techniques. To identify the research problem, the researcher conducted interviews with a school counselor, followed by the distribution of a screening questionnaire (gadget addiction scale) to 430 Grade XI students. The results were then analyzed to identify students with high levels of gadget addiction, ultimately selecting 9 students who met the criteria. These students subsequently participated in group counseling sessions using the self-management technique. The group counseling was conducted once a week over six sessions (a total of six weeks), with each session lasting 90 minutes.

We acted as the counselor during these sessions. The implementation of the self-management group counseling consisted of three stages: 1. Group Formation, including trust-building among group members and psychoeducation. 2. Core Intervention, which comprised four main activities: (a) goal setting, (b) self-monitoring implementation, (c) stimulus control provision, and (d) implementation of behavioral intentions. 3. Evaluation and Termination, involving an assessment of changes achieved and the development of follow-up action plans. The data analysis for this study employed inferential statistics, aligned with the researcher's hypothesis.

The effectiveness of the treatment was evaluated by comparing the pre-test and post-test scores using the N-Gain (Normalized Gain) analysis. The N-Gain method measures the effectiveness of an intervention by examining the extent of change in students' gadget addiction scores after participating in the group counseling sessions relative to their initial condition. This approach helps determine how effective a service method or intervention is in improving students' knowledge, attitudes, or behavior. The N-Gain formula, originally developed by Hake (1998) for assessing learning outcomes in physics education, was adapted for use in this study to evaluate the success of self-management group counseling interventions. The interpretation of N-Gain formula shown in Table 1:

$$\text{N-Gain} = \frac{Post\ test\ Score - Pre\ test\ Score}{Maximum\ score - Pre\ test}$$

Table 1. N-gain ranges, categories and interpretation of intervention results

N-gain Range	Category	Interpretation
≥ 0.70	High	Intervention is highly effective in reducing gadget addiction.
0.30 – 0.69	Moderate	Intervention is quite effective in reducing gadget addiction..
< 0.30	Low	The intervention was ineffective or did not significantly reduce gadget addiction.

Inferential statistical analysis is a method used to analyze sample data and subsequently draw conclusions that can be generalized to a larger population (Sugiyono, 2023). The purpose of this analysis is to test the research hypothesis, namely, to determine whether there is a significant difference in students' gadget addiction levels before and after the intervention. Since the number of research participants was ≤ 30, it was assumed that the data might not be normally distributed. Therefore, the

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appropriate statistical technique applied in this study was the Wilcoxon Signed Rank Test, which aims to identify differences in students' gadget addiction scores before (pre-test) and after (post-test) the treatment within the same group. The Wilcoxon Signed Rank Test is suitable for small sample sizes ($n \leq 25$) with a significance level of 0.05.

If the Asymp. Sig. (2-tailed) value is less than 0.05, it indicates a significant effect; conversely, if it exceeds 0.05, it indicates no significant effect. Accordingly, an Asymp. Sig. (2-tailed) value of < 0.001 or < 0.005 suggests a statistically significant effect of the self-management group counseling intervention in reducing gadget addiction levels among students at SMA Negeri 5 Kendari.

RESULTS

The results of the study indicate a significant difference in data before and after the implementation of the self-management group counseling intervention. As shown in Table 2, the average pre-test score of the students was 134.44, with a percentage of 63.41%, which falls into the high category. In contrast, the average post-test score after the treatment was 105.88, with a percentage of 49.94%, classified in the low category. Therefore, it can be concluded that there was a decrease in the average gadget addiction score among students after receiving the treatment, with a difference of 28.55 points or 13.46%. Based on Table 2, the student who showed the highest reduction in gadget addiction score was CAP, with a decrease of 57 points or 26.66%. Meanwhile, the smallest reduction was recorded by TM, with a score decrease of 2 points or 0.94%.

Table 2. Comparison of Students' Pre-Test Scores and Post-Test Scores

No	Subject	*Pre-test*			*Post-test*			Decrease	
		Total	(%)	Category	Total	(%)	Category	Total	(%)
1	MLS	140	66,03	High	86	40,56	Very Low	54	25,47
2	NDA	148	69,81	High	127	59,90	Low	21	9,90
3	NZF	144	67,92	High	125	58,96	Low	19	8,96
4	NF	173	81,60	Very High	153	72,16	High	20	9,43
5	CAP	134	63,20	High	77	36,32	Very Low	57	26,88
6	TM	140	66,03	High	138	65,09	High	2	0,94
7	DB	134	63,20	High	87	41,03	Very Low	47	22,16
8	ALA	97	45,75	Low	64	30,18	Very Low	33	15,56
9	KS	100	47,16	Low	96	45,28	Low	4	1,88
Average		134,44	63,41	High	105,88	49,94	Low	28,55	13,46
Maximum		173	81,60		153	72,16		57	26,88
Minimum		97	45,75		64	30,18		2	0,94

The results of the inferential analysis using the Wilcoxon Signed Rank Test presented data on the mean rank values and the number of ranks across three categories: Negative Ranks, Positive Ranks, and Ties. Negative Ranks indicate that the scores in the second group (post-test) were lower than those in the first group (pre-test). Positive Ranks indicate that the scores in the second group were higher than in the first group, while Ties denote that the pre-test and post-test scores were identical. The symbol N represents the number of samples in each category, Mean Rank refers to the average rank within each category, and Sum of Ranks indicates the total sum of ranks in the respective category.

Table 3. Data on Mean, Standard Deviation, Minimum, and Maximum

Ranks				
		N	Mean Rank	Sum of Ranks
PostTest - PreTest	Negative Ranks	9[a]	5.00	45.00
	Positive Ranks	0[b]	.00	.00
	Ties	0[c]		
	Total	9		

a. PostTest < PreTest
b. PostTest > PreTest
c. PostTest = PreTest

Table 3 shown that all 9 students tested fell into the category of Negative Ranks, indicating that their post-test scores were lower than their pre-test scores after the treatment. Furthermore, based on the results of the analysis using the Wilcoxon Signed Rank test, a Z value of -2.666 was obtained with a significance value (Asymp. Sig. 2-tailed) of 0.008, which is below the significance threshold of $\alpha = 0.05$. Therefore, the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected. These findings indicate that the implementation of group counseling using a self-management technique is effective in reducing the level of gadget addiction among students at SMA Negeri 5 Kendari.

DISCUSSION

This study aimed to analyze the impact of group counseling using the self-management technique through the Wilcoxon Signed-Rank test. This analytical method was chosen to examine the significance of differences in students' gadget addiction levels between the initial measurement (pre-test) and the final measurement (post-test). Prior to conducting the main analysis, a normality test was performed on the pre-test and post-test data. The results of the normality test indicated that the data were not normally distributed, thus not meeting the assumptions for parametric analysis. The findings of this study demonstrated that group counseling services applying the self-management technique were proven to be effective in reducing students' gadget addiction levels. This was evidenced by the data analysis results, which showed a 13.46% decrease in students' scores after receiving the intervention. Before the intervention, the average gadget addiction score was 134.44 with an average percentage of 63.41%, categorized as high. However, after the intervention through group counseling with self-management techniques, the average score decreased to 105.88 with an average percentage of 49.94%, categorized as low. The effectiveness of this intervention was further supported by the results of the Wilcoxon Signed-Rank test, where the Asymp. Sig. (2-tailed) value was 0.008, lower than the significance level of 0.05. This indicates that the provision of the group counseling services with a self-management approach was significantly effective in reducing gadget addiction among students. This finding is consistent with the assertion of Sugiyono (2023), which states that a study is considered successful or effective if it addresses the research problem and demonstrates a significant effect or change resulting from the treatment provided.

The term gadget addiction refers to a dependency behavior toward mobile devices that can lead to social issues, such as social withdrawal and difficulties in performing daily activities, as well as being classified as an impulse control disorder (Kwon et al., 2013). More specifically, gadget addiction is defined as the excessive use of mobile phones, regarded as a form of non-substance impulse control disorder, with similarities to pathological gambling, as described by Karuniawan and Cahyanti (Isni & Anugrah, 2021). According to Kwon et al., (2013), there are five primary dimensions of gadget addiction: (1) Disturbance of Daily Life, including concentration difficulties, vision problems, wrist and neck pain, and sleep disturbances; (2) Withdrawal, involving anxiety and inability to distance oneself from the device; (3) Virtual Relationship Orientation, referring to a stronger sense of connection with virtual friends than with those in real life; (4) Overuse, where individuals rely excessively on gadgets for information-seeking; and (5) Tolerance, which refers to the failure to control gadget use despite attempts to reduce it.

The application of group counseling with a self-management technique has proven effective in helping students independently monitor and regulate their gadget use. In each counseling session, activities such as goal setting, daily habit recording, self-reflection, and regular evaluations of gadget use provided structure and direction in shaping adaptive behaviors. According to Zimmerman (2005), self-management enables individuals to internalize self-control strategies through stages of self-monitoring, self-evaluation, and self-reinforcement. Within a group context, this process is reinforced by peer interactions and support, serving as sources of social motivation and normative reinforcement. Moreover, a study by Thomas J & Tipsord (2013) emphasized that supportive peer relationships in group intervention settings can enhance self-efficacy and accelerate the internalization of behavior regulation. In addition, research by Chen et al. (2020) showed that group-based approaches integrating systematic self-management techniques can reduce excessive gadget use and increase awareness of the negative impacts of digital addiction. Therefore, integrating self-management techniques into group counseling

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not only provides space for the development of individual self-control but also creates a supportive social ecosystem that fosters sustainable behavioral change among adolescents.

Group counseling with self-management techniques has a strong theoretical foundation within the framework of cognitive-behavioral theory and Bandura's social learning theory. The self-management technique involves cognitive processes such as goal setting, self-monitoring, and self-reinforcement, which align with the core principles of cognitive-behavioral theory emphasizing that behavioral change can be achieved through cognitive restructuring and the habituation of adaptive behaviors (Kazdin, 2017). In a group context, this approach is further reinforced by Bandura (1991) social learning theory, which posits that individuals learn not only through direct experience but also by observing the behaviors of others (vicarious learning). When students participate in group counseling sessions, they not only apply self-regulation techniques but also observe the self-management strategies employed by their peers. This observational process creates social modeling that strengthens individual motivation and belief in their own capabilities (self-efficacy) to modify behavior, particularly in managing gadget use. As explained by Schunk & DiBenedetto (2020), observing peers' successful behavioral regulation can enhance self-efficacy and accelerate the internalization of behavioral change.

The findings of this study are supported by the results of a study conducted by Cahayani (2021), entitled Effectiveness of Group Guidance with Self-Management Technique to Minimize Online Game Addiction in Class X Students of SMAN 2 Banjarmasin, which demonstrated that group counseling services incorporating self-management techniques were effective in reducing online game addiction among students. In a cultural context, adolescents tend to adjust their digital behaviors to align with their social groups to maintain status, identity, and connectedness, making peer norms a dominant factor in shaping media habits. Peer conformity has emerged as one of the primary predictors of media-related behaviors, where adolescents often regulate the duration and type of gadget use based on peer group behavior to preserve social acceptance and identity (Choukas-Bradley et al., 2020). Additionally, family structure and parenting practices play crucial roles; lax or inconsistent parental supervision increases the risk of compulsive gadget use (Khurana et al., 2015). Simultaneously, exposure to social media culture emphasizing instant gratification and self-image further intensifies adolescents' emotional attachment to gadgets. Therefore, the content and approach of group counseling based on self-management techniques must be adapted to the local socio-cultural context to ensure relevance and acceptance by participants. Contextually tailored counseling not only enhances the effectiveness of interventions but also strengthens participants' identification with the issues and solutions offered (Sue & Sue, 2016). Furthermore, the culture of social media that prioritizes self-image and instant connectivity actively shapes the digital behavioral norms of Indonesian adolescents. Considering these factors, it is essential for school counselors to adapt the content and approach of counseling interventions to be culturally relevant. Culturally sensitive counseling has been proven to be more effective in facilitating behavioral change as it improves participant engagement and fosters a stronger sense of connectedness (Bernal et al., 2012).

School counselors play a strategic role in implementing group counseling services based on self-management as an effective, efficient, and cost-effective intervention to address various student behavioral problems, including gadget addiction. This approach does not require expensive external tools or resources, as its implementation can be directly facilitated by school counselors by utilizing group dynamics as a medium for psychosocial intervention. Beyond targeting specific behavioral changes, group counseling using self-management techniques also contributes to the development of students' life skills, such as time management, emotional regulation, as well as social cooperation and interaction. According to Gresham (2015), self-management training within school settings has been shown to enhance students' self-control competencies and foster the development of prosocial behaviors. Additionally, the group dynamics in counseling provide opportunities for deep social learning through discussion, peer support, and collective reflection, which strengthen the effectiveness of self-management techniques (Ricardo et al., 2016). Therefore, this service not only addresses behavioral intervention needs but also supports character education programs and the integrated development of 21st-century skills within the school environment.

Study Limitations

This study has several limitations that should be acknowledged. First, the small sample size and the scope of research limited to a single educational setting constrain the generalizability of the findings to a broader population. Nevertheless, the self-management technique in group counseling has the potential to be applied not only for addressing gadget addiction but also for other behavioral issues. Second, although the data met normality assumptions, the use of a self-report method carries the risk of response bias, such as participants' tendency to provide socially desirable answers. Third, the measurement of gadget addiction relied solely on a psychological scale, which may not accurately capture the actual behavioral changes experienced by students in their daily lives. Therefore, future research would benefit from incorporating observational data and longitudinal designs to assess sustained behavioral outcomes over time.

Additionally, this study did not explore the qualitative aspects of the intervention in depth, resulting in a limited understanding of participants' subjective experiences and the contextual factors influencing the intervention's effectiveness. Fourth, the research design did not involve a control group, making it difficult to confirm whether the observed changes were exclusively attributable to the self-management-based group counseling intervention rather than external or confounding factors. Fifth, outcome measurements were conducted only in the short term, immediately after the intervention, which does not provide insights into the long-term effectiveness of the intervention in reducing gadget addiction behaviors. Lastly, the data were entirely based on students' subjective reports through questionnaires, which may contain perceptual biases or tendencies to provide responses aligned with perceived expectations.

Therefore, caution should be exercised in generalizing these findings. Future research is recommended to adopt experimental designs with control groups, incorporate long-term follow-up measurements, and utilize data triangulation through both quantitative and qualitative methods to produce more comprehensive and valid conclusions. Furthermore, subsequent studies should employ a wider variety of approaches, techniques, and methodologies while involving a larger and more diverse sample of participants from various socio-economic, gender, cultural, and educational backgrounds to enhance the external validity and contextual relevance of the findings.

CONCLUSION

The findings of this study demonstrate that group counseling interventions utilizing self-management techniques are significantly effective in reducing the level of gadget addiction among students. The pre-intervention mean addiction score was recorded at 134.44, with an average percentage of 63.41%, categorized as high. Following the implementation of group counseling with a self-management approach, the mean score decreased to 105.88, with an average percentage of 49.94%, classified as low. The reduction of 13.46% between the pre-test and post-test scores indicates the intervention’s effectiveness in mitigating the intensity of gadget addiction. In addition to the quantitative outcomes, the intervention also produced positive psychosocial impacts. Participants exhibited improvements in concentration, reduced anxiety levels, greater emotional stability, and enhanced quality of social interactions in real-life contexts. Furthermore, students demonstrated an increased ability to seek social support and reduce dependence on digital devices, reflecting improved self-regulation skills.

Nevertheless, this study has several limitations that warrant consideration, including a relatively small sample size, the short duration of the intervention, and a reliance on quantitative data through gadget addiction scales without accompanying in-depth qualitative exploration. Overall, these findings reinforce the empirical evidence supporting the effectiveness of self-management-based group counseling as a viable intervention approach. It is recommended for use by educational practitioners, particularly school counselors, in addressing gadget addiction and other relevant adolescent behavioral issues.

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