Application of group counseling based on cognitive behavioral therapy to students with a tendency to online game addiction in Malang City

Penerapan konseling kelompok berbasis terapi kognitif perilaku terhadap pelajar dengan kecenderungan adiksi *game online* di Kota Malang

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ABSTRACT

The prevalence of students with a tendency to online game addiction is increasing, but studies on effective intervention to overcome the problem are still very limited. In this article, the influence of group counseling based on cognitive behavioral therapy on the tendency of online game addiction in students is discussed. The method in this study uses a quasi experiment, with a one group pre-test post-test design. The sampling technique used was purposive sampling. The sample in this study is ten students in Malang City. The reliability test of the online game addiction tendency instrument used alpha cronbach with a coefficient value of 0.9. The assumption test uses normality and homogeneity tests. Test the hypothesis using a paired sample t-test using SPSS 20 for Windows. The results showed that there was a difference between the pre-test and post-test scores with a value of p = 0.00, so it can be concluded that there was a significant change in the level of the subject's online game addiction tendency between before and after being treated. The mean pre-test score was higher than the mean post-test score, so it can be concluded that the students showed a decrease in the tendency of online game addiction after being given psychological intervention in the form of group counseling based on cognitive behavioral therapy.

ABSTRACT

Prevalensi siswa dengan kecenderungan adiksi *game online* semakin meningkat, namun kajian tentang tindakan penanganan yang efektif untuk mengatasi masalah tersebut masih sangat terbatas. Dalam artikel ini dibahas pengaruh konseling kelompok berbasis terapi kognitif perilaku terhadap kecenderungan adiksi *game online* pada pelajar. Metode penelitian ini menggunakan rancangan kuasi-eksperimental *one group pre-test post-test.* Teknik pengambilan sampel yang digunakan adalah *purposive sampling* dengan tujuan memilih partisipan yang memiliki karakteristik spesifik yang relevan dengan tujuan penelitian. Sampel pada penelitian ini adalah sepuluh orang pelajar di Kota Malang. Uji reliabilitas instrumen kecenderungan adiksi *game online* menggunakan *alpha cronbach* dengan nilai koefisien sebesar 0,9.. Uji asumsi menggunakan uji normalitas dan homogenitas. Uji hipotesis dengan menggunakan *paired sample t-test* dengan bantuan SPSS 20 for Windows. Hasilnya diketahui terdapat perbedaan antara skor *pre-test* dan *post-test* dengan nilai p = 0,00 maka dapat disimpulkan bahwa terdapat perubahan yang signifikan pada tingkat kecenderungan adiksi *game online* subyek antara sebelum diberi perlakuan dan setelah diberikan perlakuan. *Mean* skor *pre-test* lebih tinggi dibandingkan *mean* skor *post-test* maka dapat disimpulkan bahwa para pelajar menunjukkan penurunan kecenderungan adiksi *game online* setelah diberikan intervensi psikologis berupa konseling kelompok berbasis terapi kognitif perilaku.

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1. INTRODUCTION

Online gaming has become a highly engaging form of entertainment for many, ranging from children to adults (Narullita & Yuniati, 2020), including students. Online games are typically played during breaks or free time; however, according to preliminary interviews conducted by the researcher with several students, online gaming can take place at any time, even during classroom lessons.

According to data from Lin (2018), the global gaming population amounts to 2.6 billion people. This statistic highlights the vast number of gamers, from children to adults. There are numerous types of online games played, ranging from simulation games to MMORPGs. MMORPGs are particularly popular, especially among males (Pamungkas, Mardhiyah, & Puspasari, 2019). MMORPGs are multiplayer games where players can interact with more than a hundred other players. Common MMORPGs include games like Mobile Legends, Free Fire, and Dota 2. MMORPGs are highly favored due to the freedom they offer players to develop their characters and the progression system that encourages players to level up their characters to the maximum.

Games have long been recognized as a source of enjoyable entertainment for users. This activity can be conducted through various devices, including computers, laptops, and smartphones. However, the tendency to develop an addiction to gaming has increased alongside technological advancements. The adrenaline rush generated during gameplay often drives individuals to continuously engage in this activity. Addiction, in this context, can be understood as a consequence of excessive consumption and a lack of self-control (Albery & Munafo, 2008). This addiction is not limited to substances like cigarettes or alcohol but can also occur in habits that provide satisfaction and pleasure, such as gadget use. Gadget addiction includes various forms of dependency, such as addiction to social media and gaming.

There are several aspects that indicate a habit can be classified as an addiction, such as the domination of thoughts, behaviors, and emotions towards something, the tendency to repeat the habit, and problems related to schoolwork. The tendency toward online gaming addiction becomes more apparent during face-to-face learning. During breaks, a significant number of students are observed playing online games (Salimah & Zukdi, 2020). This behavior is also evident among students in Malang City, where they start by taking out their gadgets and then proceed to play games.

Griffith (2005) has formulated a set of diagnostic criteria that comprehensively describe addictive behavior. These criteria include: 1) Salience, where the activity becomes the central focus of the individual's life, dominating their thoughts, feelings, and behavior. 2) Tolerance, which refers to the increased frequency and intensity of the activity over time. 3) Withdrawal, the unpleasant or distressing feelings that arise when attempting to stop or reduce the activity suddenly or forcefully. 4) Conflict, referring to the tension or disagreement that arises between the addicted individual and those around them, or even internal conflict experienced by the

addict. 5) Relapse, the tendency to return to addictive behavior after a period of cessation or recovery. 6) Mood modification, which refers to the subjective changes in mood or feelings resulting from engagement in the activity. 7) Problems, which refers to the various issues that arise from engaging in the activity excessively. Excessive addictive activities can lead to negative impacts in various aspects of an individual's life, including social, academic, and personal problems. These issues can disrupt daily functioning and overall well-being.

Addiction according to King and Delfabbro (2019) is divided into internal and external factors. Internal factors include: Gender, males generally have the highest risk of experiencing online game addiction; Age, adolescents are most vulnerable to addiction to gaming; Personal characteristics, online game addiction is caused by personality traits with high impulsivity, aggression, social anxiety, attention deficits, and low self-esteem; Comorbidity, caused by other accompanying disorders, such as mood disorders; Self-regulation and decision-making, someone with poor self-regulation and decision-making may tend to exhibit online game addiction behavior; Self-esteem and self-efficacy, low self-esteem and lack of self-efficacy make someone vulnerable to self-criticism and have difficulty in building and maintaining friendships; Educational achievement or few other interests, a lack of fulfillment in existing life and a lack of varied activities can result in a greater risk related to online game addiction.

External factors include: Peer influence, peers have a significant impact on an individual's gaming behavior; Gaming environment, an individual's extensive access to online games tends to involve them more frequently and for longer periods; Family influence, including parent-child relationships, parental restrictions, monitoring of electronic device use, marital status, and social status; Relational trauma, online gaming provides self-satisfaction such as relationships and emotional security, which can lead to avoidance or conflicts with friends and peers. Factors related to the game: Type of game, games with internet connectivity and game genres have a tendency to cause addiction; Game features, features such as sound, graphics, background, settings, game duration, game levels, and progress levels tend to maintain or increase a person's interest in playing.

Excessive and repetitive game use can create problematic behavior patterns. These patterns can affect an individual's behavior and thinking (DSM V, 2008). Excessive and repetitive online gaming can lead to tendencies of internet gaming disorder. Similar to substance addiction, individuals experiencing this disorder often experience anxiety or anger when their access to games is hindered. The emotions that arise can be influenced by game outcomes, such as winning or losing. Although online games were initially designed as a form of entertainment and relaxation, excessive use can trigger addiction (Huda, 2021).

The issue of online game addiction became more apparent during face-to-face learning after the implementation of online learning during the Covid-19 pandemic. Students were found playing games both in and out of the classroom. Some played in groups, while others played alone. It was not uncommon to find students playing online games during lessons.

In some schools, there were quite a few cases of students stealing money for gaming purposes (Griffith, 2010). Cases of money theft for online gaming also occurred in Malang City. Based on an interview with a teacher at a vocational school in Malang City, student funds meant for tuition fees were not delivered to the school. When questioned, the student admitted that the tuition money was used to top up Mobile Legend diamonds. According to Narullita and Yuniati (2020), a lack of control from parents and teachers is a trigger for these issues. Another problem is the lack of self-control as the ability to regulate one's own behavior and desires, whereas students' obligations during lessons are to learn according to the material provided by the teacher.

One of the handling efforts that can be done is by using the Cognitive-Behavioral Therapy (CBT) approach. According to Zees et al. (2020), cognitive-behavioral psychotherapy has an impact on reducing online game addiction. Cognitive-behavioral therapy offers significant advantages compared to other therapeutic approaches in managing disorders such as game addiction. This therapy not only focuses on cognitive modification, which involves changing irrational thought patterns, but also includes altering maladaptive behaviors. Empirical research, such as that conducted by Narullita and Yuniati (2020), supports the effectiveness of cognitive-behavioral therapy and acceptance commitment therapy in reducing game addiction among adolescents. These findings are consistent with previous studies, which further reinforce the evidence of the benefits of cognitive-behavioral therapy in addressing various psychological disorders.

This view is supported by another study by Sari et al. (2020), which states that cognitive-behavioral therapy can reduce internet gaming disorder. The findings of Narullita and Yuniati (2020) support the effectiveness of cognitive-behavioral therapy in reducing online game addiction among adolescents. The study showed a significant decrease in the desire to play games, frequency of play, and an increase in adaptive behaviors after undergoing cognitive-behavioral therapy intervention. Similar findings were also shown by Zees et al. (2020), indicating that cognitive-behavioral therapy can address gadget addiction among adolescents.

Previous research has extensively discussed the impact of using psychotherapy approaches, but there has been less examination of the use of group counseling approaches in reducing tendencies toward online game addiction. This research aims to address this gap by packaging cognitive-behavioral therapy into a group counseling format. The study aims to analyze the use of group counseling methods based on cognitive-behavioral therapy to reduce online game addiction tendencies among students. Group counseling techniques are chosen as an alternative intervention that is more multi-directional; supported by group cohesion, cognitive-behavioral therapy can be more effective for students with tendencies toward online game addiction in Malang City. According to Zees et al. (2020), cognitive-behavioral therapy can modify cognition, which involves changing irrational thought patterns while

also addressing maladaptive behaviors. The hypothesis of this study is that group counseling based on cognitive-behavioral therapy influences the tendency of online game addiction among students in Malang City.

2.   METHODS

This study used a quasi-experimental research design of one group pretest-posttest design. This design is used to determine the effect of psychological intervention on the behavior of one group of subjects. The subjects of treatment in this study were students of grades X and XI from SMK "x" Malang City (classified school identity). In this study, group counseling based on cognitive behavioral therapy as the independent variable (X) and the tendency to online game addiction as the dependent variable (Y). The research design is illustrated in Table 1 as follows:

Table 1. Research Design One Group Pretest-Posttest Design

Pretest	Treatment	Posttest
O_1	⟶ X ⟶	O_2

This study involved 34 students from grades X and XI who are avid online gamers at SMK "X" in Malang City. From these 34 participating students, ten students with a high tendency for online game addiction were selected and treated. The criteria for research subjects include: 1) being an active student, 2) being fond of online gaming, 3) agreeing to treatment, as indicated by signing a consent form. The sampling technique used in this study is purposive sampling.

The research instruments used include an online game addiction tendency scale, constructed based on aspects from Griffith (2005), and a group counseling module based on cognitive-behavioral therapy, developed by the researcher based on the CBT concepts from Liese and Beck (2022). The online game addiction tendency scale initially consisted of 40 items, which were then subjected to expert testing and a trial with 33 participants. Subsequently, item analysis was performed using the product-moment correlation technique, resulting in 29 remaining items. The group counseling module based on cognitive-behavioral therapy was reviewed by 3 experts: 2 psychologists and 1 guidance counselor from SMK "X" in Malang City.

The cognitive-behavioral psychotherapy was conducted over 5 consecutive days. The treatment subjects in this study were labeled A, B, C, D, E, F, G, H, I, and J. The group counseling based on cognitive-behavioral therapy was carried out over 5 sessions with the following details:

1.   The first meeting or problem introduction. In this session, rapport building is conducted, the issue of online game addiction is introduced, and understanding of the online game

addiction experienced by group members is provided. The counselor also explains the rules to be followed during the group counseling sessions. The subjects in the study agreed to commit to attending all counseling sessions. This session also includes assigning tasks, such as creating a hierarchy of values for each subject and a homework assignment involving the recording of thoughts, feelings, and behavioral responses that arise when the desire to play online games occurs.

2. The second meeting or cognitive restructuring and evaluation. On this day, cognitive restructuring and evaluation sessions are compressed. This is done to prevent fatigue among the subjects and because the assigned tasks are still related. Activities in this session include exploring the awareness of all subjects regarding online game addiction and the formation and reinforcement of new thoughts. Tasks assigned during this session include an automatic thoughts worksheet and alternative thoughts record.

3. The third meeting, or behavior modification. In this session, new behaviors are established, such as engaging in alternative activities to online gaming, reinforcing new behaviors, and reducing the intensity of old behaviors or previous online gaming activities. Tasks assigned include a worksheet on positive behaviors

4. The fourth meeting, or behavior modification evaluation. This session involves evaluating the new behaviors formed in the previous meeting, reinforcing new behaviors, and reducing the intensity of old behaviors. The assignment for this session includes a group task to create an ABC diagram (Antecedents, Beliefs, and Consequences).

5. The fifth meeting, or termination. This final session involves evaluating the changes experienced over the previous 4 days and exploring alternative new activities. The assignment for this session is a group task to create a concept map of activities other than online gaming.

The provision of a scale to all participants also functions as a pre-test. From filling out this scale, a picture of students who are indicated to have a tendency to be addicted to online games is obtained. Ten students who are included in the high category will be given treatment in the form of cognitive behavioral psychotherapy. Then the post-test is given a few days after group counseling for 5 days. This study uses several assumption tests, including normality tests and homogeneity tests. Then, a paired sample t-test is used to test the research hypothesis using SPSS 20.0 for windows.

3. RESULTS AND DISCUSSION

RESULTS

The following is a comparative presentation of the online game addiction tendency scores of the subjects before and after being given treatment.

Table 2. Pre-test and Post-test Results of Online Game Addiction Tendency

Initial	Pre-test	Categories	Post-test	Categories
A	95	Very high	72	High
B	83	Very high	74	High
C	78	High	64	Medium
D	75	High	65	Medium
E	72	High	70	High
F	72	High	80	High
G	71	High	52	Low
H	71	High	68	Medium
I	69	Medium	62	Medium
J	68	Medium	69	Medium

Based on Table 2 above, there was a decrease in scores in 7 students. Then there were 2 students who experienced an increase in scores, and 1 student with a constant score. Hypothesis testing in this study used a paired sample t-test. This was done to determine the difference in the average or mean in the pre-test and post-test scores. The paired sample t-test was conducted using SPSS 20 for Windows. The following are the results of the paired sample t-test.

Table 3. Descriptive statistical results

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRETEST	75,40	10	8,208	2,596
	POSTEST	67,60	10	7,575	2,395

Based on Table 3, the number of subjects in the table shows 10 students. The mean result on the pre-test score is 75.40, while the post-test score is 67.60. The standard deviation calculation result on the pre-test score is 8.21, then on the post-test score is 7.57.

Table 4. Results of the difference test analysis

		Paired Differences					T	df	P
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	PRETEST – POSTEST	7,800	4,541	1,436	4,551	11,049	5,432	9	,000

Based on the calculations shown in Table 4 above, it can be seen that t = 5.432, then 5.432 > 2.262 or tcount > ttable. Then, the significance value obtained is 0.000 which is smaller than 0.05. It can be decided that the hypothesis is accepted. From these results, it can be said that there is a difference in the average score of the post-test and pre-test, so it can be concluded that there is a significant influence of group counseling based on cognitive behavioral therapy on the tendency of online game addiction in students.

DISCUSSION

Cognitive-behavioral therapy-based counseling is an intervention method focused on the cognitive and behavioral aspects of clients. The focus of this therapeutic approach is on changing maladaptive behaviors through modifying the client's thoughts (Grebb, Kaplan, Sadock, 2010). The procedures in cognitive-behavioral therapy involve six stages: 1) facilitator introduction, 2) group member introduction, 3) problem introduction and therapy model review, 4) skill presentation, 5) feedback, and 6) summary and review (Liese & Beck, 2022). Each day, therapy sessions lasted approximately 120 minutes.

The treatment, which involved cognitive-behavioral therapy-based group counseling, was found to affect online game addiction. This is evidenced by the significance value obtained, which is 0.001 or p < 0.05. This indicates that the hypothesis is accepted, suggesting that cognitive-behavioral therapy-based group counseling has an impact on reducing online game addiction tendencies among students in Malang City.

The research findings also revealed that the majority of participants experienced a decrease in online game addiction scores, with 7 individuals showing improvement. These results align with the views of Zees et al. (2020). The study demonstrated a reduction in addiction levels from moderate to severe categories. After cognitive-behavioral therapy intervention, there were no cases remaining in the severe addiction category.

However, 2 individuals experienced an increase in online game addiction scores, specifically subjects F and J. The increase and the unchanged results were influenced by several factors during the therapy, including: a) diversion of the client's focus to friends outside the forum, classmates, and gadgets, b) complaints of headaches, and c) a lack of awareness about their online gaming behavior. During the therapy process, subjects F and J were relatively passive and did not recognize their behavior as abnormal. They often joked with each other during therapy sessions, which hindered the effectiveness of cognitive restructuring. Based on their worksheets, their results were also not optimal, as they still struggled to recognize their maladaptive thoughts.

Changes before and after cognitive-behavioral psychotherapy are reflected in the frequency of online game play during the pre-test and post-test, which showed a decrease. This is consistent with the research conducted by Siregar (2013), which explains that cognitive-behavioral therapy can reduce the duration of online game play.

The first session in the group counseling aimed to help participants recognize their online game addiction issues. This session showed that some participants realized that boredom was a key reason for their gaming. This aligns with King and Delfabro (2009), who suggest that online games help individuals escape boredom and loneliness, leading to less interaction with their surroundings.

Cognitive restructuring was implemented by comparing the completed value hierarchy task with their usual behavior. Participants considered online gaming as the only activity they could engage in. Through cognitive restructuring, more rational thoughts were demonstrated, as shown by changes in the ABC diagram task. Narullita and Yuniati (2020) support these results.

Changes can be observed in the fourth session, behavior modification. After identifying alternative behaviors in the third session, the therapist encouraged participants to adopt the new behaviors mentioned. This session was conducted to help participants understand the new behaviors they could engage in. These results are consistent with Young (2007), who found that cognitive-behavioral therapy can enable participants to better address their own issues.

For students with tendencies toward online game addiction, online gaming holds significant meaning in their lives. This meaning can influence their thoughts, feelings, and behaviors in daily life, leading to an increased frequency of gaming. Conflicts can arise from gaming, both internally and with others. In cases of high addiction tendencies, conflicts often involve the inability to control gaming behavior, even when feeling tired. Additionally, some participants experienced conflicts with their parents. Online gaming can become a daily routine, with most participants engaging in gaming activities every day, primarily at night. The busy school schedule from morning to afternoon results in students playing online games in the evening. The emotions experienced during gaming include pleasure, as adrenaline increases, allowing continuous play.

4. CONCLUSION

Cognitive-behavioral therapy-based group counseling has a significant impact on reducing online game addiction tendencies among students in Malang City. Most of the study subjects showed a decrease in online game addiction tendencies after receiving treatment through cognitive-behavioral therapy-based group counseling. For future research, it is recommended to further develop the counseling module design to explore cognitive-behavioral therapy characteristics more comprehensively, and then apply it in simpler counseling activities, making it easier for counselors or teachers to implement in schools. The research method can also be enhanced by increasing the number of participants and subjects, and by using a more standardized experimental research design (true experiment design).

BIBLIOGRAPHY

Albery, I. P., & Munafo, M. (2008). Key Concepts in Health Psychology. California : SAGE Publications.

American Psychiatric Association. (2013). Diagnostic and Statistical Manual of Mental Disorder Edition (DSM-V). Washington : American Psychiatric Publishing. https://doi.org/10.1176/appi.books.9780890425596

Beck, J. S. (2021). Cognitive Behavior Therapy: Basics and Beyond. $3^{rd} Ed$. New York: The Guilford Press.

Griffith, M. D. (2010). Does video game addiction really exist?. *Education* today. 60 (2), 28-31.

Huda, Z. (2021). Hubungan Kontrol Diri dengan Kecanduan Game Online pada Remaja SMA X. *Prosiding Konstelasi Ilmiah Mahasiswa Unissula (KIMU) Klaster Humanoira*, *1*(1).

Kaplan, H. I., Sadock, B. J., & Grebb, J. A. (2010). *Sinopsis Psikiatri : Ilmu Pengetahuan Perilaku Psikiatri Klinis. Edisi 2*. Jakarta: Bina Rupa Aksara.

King, D. L. & Delfabbro, P. H. (2019). Internet Gaming Disorder Theory, Assessment, Treatment, and Prevention. Cambridge: Academic Press.

Lin, Y.W.C. (2018). *Game* Addiction is Included in Mental Illness and Medical Care is A Challenge: Textual and Discourse Analysis. Vol. 1. Issue 2 : 26-30. DOI:10.26502/fjhs004

Liese, B. S., & Beck, A. T. (2022). Cognitive Behavioral Therapy of Addictive Disorder. New York: The Guilford Press.

Narullita, D., & Yuniati, E. (2021). The Effect of Cognitive Behaviour Therapy (CBT) and Acceptance Commitment Therapy (ACT) to Reduce of *Game online* Addiction in Adolescents. *Available at SSRN 3808409*.

Pamungkas, P. D., Mardhiyah, S. A., & Puspasari, M. (2019). Hubungan Antara Konsep Diri Dengan Kecanduan *Game online* Pada Pemain *Game* Mmorpg. *Jurnal Insight*, 15(1), 60-70. DOI:10.32528/ins.v15i1.1643

Salimah, N., & Zukdi, I. (2020). Dampak Kecanduan Game Online Pada Peserta Didik di SMP Negeri 12 Padang. *Jurnal Al-Taujih*, 6(2), 128-138. DOI: 10.15548/atj.v6i2.2127

Siregar, E. Y. (2013). Penerapan *cognitive behavior therapy* (cbt) terhadap pengurangan durasi bermain *game*s pada individu yang mengalami *game*s addiction. *Jurnal Psikologi*, *9*(1), 17-24

Young, K. S. (2007). Cognitive behavior therapy with Internet addicts: treatment outcomes and implications. *Cyberpsychology & behavior*, *10*(5), 671-679.

Zees, R. F., Ariani, G. A. P. P., Usman, L., & Djamalu, I. (2021). Effectiveness of *Cognitive behavior therapy* (CBT) Terhadap Ketergantungan Gadget pada Remaja Di Politeknik Kesehatan Gorontalo. In *PROSIDING Seminar Nasional Tahun 2020 ISBN: 978-623-93457-1-6* (pp. 131-138).

Zees, R. F., Ariani, G. A. P. P., Usman, L., & Djamalu, I. (2021). Effectiveness of *Cognitive behavior therapy* (CBT) Terhadap Ketergantungan Gadget pada Remaja Di Politeknik Kesehatan Gorontalo. In *PROSIDING Seminar Nasional Tahun 2020 ISBN: 978-623-93457-1-6* (pp. 131-138).