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The Effectiveness of Cognitive Behavioral Counseling with a Self-Management Technique to Reduce Students Smartphone Addiction and Phubbing

Ahmad Kamil ✉, Anwar Sutoyo, Edy Purwanto

Universitas Negeri Semarang, Indonesia

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Abstract

Smartphone is a form of technological and information advancement which now has become a necessity in life. However, excessive use of a smartphone makes its users susceptible to addictive behavior and phubbing. Regarding this issue, the present study strived for testing the effectiveness of cognitive behavioral group counseling with a self-management technique to reduce smartphone addiction and phubbing in students at SMA Negeri 12 Enrekang. It used an experimental method with a pretest-posttest control group design and involved 12 students with high levels of smartphone addiction and phubbing as the subjects. Based on the Mixed ANOVA test, the intervention applied could reduce smartphone addiction and phubbing in grade twelve students at SMA Negeri 12 Enrekang. Further discussion regarding the implications and limitations are presented in the discussion chapter.

✉ Correspondence address:
Gedung A Kampus Pascasarjana Unnes
Jl. Kelud Utara III Semarang 50237
E-mail: ahmadkamilcilun@gmail.com

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INTRODUCTION

Science advancement is unavoidable due to its simultaneous occurrence with information and technology in this modern era. One of its examples is smartphone that currently becomes the most significant information and technology means for humans. It truly facilitates people communication (Cho and Lee, 2015), helps finding information for any assignments (Derks and Bakker, 2014), not to mention a medium for spending pleasure time by socializing with others through the internet or online (Rotondi et al., 2017).

Various human needs can be met through the smartphone use, such as phone calls, reading news, watching videos, taking photos, ordering food, listening to music, checking the weather, looking for information, and travel ideas (Wang et al., 2016). Here, smartphones have significantly improved and simplified the lives of individuals.

The smartphone invention makes people prefer spending their time with it, for example playing game and even just checking back and forth its features. Further analysis shows that people are more likely to interact through their social media networks than to meet or talk in person. It proves smartphone use can influence user behavior. (Roberts et al., 2014) argue the smartphone use in the modern era can both provide freedom and enslave users. This device allows users to socialize, access information, and communicate, but can also make them dependent in a negative way.

When people become too dependent on smartphones, addiction can happen. Even though in the past the term addiction was limited to substances and drugs, it now includes smartphone use, gambling, internet, gaming, and several other addictive behaviors (Kwon, Kim, et al., 2013). (Van Deursen et al., 2015) revealed that the main factor causing smartphone addiction is the habit of using smartphones.

(Kwon, Lee, et al., 2013) found that smartphone addiction can cause social problems, such as difficulty carrying out daily life, withdrawal, or impaired control of one's own impulses. There are several components of smartphone addiction, namely tolerance, self-disclosure, excessive use, positive perceptions, interference in daily life, and internet-focused relationships

Some reported phenomena caused by smartphone addiction are problems with education, sleep quality, social lockdown, and even negative influences on interactions with their environment, which can lead to phubbing.

Smartphone and internet addiction are the major causes of phubbing. (Chotpitayasunondh and Douglas, 2018). Phubbing can be a determinant factor in disrupting communication, togetherness, a sense of ownership, and control so that communication becomes much worse and the relationship feels unsatisfying. Phubbing shows effects that result in negative and resentful reactions, so that people perceive their communication to be of poorer quality and less satisfied (van Rooij et al., 2018).

Since smartphone is easy to use and can help almost all generations, the phenomenon of phubbing can likely be found in teenagers. Facts stating students are vulnerable to phubbing are revealed by (Ugur and Koc, 2015) that out of 349 students, 100% said they had cellphones, while around 95%. admitted that they phubbed once or twice in class and 32% even phubbed every day.

Problems experienced by adolescents are increasingly complex due to the facts about smartphone addiction and phubbing in the modern era, especially those which happen to students. Due to smartphone use, they may counter both personal and social complex problems.

Regarding the above phenomena, it was assumed that smartphone addiction and phubbing still often occur among many students. Therefore, strategic interventions must be given to handle these problems. One method of guidance and counseling, namely cognitive behavioral intervention may help students solve problems of thinking and wrong perspectives. Wilding and Milne in (Farjantoky et al., 2020) state that cognitive behavioral intervention will help people gain the ability to see the situation from various points of view.

Furthermore, the cognitive behavioral approach helps overcome social, cognitive and behavioral problems that cause addiction in adolescents (Scott et al., 2017). In this study, the intervention of cognitive behavioral approach was aided with a self-management technique. Through this technique, students were directly involved to meet several basic components and determine behavioral targets by monitoring the past behavior and evaluating how effective the procedures were.

A study conducted by (Chotpitayasunondh and Douglas, 2016) explains self-control has a positive effect on phubbing. However, another one by (Isrofin and Munawaroh, 2021) is contradictory, where it describes that self-control has not been proven to have an effect on phubbing. This difference somehow motivates the researchers to use a self-management technique to reduce students' smartphone addiction and phubbing.

According to the previously mentioned descriptions, the aim of this study was to find out the effectiveness of cognitive behavioral group counseling with a self-management technique in reducing smartphone addiction and phubbing in students at SMA 12 Enrekang. It was hoped that the results will clarify and prove that cognitive behavioral group counseling with a self-management technique can reduce this behavior in students.

METHODS

Purposive sampling technique was used to select 12 out of 54 grade twelve students at SMA Negeri 12 Enrekang to be the subjects of this study. Meanwhile, random sampling was used to group the twelve subjects into one experimental group and one control group equally.

There were two scales used to collect data in this study, namely the smartphone addiction and phubbing scales. The smartphone addiction scale originates from the theory developed by (Kwon, Lee, et al., 2013). It has 38 items and 6 indicators, including (1) Daily-life Disturbance, (2) Positive Anticipation, (3) Withdrawal, (4) Cyberspace-oriented Relationship, (5) Overuse, (6) Tolerance. In terms of reliability test, all items obtained a Cronbach Alpha coefficient of 0.89. Moreover, phubbing was measured using the Generic Scale of Phubbing (Chotpitayasunondh and Douglas, 2018). It has 15 items and 4 indicators, including (1) Nomophobia, (2) Interpersonal Conflict, (3) Self-Isolation, and (4) Problem Recognition. For the reliability test, all items obtained a Cronbach Alpha coefficient of 0.76.

Several procedures were carried out in this study. First, the researchers gave a pretest using the smartphone addiction scale and the Generic Scale of Phubbing (GSP). Second, the intervention of cognitive behavioral group counseling with a self-management technique was provided. Here, self-monitoring, self-reward, self-contracting, and self-control were the main the strategies in the provision of self-management techniques carried out in six sessions with the time allotment of 2 × 45 minutes. Third, a posttest was carried out to see whether there was a change or decrease in students' smartphone addiction and phubbing. Finally, follow-up was done by conducting a second posttest. All collected data were analyzed using Mixed ANOVA test analysis with the help of SPSS 23 micro software.

RESULTS AND DISCUSSION

The data obtained from the pretest, posttest and follow-up were then tabulated prior to analysis. Before being given the intervention, both students' smartphone addiction and phubbing were at a high level. After being given the intervention, there was a change in students' smartphone addiction and phubbing. In the experimental group, both smartphone addiction behavior and phubbing reduced to the low category. Following these results, the data were then analyzed using the Mixed ANOVA test to prove the effectiveness of cognitive behavioral group counseling with a self-management technique in reducing students' smartphone addiction and phubbing behavior. This can be seen in Table 1.

Regarding the data, the mean and standard deviation of students' smartphone addiction behavior decreased from the pretest (M = 114.50, SD = 5.92), to (M = 89.67, SD = 5.85) in the posttest, and follow-up (M = 77.17, SD = 5.38). Likewise, students' phubbing scores decreased from (M = 44.67, SD = 3.26) in the pretest, (M = 25.33, SD = 4.22) in the posttest, and follow-up (M = 20.33, SD = 4.92). These results are presented in table 1

Table 1. Data Description

Variable	Time	n	Experimental		n	Control	
			M	SD		M	SD
Smartphone Addiction	T1	6	114.50	5.92	6	114.17	2.92
	T2	6	89.67	5.85	6	101.67	1.36
	T3	6	77.17	5.38	6	103.00	3.89
Phubbing	T1	6	44.67	3.26	6	41.67	2.06
	T2	6	25.33	4.22	6	41.83	0.75
	T3	6	20.33	4.92	6	41.00	0.89

Mixed ANOVA test was carried out to analyze the data in this study. In table 2, the Mixed ANOVA test proved that there was a decrease caused by the intervention on students' smartphone addiction and phubbing.

Table 2. Mixed ANOVA test results

Variable	Effect	F	df	*p*
Smartphone Addiction	Time	160.14	2.20	<0.01
	Group	52.06	1.10	<0.01
	Time*Group	41.24	2.20	<0.01
Phubbing	Time	186.70	2.20	<0.01
	Group	79.33	1.10	<0.01
	Time*Group	174.01	2.20	<0.01

Table 3. Pairwise Comparisons

Time	Mean Difference	Standard Deviation	Sig
Smartphone Addiction			
Pretest-posttest	18.16	1.58	< 0.01
Pretest-follow up	23.75	1.49	< 0.01
Posttest-follow up	5.58	1.01	< 0.01
Phubbing			
Pretest-posttest	9.58	.88	< 0.01
Pretest-follow up	12.83	.72	< 0.01
Posttest-follow up	3.25	.34	< 0.01

The findings of this study have confirmed that time influenced the reduction in smartphone addiction behavior ($F(2.20) = 160.14$, $p<0.01$). Meanwhile, the effect of time on phubbing behavior was ($F(2.20) = 186.70$, $p<0.01$). In addition, the results presented in table 3 showed significant differences. First, the difference in smartphone addiction behavior between pretest - posttest was ($MD = 18.16$, $p < 0.01$). Second, the difference between pretest - follow up was ($MD = 23.75$, $p < 0.01$). Third, the difference between posttest - follow up was ($MD = 5.58$, $p < 0.01$). Meanwhile, the results on phubbing were pretest – posttest ($MD = 9.58$, $p < 0.01$), pretest – follow

up (MD = 12.83, $p < 0.01$) and posttest – follow up (MD = 3.25, $p < 0.01$). All indicated a significant decrease in scores over time of measurement.

The value of smartphone addiction reduction can be seen in Figure 1.

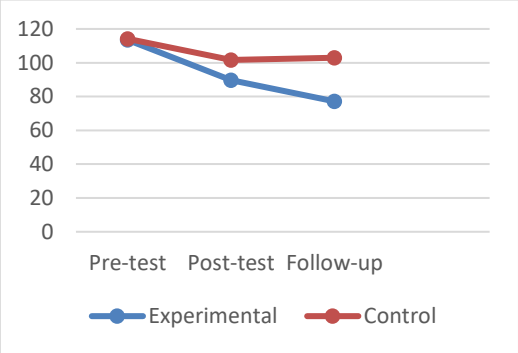

Figure 1. Level of reduction in smartphone addiction

The value of phubbing reduction can be seen in Figure 2.

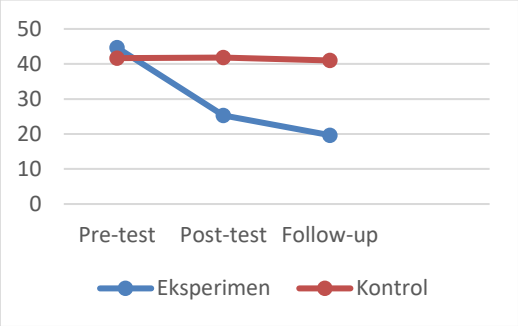

Figure 2. Level of reduction in phubbing

The findings above have proven that the cognitive behavioral group counseling with a self-management technique has been effective in reducing students' smartphone addiction and phubbing. It is in line with the findings of (Farjantoky et al., 2020) that cognitive behavioral counseling has a significant impact on students with smartphone addiction. Also, (Setiawan et al., 2022) explain the self-management technique counseling approach is effective in reducing problematic smartphone use.

Several previous studies findings have revealed a positive relationship between smartphone addiction and phubbing. (Isrofin and Munawaroh, 2021) explain that smartphone addiction is a predictor of phubbing by 47%. The main determining factor for phubbing is internet addiction, and this widespread phubbing culture can gradually be weakened if face-to-face interaction is increased intensively, (T'ng et al., 2018). The face-to-face interaction will determine how a person is able to control himself (self-management) when using a smartphone and discussing more with other people.

Other similar results were found by (Hikmah et al., 2023) that Fear of Missing Out (FoMo) and self-management are significantly correlated with the phubbing of the millennial generation. Self-management is another variable that influences phubbing. Individuals who experience difficulties in self-control (self-management) will most likely have difficulty controlling their smartphone use.

It can be seen that the intervention of cognitive behavioral counseling with a self-management technique influenced individuals who experienced smartphone addiction and phubbing. It is similar to a study done by (Pauza et al., 2020) which shows that group counseling services with a self-management technique are effective in reducing smartphone addictive behavior.

CONCLUSION

Regarding the findings, it can be concluded that the cognitive behavioral counseling with a self-management technique is effective in reducing smartphone addiction and phubbing in students at SMA Negeri 12 Enrekang. Thus, it is expected that counselors or school counselors can use this intervention in an effort to solve student problems related to smartphone addiction and phubbing. In addition, future researchers can enrich the scope of subjects and include the analysis of gender and age differences between research subjects.

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