Cognitive Counseling Intervention to Overcome Students’ Internet Addiction in Indonesian Vocational High Schools

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Abstract. This research aims at identifying cognitive counseling intervention models to overcome students’ internet addiction at the Vocational High School Makassar. Besides, this study aims at determining the effectiveness of cognitive counseling to overcome students’ internet addiction at the Vocational High School Makassar. The research method was an experiment using the pretest-posttest control group design. The samples were 60 students divided into two groups, namely 30 experimental groups and 30 control groups. The data were collected data using the questionnaire. The data were then analyzed using descriptive analysis to obtain an overview of the level of students’ internet dependence before and after giving cognitive counseling interventions. The hypotheses were tested using t-test. There are some results in this study. First, the description of internet use behavior shows that there are indications that students are addicted to using the internet. It can be seen based on the time in accessing the internet, the objects used, and the types accessed when they use the internet. The level of internet addiction of students is in the high category. Second, the implementation of cognitive counseling interventions has a significant effect on decreasing the level of internet addiction. It is evident from the results of the posttest in the experimental group, which is lower than the control group. Third, the cognitive counseling intervention is effective to reduce students’ internet addiction of the Vocational High School Makassar.

Keywords: Internet Addiction, Cognitive Counseling, Intervention, Indonesia

INTRODUCTION

Recently, internet addiction has become a significant issue among prominent scholars and researchers. The internet addiction causes several problems for students. The impact of internet addiction is enormous. In India, there are suspected suicides of antisocial behavior that are...
driven by excessive internet users Swaminath, (2008). Internet addiction can cause considerable side effects in adolescent life, such as anxiety, depression, physical decline and mental health, interpersonal relationships, and decreased performance Ybarra, M., Alexander, C., & Mitchell, K. (2005), Yen, C. F., et al (2014), Wee, C., et al (2014). Studies in India in 2016 showed that 11.8% of students had an internet addiction. From the time spent doing the online activities, the use of social networking sites and chat rooms, and it is because of the results of the anxiety and stress Bathia, M., Rajpoot, M., & Dwivedi, V. (2016) and the internet provides entertainment facilities rather than doing tasks Floros G, (2013). It explains that internet addiction or excessive use of the internet is very bad for individuals both physically and psychologically, which means it will damage their future, especially in self-control, so that in the future, children will grow up with narcissistic traits.

The problem of internet addiction must get special attention from various parties, educators, academics, researchers, psychiatrists, and parents so that individual development moves towards a better direction. Counselors or guidance and counseling teachers as educators have the main task in providing counseling to individuals who experience internet addiction problems. Counseling as a center for handling through therapeutic and clinical assistance is undoubtedly an appropriate way to overcome this problem, through specific techniques in counseling. Treatments to overcome internet addiction include physical practice, counseling, social support, and family therapy Chien Chou, & John C. (2005), Young & de Abreu (2011).

Research on internet addiction in Indonesian contexts has received little attention. As a consequence, there is not much published on the issues of internet addiction relating the students in Indonesian settings. Therefore, this aims to fill this knowledge gap. This study explore cognitive counseling interventions on internet additions in high schools. This study is significant because it can be a model for similar case within different contexts. To explore this issue, researchers establish one key question: a. how does the counseling cognitive intervention impacts on students internet addiction?

Internet addiction is a syndrome that is characterized by spending an enormous amount of time using the internet and unable to control its use online Young & de Abreu (2017). It means that the characteristics of individuals who are addicted to their time more with the internet, their daily activities with the internet, and feeling bored without opening the internet. A study carried out by the Internet and Mobile Association of India covers 65,000 individuals through household surveys in 26 cities in India that around 38% of internet users in the country have shown signs of heavy use (approximately 8, 2 hours per week) Young & de Abreu (2017). Then other research results show through the annual American Psychological Association event that 6% of internet users experience internet addiction Widiana,& Hidayat (2004).

The right counseling model is through cognitive counseling interventions as a treatment. This approach aims at identifying and modifying various processes of maladaptive thinking and problematic behaviors of individuals through cognitive restructuring and behavioral techniques to achieve this change. This approach is called cognitive behavior modification VandenBos (2015). Another study showed that through group counseling with a cognitive-behavioral modification counseling approach or CBT, it was significantly effective in reducing students’ academic anxiety and could also help individuals analyzing their thoughts and behavior, through passive music guided imagery Situmorang, Mulawarman, and Mungin (2018). It shows that there is a significant influence on students’ self-adjustment in facing the exam, Iswara (2015). Looking at the results of these studies, the approach through cognitive counseling interventions can change students' behavior by modifying their ways of thinking and behavior with cognitive counseling.

Today, we are being overwhelmed by the significant changes in the history of science. We can be a prominent witness in the field of human knowledge and behavior. It has double impacts: the consequences of the effects of technology on everyday life and the use of the internet. Dependence on the internet is one of the issues that challenged people, families, academics, and researchers.

The internet has become a part of our daily lives. Most people use the internet, presenting it as an extraordinary information tool and an opportunity to connect humans socially and to educate themselves, as well as an information center. The internet increases the well-being and quality of life. However, the internet can also bring people to situations that seem to fulfill mental disorders, namely in the form of the actor.
or psychological syndrome that is clinically significant concerning the current situation or the risk that puts a significant amount of death and losing important freedom.

Along with advanced technology, internet addiction is a phenomenon that becomes a mental illness in society. Internet addiction is increasing in terms of its acceptance as a legitimate clinical disorder that often requires treatment Young & de Abreu (2017). However, the current reality is that there is still a lack of services that tend to deal specifically with problems related to internet addiction, even though many places provide services such as hospitals, mental therapy clinics, schools, and colleges and society in general.

The use of the internet as social media is the most internet users in the world. Nearly 40% of the world's population uses internet media in the form of social networking. WHO in 2018 describes that human being share, like, write, and renew status two hours every day. It means that there are about one million copies and photos shared every minute. Data released by the Indonesian Internet Services Providers Association, Aryani (2017) in 2016 states that 132.7 million internet users in Indonesia or around 51.5% of the population use internet for businesses, upgrade skills, entertainment communication, gossip, bullying, anti-social, intimidation, games, and hoaxes. The research indicates that 64% of junior high school students use the internet with social networks. The use of the internet that is beyond the time limit provides an impact that is not good for the development of human minds. The results of research at Swansea University and Milan University that people who spend more time surfing the internet have an impact on their psychological condition, one of the impacts is high anxiety Aryani (2017). Thus, Prof. Phil Reed from Swansea University explained through his research that people dependent on digital devices could make them depressed when they stop using them. Based on the results of this research, the psychological or mental impact of individuals after using internet media can be known. This phenomenon illustrates that the use of the internet is one of the habits of individuals who are not left behind so that it can trigger the occurrence of internet addiction

METHOD

The research design used in this study was the experimental method using the pretest-posttest control group design. This study examined the application of cognitive counseling intervention models to reduce students’ internet addiction. The university ethics committee approved the ethical application for this research.

The population of this study was 60 students of Vocational High School in Makassar who were voluntarily identified themselves as having internet addiction disorders. From the population, the samples used purposive sampling technique. The purposive sampling technique is the technique of determining samples taken based on the objectives of the study. The sample of this study was 60 students consisting of 30 students experimental groups and 30 participants for control groups.

The procedure for conducting research was starting from the planning stage by forming an experimental group and control group, performing pre-test, implementing cognitive counseling interventions, and then doing post-test.

The data were collected using a questionnaire. The questionnaire was given to the subjects of the study to obtain data about the level of internet addiction that occurred in students both before (pretest) and after (posttest) giving treatment. The questionnaire follows the Guttman scale model, where each question item provides with various answer choices.

Table 1. Weighted scoring of the questionnaire

<table>
<thead>
<tr>
<th>Choice of Answers</th>
<th>Answer Category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Favorable</td>
</tr>
<tr>
<td>Appropriate</td>
<td>1</td>
</tr>
<tr>
<td>Inappropriate</td>
<td>0</td>
</tr>
</tbody>
</table>

Data analysis

The data analysis used descriptive statistical analysis and t-test. Descriptive statistical analysis aims to describe the level of internet dependence of students before (pretest) and after (posttest) giving treatment in the form of cognitive counseling interventions using frequency distribution tables and percentages.

The analysis of the prerequisite test aims to test whether the collected data met the requirements for analysis. Therefore, it is necessary to do a normality test and homogeneity
test, which is an analysis of the prerequisite test. The objective of the normality test of data is to test the assumption that the data obtained comes from normal distribution of population. This normal data criterion is a condition to achieve in testing the research hypothesis. Hadi (2005) [15]. The Kolmogorov Smirnov test is a testing technique that must be performing to determine the normality of data distribution Hadi (2005). There are some criteria for the normality of the data. (1) If the significance value is $\geq 0.05$, then the data is declared normally distributed; (2) If the significance is $\leq 0.05$, then the data is declared not normally distributed.

The homogeneity of data can be tested on the homogeneity of variance test. Previous homogeneity tests were applied to the following hypothesis: $H_0$: Homogeneous variant data and $H_1$: Homogeneous non-variant data.

There are some criteria of the test. If the sig value $\leq \alpha$ at 5% or 0.05 $H_0$ is rejected. According to Hadi (2005), the inferential analysis is used to test the hypothesis that has been proposed. One of the roles of inferential analysis is to conclude something that is investigated on subjects to be generalised to a more significant number of subjects. The researcher suggested that inferential analysis was used to examine the effect of implementing cognitive counseling interventions on decreasing internet dependence by using an independent t-test Hadi (2005). The independent t-test used SPSS 20 for windows. Moreover, the significant level used is 0.05.

RESULTS AND DISCUSSION

Results

_The Description of Internet Use at Vocational High School & Makassar_

The description of internet use at the vocational high school 7 Makassar can be described in the following figures.

a. Students' Habits in Using the Internet

![Figure 1. Students' Habits in Using the Internet](image-url)

The data above illustrates the students’ habits in using the internet. 37% of students used the internet whenever there is an opportunity. 23% of students used the internet every week. 14% of students used the internet every day. 26% of students use the internet every hour. Based on these data, it explains that students use the internet every time where there is a chance.

- Types of Internet Usage
Figure 2. Types of Internet Usage

Figure 2 above illustrates the types of internet accessed by students. 23% of students access YouTube, and 14% access websites. Furthermore, the students also access the internet for social networks such as Facebook and Instagram (26%) and games (37%). From this data, the students are more dominant using the internet for the needs of playing games and using social networks such as Facebook and Instagram.

- Time in Surfing the Internet

Figure 3. Time in Surfing the Internet

Figure 3 explains that 12 students access the internet for 1-3 hours, six students access the internet for 4-7 hours, and five students surf the internet for 8-10 hours. It shows that students always spend many hours surfing the internet.

- Devices used in surfing the Internet

Figure 4. Devices used in surfing the internet

Figure 4 shows that there are 68% of students surf the internet using their mobile phones and 32% of students surf the internet using
computers. Based on the types and tools used, the students dominantly use mobile phones. The description of behaviour using the internet explains that there are indications that students are addicted to the internet. It can be seen when they are surfing the internet, the objects they used then the types they accessed when they are surfing the internet.

**Counseling cognitive intervention activities**

The implementation of cognitive counseling interventions to overcome internet addiction of students is carried out according to the agreed meeting schedule. During the activity, the researcher himself became the activity coordinator and leader in carrying out this counseling.

The following are steps in implementing cognitive counseling to overcome internet addiction of the students.

**Pre-session Activities**

The activity begins with the coordination phase related to the implementation of this research. Then after obtaining approval from the school, it is agreed that the implementation of the initial data collection activities for students experiencing internet addiction is agreed upon. Then, the students agreed to be used as research samples. There are two groups of students as the research target groups, namely the experimental group and the control group. At that time, the researcher gave a questionnaire as a pretest to these two research groups.

**Main Activities**

Life models are carried out by counsellors, or facilitators to participants. The symbolic model is used through video or film that presents desired behaviours in preventing internet dependence. Symbolic modelling sessions are performed by modelling therapy through video about the benefits of using the internet and the dangers of using the internet. Participants are shown videos on how to use the internet correctly and thoroughly. After that, participants were asked to simulate it through practice directly. The practice will be a choice behaviour in using the internet correctly. Then the videos that were played provide motivation and enthusiasm because they contain the value.

![Figure 5. Interactive Counseling Cognitive Intervention Activities](image)

Role-playing strategies and training for this session was one meeting. This model strategy was carried out through direct experience of the roles carried out when counseling went on. The goal was to improve change through stimulation or game in a real way from the response desired by the counselee. There are some general elements of this strategy. First, it is playback from oneself, another person, an event, or a response device by the client. Second, it uses the principle now and here. Third, it uses a gradually increasing process, starting from simple to complex. Fourth, it returns to the client that is done by the counsellor or other people who help. This model is usually sufficient for use as a method of changing client attitudes, increasing self-awareness, solving conflicts, and as a method for changing behaviour. Each participant is given the role of each of the scenarios that have been prepared, and this activity tells an activity so that the counselee gets to experience at that moment. After the practice is performed, the counselee is asked to explain what is felt or the experiences gained and share the story of the role-playing activity.

This technique is used for clients, who regularly reflect on something in the past, present, or future or who regularly use irrational thoughts that are centred on fear. Fear of not using the internet, fear of lagging behind a fun or dependent activity. The implementation is always done by asking the client to imagine a situation that brings fear, worry about not playing the internet, then verbally asked, and when anxious thoughts excessively control the client experiences or, the client is asked to stop. Another technique is to restructure cognitively.

In this strategy, the client is directed to direct efforts to change himself, with minimal assistance from the counsellor. There are some techniques in this strategy. First, it is through the
application of self-monitoring procedures, by making arrangements for habits, thoughts, feelings. Second, it is a self-reward. The way can be done by giving an appreciation to himself after certain behaviours that are confronted can be displayed. Third, it is self-contracting. This contract is a manifestation of the client's commitment to change. The contract must also be written. This technique is generally more successful than the self-reward technique.

**The Effect of Cognitive Counseling Intervention to Reduce Internet Addiction of students at Vocational High School 7 Makassar**

To find out the effect of cognitive counseling interventions on reducing internet addiction, a descriptive statistical analysis was conducted. From these data, data about questionnaire were obtained from the experimental group and control group before and after giving cognitive counseling treatment. The data were presented in the form of frequency distribution tables and percentages based on research data.

**Table 3. The level of Internet Addiction in the Experimental Group**

<table>
<thead>
<tr>
<th>Interval</th>
<th>Activities</th>
<th>Experimental group</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
</tr>
<tr>
<td>164-184</td>
<td>Very High</td>
<td>3</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>143-163</td>
<td>High</td>
<td>4</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>122-142</td>
<td>Fair</td>
<td>8</td>
<td>27</td>
<td>3</td>
</tr>
<tr>
<td>101-121</td>
<td>Low</td>
<td>9</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>80-100</td>
<td>Very Low</td>
<td>6</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>30</strong></td>
<td><strong>100 %</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Table 3 shows the level of internet addiction of students for the experimental group before being given intervention. 10% of students are in the very high category, and 13% students are in the high category, 27% in medium, 30% students are in a low category, and 20% students are in the very low category. After being given a cognitive counseling intervention the posttest data illustrates that there are 17% students are in the moderate category, 40% students are in the low category, and 43% students are in the very low category. It is reinforced by the average value of the pretest that is 124 with the moderate category and the average value of posttest that is 104 categorised as a low category.

Then the following data are described in the control group which was carried out simultaneously, but no cognitive counseling treatment was carried out. The following internet addiction data are described in the form of frequency distribution tables and percentages based on research questionnaire data.

**Table 4. The level of Internet Addiction in the Control Group**

<table>
<thead>
<tr>
<th>Interval</th>
<th>Activities</th>
<th>Control Groups</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
</tr>
<tr>
<td>147-165</td>
<td>Very high</td>
<td>2</td>
<td>7%</td>
<td>1</td>
</tr>
<tr>
<td>130-146</td>
<td>High</td>
<td>4</td>
<td>13%</td>
<td>5</td>
</tr>
<tr>
<td>113-129</td>
<td>Fair</td>
<td>10</td>
<td>33%</td>
<td>9</td>
</tr>
<tr>
<td>96-112</td>
<td>Low</td>
<td>8</td>
<td>27%</td>
<td>9</td>
</tr>
<tr>
<td>79-95</td>
<td>Very Low</td>
<td>6</td>
<td>20%</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>30</strong></td>
<td><strong>100 %</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Table 4 shows that internet addiction for the control group at the pretest showed that there were 2 students (7%) are in very high category, 4 students (13%) are in high category, and it is dominated by the fair category that is 10 students (33%), 8 students (27%) are in low category, and
6 students (20%) are in very low category. While the posttest results showed that the data did not change too much, namely 9 students (30%) are still in the fair category, 9 students (30%) are low, then an increase in the high category became 5 students (17%), and 1 student (3%) is very high.

These results indicate that internet addiction in the experimental group had more significant changes than the control group where the posttest experimental group showed a decrease in the level of internet dependence compared to the control group that showed no significant change. Therefore, the internet addiction of students before and after being given treatment in the form of cognitive counseling interventions showed very significant changes, in which there was a decrease in the level of internet addiction of students.

The research hypothesis is that there is the influence of cognitive counseling interventions to reduce the level of internet addiction of students. Hypothesis testing was made for working hypothesis (H0) namely there were no differences in the level of internet addiction of students before and after the cognitive counseling intervention is given. The following are described the results of data analysis through t-test on the internet addiction level of students.

Table 5. Paired Samples Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>124.23</td>
<td>30</td>
<td>24.78</td>
<td>4.52</td>
</tr>
<tr>
<td>Posttest</td>
<td>104.26</td>
<td>30</td>
<td>16.06</td>
<td>2.93</td>
</tr>
</tbody>
</table>

From the data in table 5, the results of the analysis, Table 6 shows that the value of t is equal to 6.58 in which the significance value is 0.000. Because the value of sig <0.05, it can be concluded that H0 is rejected and H1 is accepted. It means that there are differences in the average value of the internet addiction level of students before and after giving the cognitive counseling intervention. After giving the cognitive counseling intervention, the level of internet addiction students experienced a very significant decrease. Thus, it can be stated that cognitive counseling interventions can reduce the level of internet addiction of students.

Table 6 describes the statistical results of the application of cognitive counseling interventions that are applied as treatments through the pretest and posttest questionnaire. The average value of the pretest is 124.23. For the posttest, the average value is 104.26 in which the numbers of respondents are 30 students. The results of the average posttest score showed smaller than the pretest. In other words, the results of the posttest average score showed a drastic decrease or a significant change compared to the pretest. The data illustrates that the provision of cognitive counseling interventions is very effective in reducing students’ internet addiction.

Table 6. Paired Samples Test

<table>
<thead>
<tr>
<th></th>
<th>Paired Differences</th>
<th>95% Confidence Interval of the Difference</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Std. Error Mean</td>
<td>Lower</td>
<td>Upper</td>
<td>t</td>
</tr>
</tbody>
</table>

Discussion

The results of the study showed that there was an effect of giving cognitive counselling interventions on students’ internet addiction decline. Counselling activities are carried out through group settings because they are seen as more effective to do where counselling is a profession that helps individuals with various procedures, and one of them is through group procedures, Kurnanto (2013). This procedure is easily understood by children and easily adapted to all groups age and can help individuals dealing with things that they can change and accept things that they cannot change, Dobson (2001) so
that this activity goes well. The activity was carried out in four sessions, namely social modelling strategies (live and symbolic models), role-playing and training strategies, cognitive change strategies, and self-management strategies.

The applied cognitive therapy aims at identifying wrong thoughts and replacing them with more adaptive ones. This process is known as cognitive restructuring, Corey (2005). The process of cognitive reconstruction is intended to direct wrong thoughts by replacing real and rational thoughts. Mind reconstruction is performed to direct thoughts of negative technological dependence on students through this counselling model. Students who take part in the activity show that there are behaviours that are passionate about activities with other students. The results of statistical data indicate a change in the behaviour of internet usage in students. It is seen from the hypothesis test where the average score of the posttest shows smaller than the pretest in other words the results of the average posttest score indicate a drastic decrease or a significant change compared to the pretest. The data illustrates that the application of cognitive counselling techniques is very effective behavioural intervention to overcome students' internet addiction. The students have been able to manage study time, take advantage of working time and complete assignments, using the internet as needed. The components of behaviour and motivation through the treatment of internet addiction use time management techniques, self-observation and seeking support in the real world, Yazeer Khazaal, et al (2012).

With the presence of this technique, it will be a solution for guidance and counseling teachers in overcoming student problems, primarily related to internet addiction. Children will be more serious about learning, spend more time in learning, doing assignments, not lazy and enthusiasm and they have high motivation to get higher learning achievement.

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CONCLUSIONS AND SUGGESTIONS

From the results of this study, some conclusion can be drawn. First, in terms of the description of behaviour in using the internet, there are indications that students are addicted to using time. It can be seen based on the time in accessing the internet, the objects used, and the types accessed when they use the internet. Second, the implementation of cognitive counseling interventions showed that the level of internet addiction in the experimental group was lower than the control group, in which the posttest experimental group showed a decrease in the level of internet addiction while in the control group, and it does not experience significant changes. Third, there is a significant effect of cognitive counseling interventions on students' decrease in internet addiction. It proves that cognitive counseling intervention is effective to reduce student internet addiction.

Based on these findings, it is recommended to the counselors and the guidance and counseling teachers in the school to apply cognitive counseling to overcome the students’ internet addiction. The author will continue his research on the effects of counseling to reduce Internet addiction in elementary school children, who are now smart to use the internet via smartphone gadgets.

REFERENCES


