THE EFFECT OF SELF-MANAGEMENT TRAINING ON THE ABILITY TO REDUCE THE OVERUSE OF THE INTERNET

Shofa Farida Istiqomah[1] , Magdalena Hanoum[2]
, Agustina Ekasari[3]

[1]Prodi Psikologi FISIP Universitas Islam 45 Bekasi
[2]Prodi Psikologi FISIP Universitas Islam 45 Bekasi
[3]Prodi Psikologi FISIP Universitas Islam 45 Bekasi

Author's email: [1] shofa.fi@gmail.com , [2] maryammagda66@gmail.com ,
[3]agustina.ekasari@gmail.com

Corresponding Authors: [2] maryammagda66@gmail.com

ABSTRACT

Excessive internet use has a negative impact on school youth, especially in the academic field such as neglecting assignments and decreasing academic achievement. Therefore, efforts are needed to improve self-regulation in adolescents so that they can regulate internet use properly. Self-management training is one technique to help adolescents improve their ability to regulate and control themselves to reduce excessive internet use. The purpose of the study was to determine the effect of self-management training in reducing excessive internet use in adolescents. The research with a quasi-experimental design, one group pretest and, posttest design, used 9 junior high school students as the experimental group. The sampling technique used is purposive sampling with subject criteria; male and female students aged 15-18 years, using the internet with a duration of >2 hours per day, the results of the pretest score of excessive internet use being high/moderate. The data collection method used a self-management measurement scale and a measurement scale for excessive internet use. The training or treatment provided was self-management training, which was carried out for two days. Data analysis was carried out by using the Wilcoxon signed-rank test to test whether there was a significant difference between the results of the pretest data scoring and the posttest data scoring results. The results of the Wilcoxon signed-rank test showed that there was a significant difference between the results of the pretest (before training) and posttest scores. (after training). It was concluded that self-management training affected the ability to reduce excessive internet use in junior high school students.

Keywords: *Self Management Training, Overuse of the Internet*

1. PRELIMINARY

In the era of advanced technology like these days, the existence of the internet as a media of information makes it easier for every circle of people in doing daily activities; student, teacher, office worker and the others. Basically internet use is divided into two groups, namely healthy internet use and unhealthy internet use. Internet use is said to be healthy if someone is able to combine real life and life on the internet, so that they are able to talk about online activities with friends in the real world. while the unhealthy use of the internet separates real life from the world of the internet, so it does not want to talk about its activities to the people in its life (Suler, 2006). Healthy or unhealthy internet use can be seen from the frequency and duration of its use. The duration of healthy internet use is an average of 8 hours of internet access per week. unhealthy use of the internet or what is considered problematic or abused is a user who spends time accessing the internet for at least 38,5 hours per week.

Basically, can be misused by anyone including the teenager with cognitive abilities and self-control that haven't fully grown. Many benefits obtained from the internet and the easiness of accessing it caused teenagers to be hypnotized inside it so that they have the urge to keep opening it even for unimportant things. That caused teenagers tend to be susceptible to overusing the internet. The overuse of the internet will cause some troubles either physical or psychological to teenagers.

Among the negative impacts of the behavior of the internet, overuse is health issues like lesser bedtime, over-exhaustion, and eye problem (Nurfadilah, 2014). Hasanzadeh, et al. (2010) said that frequent internet user has a significant correlation with mental health degrading. Other than negative impacts to physical and psychological, internet overuse also resulting in academic problems such as academic procrastination.

The formation of internet overuse behavior mainly on teenagers is oftentimes caused by loneliness, boredom, lack of activity, trying new things, and also the lack of parent's supervision. Self-control is one of the factors that affected internet overuse the most. Teenagers haven't yet had self-control ability well developed so it makes them difficult to control themselves in balancing time between accessing the internet with other activities in the real world. The research "Kontrol Diri dan Kecenderungan Kecanduan Internet" (Widiana, et al. 2004) proves that someone with low self-control has the tendency to be highly addicted to the internet. Some similar researches prove that self-control has a significant influence on the overuse

of the internet.

In handling that problem, the effort of self-control enhancement with the technique to change to a better self is needed. The goal is for the usage of the internet can be more directed. Self-control enhancement needs to be owned by the teenager on reducing internet overuse behavior so it can prevent teenagers have the behavior of internet addiction. A strategy/technique that can be used to decrease internet overuse is employing self-management. This technique is a modification of behavior, thought, and feeling in handling wrong behavior. The wrong behavior in this term is internet overuse.

Based on the effectiveness of self-management that can handle many wrong behaviors, it's expected that this technique can also enhance self-control in the effort to control internet overuse. This technique is meant as a curative and preventive effort so that it won't reach the level of internet addiction. Based on the description above, the researcher established the research inquiry of "Is **Self-Management Training Affect The Ability to Decrease Overuse of the Internet on Teenagers".**

2. LITERATURE REVIEW

Training
Training is a short-term process of education that uses systematic and organized procedural where non-managerial worker learns the knowledge and technical skill for restricted purposes (Prabu Mangkunegara, 2013). Simamora, 2010, defines training as a series of activities designed to enhance skills, knowledge, experience, or an individual behavioral change. Training is a part of education as a means of construction and development of the career along with a means to enhance human resource quality suitable with professional need. The dimension and indicator of training according to Gary Dessler (2015): Training Goal, Training Theory, Training Method, Instructor and, Training Participant.

Self-Management
Self-management is a psychological terminology to describes the process of achieving self-autonomy. Self-management is a strategy of behavioral change that within the process the counselee directed owned behavioral change with a technique or combination of therapeutical technique (Nurzakiyah & Budiman, 2011). According to Bandura, most part of human behavior is self-regulation behavior. Someone has the ability to self-regulate by monitoring their own behavior and evaluate it by comparing by their own goal. Bandura proposes that the self-

regulation principle is developed into the self-management technique (Hergenhahn & Olson, 2009). Self-management as a strategy of behavioral change has some purposes (Nurzakiyah & Budiman, 2011), which are: a)Giving a more active role counseling process, b)Individual skill that can last outside of counseling session, c)Solid and permanent change with the right direction of the procedure, d)Creating new skill as expected, e)The Individual able to pattern behavior, thought, and desired to feel.

According to Soetarlinah Soekadji (Purwanta, 2015), there is four-step in self-management, which are: 1). Self-observation, monitor or, observation . 2) Managing environment. 3) Reinforcement giving, deletion, or punishment. 4) Self-evaluation. An organized behavioral observation data note is very important to evaluate the efficiency and effectiveness of the program.

According to Gie (2000), there are 4 aspects form of self-management action in minimum, which is; **1).Self-motivation**. The first requirement for someone to achieve the goal of behavioral change is self-motivation. **2).Self-organization.** Self-organization is the better organizing of mind, energy, time, place, thing, and all other resources in someone's life so that personal efficiency is achieved. **3). Self-control**. Self-control is human action building willpower discipline, lift up spirit, erase reluctance, and call out energy to really do what needs to be done. **4). Self-development.** Self-development is an action of completing or self-enhancing of many things. The complete self-development covers a whole personal resource from within a person, which are: (a) mind intelligence (b) character personality (c) social sense (d) maintaining spiritual and physical health.

Self-management training

Self-management training is a short-term educational process that uses a systematical and organized procedure where the student learned knowledge and technical skill for a certain/restricted purpose. In this training, the purpose is to reduce the overuse of the internet. Self-management formed by the presence of the four aspects, **self-motivation** attitude will push the individual to possess great willpower in achieving own goal. **Self-forming functions regulate** many resources that are needed to support a certain behavior with the purpose of achieving efficiency in own life. **Self-control functions** so that the individual is able to regulate and discipline ownself, really do what must be done to be able to obtain/achieve what will be achieved. **Self-development** functions so that the

individual capable of developing ownself, commit to complete, developing ownself in many things.

There are four steps that will be learned by the student in this self-management training, those are; 1) Self-observing step, monitor or, observation. In this step, the subject intentionally and thoroughly observes their own behavior and takes notes of the type, time, duration of the behavior that is in the subject that will be modified (behavior of the overuse of the internet). In this step, the subject sometimes asks for therapeutical assistance to choose the way of taking the notes or practical behavioral recording. For example, it can be in the shape of form or, format.

2) Regulating the environment step. The environment needs to be regulated so that it can reduce or even diminish the behavior that can possibly get an immediate reinforcement. 3) Reinforcement giving step, deletion, or punishment. 4) Self-evaluating step. In this step, the subject compares what is noted as reality with what needs to be done.

Overuse of the Internet

Overuse of the internet is a term that shows a wrong use of the internet but on a level below internet addiction. Hansen (2002) states the overuse of the internet is a symptom of overuse of the internet. Overuse of the internet as an inefficient use of the internet is considered the potential of becoming internet addiction (Griffiths, 2000). Charlton & Danforth (2007) stated the overuse of the internet is the involvement of someone in a high level of the use of internet non-pathologically without the presence of withdrawal symptoms. As Lobe, et al. (2012) defined the overuse of the internet as a condition without control, overuse, and problematic behavior that is caused by the use of digital technology.

The overuse of the internet not only means to use the internet for a long duration but also as a condition of the inability to control online activity as a result of a lack of self-control (Smahel, 2012). It can be inferred that the overuse of the internet is the use of the internet because of a lack of control or self-control in doing an activity so it has a negative consequence that is risky or a potential to become internet addiction.

The duration spent in accessing the internet functions to measure or determine whether the use of it is categorized as the overuse of the internet or internet addiction. Four aspects of overuse of the internet according to Charlton & Danforth, (2007): **1) Salience**, this happens when the use of the internet becomes an important

activity in someone's life, that dominates the mind, feeling, and also behavior, **2) Euphoria subjective experience** is affected by done activity. Euphoria situation or happiness obtained from the use of the internet as well as the excitement of using the internet to obtain tranquilizer function, happiness and self-escape, **3) Tolerance,** is a process where the activity of the use of internet needs to be done to a level of fulfillment in a certain rate to achieve the effect of euphoria that can be seen from fear of losing something so the user does a long duration activity of accessing the internet, **4) Conflict**, the activity of using the internet leads to a conflict that happens between the user of the internet with own's environment (interpersonal conflict), on-duty conflict (work, task, social life, and hobby), or conflict that happens inside one's self (feeling a lack of control).

Self-Management Training and Overuse of the Internet

Self-management training in this research is a <u>short-term educational process (2 days)</u> that uses systematic and organized procedures where the student learns knowledge and technical skill of self-management as a means to decrease the overuse of the internet behavioral. Knowledge and technical skill of self-management in this case is a knowledge and skill in developing and applicating self-autonomy. Especially in developing and applicating the strategy of changing behavior by the mean of managing and directing daily behavior to achieve the goal of degrading overuse of the internet behavioral.

The short-term educational process, in this case, covers the four aspects of self-management those are: <u>self-motivational attitude, self-adaptation, self-control and, self-development.</u> A Self-motivational attitude of the students will compel them to possess great willpower in achieving the goal of decreasing the overuse of the internet behavioral. Self-forming functions for the students to manage many resources needed efficiently to support the achievement of degrading/lessening the overuse of the internet behavioral. Self-control functions for the students to be able to self-manage and self-discipline, really do what needs to be done to be able to obtain /achieve a lessening of overuse of the internet behavioral. Self-development functions so that the individual be able to self-develop, commit to complete, self-enhancement in many aspects. With self-enhancement, it is hoped that besides the lessening of the overuse of the internet behavioral, an individual capable of self-developing to do other positive things.

3. RESEARCH METHODS

This research design uses quasi-experimental research, the technique used

is one group pretest-posttest design. This technique only involves one experimental group and takes measurements before (pre) and after (post) treatment on the subject without being accompanied by a control group (Latipun, 2010). The quasi-experimental method was carried out by researchers to test whether there was an effect of self-management training on the ability to reduce excessive internet use behavior. The researcher also tested the self-management abilities of the research subjects whether there was an increase in self-management abilities after the self-management training was given to them. Desain penelitian ini digambarkan sebagai berikut:

Kelompok	*Pretest*	*Treatment*	*Posttest*
Eksperimen	O1	X	O1 "
	O2	X	O2"

Explanation:
O1   : a scoring result of self-management scale before the training
O1"   : a scoring result of self-management scale after the training
O2   : a scoring result of overuse of the internetscale before the training
O2"   : a scoring result of overuse of the internet scale after the training
X   : treatment / self-management training

The population of the research is every student at SMAN 1 Cibitung. Research subjects are chosen/picked by using purposive sampling technique with the characteristic of low pretest scoring result of self-management scale and high pretest scoring result of overuse of the internet scale. From 50 students at grade XI with the following characteristics: (a) male or female students, (b) aged 15-18 years old, (c) uses the internet on average of >2 hours per day, (d) has low/medium self-management score category and high/medium overuse of the internet score category. There are 9 students with corresponding criteria and are willing to be given the self-management training treatment.

The research took place at SMAN 1 Cibitung-Bekasi. The time of research was started by doing the interview in February 2017, deployment of pretest scale, giving self-management training treatment (for 2 days), and the deployment of posttest scale was done in April 2017.

The treatment that was given in this research is self-management training. Self-management is a behavioral modification technique functions as regulator and director of problematic behavior (Miltenberger, 2008). In this self-management training, the problematic behavior is the overuse of the internet on teenagers (subject). The technique used in the self-management technique consists of some activities, such as lecture, worksheet-filling, games, discussion, video playback, and role play. The self-management module is adapted from the self-management

research module of Mutohharoh & Kusumaputri (2013), later developed by the researcher herself. The development module refers to the theory of self-management (Purwanta, 2012) regarding self-management steps; observation/self-monitoring, environment regulation, reinforcement or punishment giving, and self-evaluation.

The data analysis was done descriptively and statistically to see the difference between pretest and posttest scores. The data recording shows that there is a change in self-management scoring results and overuse of the internet scoring result on the subjects. From the difference of these pretest and posttest scoring results, a statistical analysis was done to acknowledge the significance of the score difference. The statistic analysis used a non-parametric method, Wilcoxon signed-rank test. Wilcoxon signed-rank test is used because the sample amount is very few as many as 9 subjects and the data is not distributed normally.

4. RESULTS AND DISCUSSION

From the self-management ability measurement result data before the training (pretest) and after the training (posttest) for each subject, there is a change/enhancement on self-management ability scoring result (table 1.). Whereas, on the overuse of the internet behavioral shows a degradation on the scoring result of each subject, before and after the training was done.

Table 1.Score *Pretest* dan *Posttest Self Management and Overuse of the internet*

No	Subject	Self- management			Overuse of the Internet		
		Pretest	*Posttest*	+%	*Pretest*	*Posttest*	-%
1	S.S	58	60	3%	143	141	1%
2	N.H	70	78	11%	147	135	9%
3	A.T	52	55	6%	171	160	7%
4	A.D	59	65	10%	164	164	0%
5	A.F	55	64	16%	165	160	3%
6	A.A	56	62	11%	168	152	11%
7	R.A	71	72	1%	159	124	28%
8	D.M	34	49	44%	191	168	14%
9	A.N	62	67	8%	147	139	6%

The impact of the self-management program can be seen from the difference in pretest and posttest scores. Wilcoxon signed-rank test testing was done appropriated to the research goal, which is to acknowledge the significance of the difference on the pretest and posttest scores in an experimental group of 9 people. The following is the pretest and posttest data comprehensively (table 2.)

Table 2. The Description of data result

		N	Score Min	Score Max	Mean	Std. Deviation
Self Management	*Pretest*	9	34	71	57,44	10,90999
	Posttest	9	49	78	63,55	8,618456
Overuse of the Internet	*Pretest*	9	143	191	161,66	14,95828
	Posttest	9	124	168	149,22	15,08955

From the Wilcoxon signed-rank test analysis test result (table 3), it's visible that there's a change in the self-management ability, as many as $0,012 < 0,05$. Meaning that the self-management ability change of each subject is significant. There's a change in self-management ability on the subjects after being given self-management training. Similar to the overuse of the internet behavioral, analysis test of the significance of the pretest and posttest data result undergo a significant degradation, with the significance value of $0,008 < 0,05$. Mean that there's a significant degradation in the overuse of the internet behavioral on the subject after being given self-management training.

Table 3. Analysis of *Wilcoxon Signed-Rank Test*

	Z	Sig. (2-tailed) (p)	explanation
Self- management	-2,521	0,012	Signifikan
Overuse of the I	-2,688	0,008	Signifikan

DISCUSSION

Based on the research data analysis result, self-management training took effect in degrading the overuse of the internet. The results, all the subjects (of 9 people) undergo an escalation in self-management score. As for the overuse of the internet score as many as 8 subjects undergo score degradation, while 1 subject did not undergo degradation nor escalation (stagnant).

One of the causes of the overuse of the internet behavioral as problematic behavior is low self-control. This research result appropriates Corsini's theory (1994) stated that self-management is one of the strategies in enhancing self-control. Self-management training can enhance the ability to self-control so that the overuse of internet behavior can be reduced/degraded (negative correlation). Other research that proves the presence of a significant negative correlation between self-management/self-control with the tendency of internet addiction, is

Sari's research, (2011). She stated that the higher the self-control means the lower the tendency to overuse the internet, on the contrary, the lower the self-control means the higher the tendency to overuse the internet. The tendency to overuse the internet behavior is similar to the overuse of internet behavior.

The choice of teenagers as subjects in this research is based on the idea teenagers are more susceptible to the overuse of the internet behavioral. Teenagers tend to possess big curiosity and try new plentiful things on the internet even though it is useless. School assignment requirement likewise, teenagers oftentimes used/exploited internet as a medium in doing their assignments. In teenagers, the impact of the overuse of the internet is very influencing upon the achievement of their academic grades. The teenagers that are too busy accessing the internet that made them forget the time oftentimes ignored time to learn and abandoned school assignments. Even so, teenagers are oftentimes exploited during school hours. As a consequence, the process of learning is ineffective which impacted the degrading of the achievement of academic grades. Therefore, self-management training needs to be given to the teenagers experiencing trouble in controlling/managing the use of the internet, in order to enhance self-control ability to be able to use the internet more effectively and efficiently.

Research focus to degrade the use of the internet is based on four steps of self-management. Those are <u>observation/self-monitoring, environment regulation, behavioral reinforcement, and self-evaluation.</u> In this self-management training, those four steps are done with many delivery methods to be more varied. The goal is for the subject to not feel bored during the training program so that the goal of the change in overuse of the internet behavioral is achieved. The participants (experimental group) follow the four steps from the beginning to the end of the training.

The training was done for 2 days. During the training process, the subjects show comprehension the concept of self-management and the concept of overuse of the internet obtained from the conducted program. The enhancement of self-control and the degradation of overuse of the internet from the subject can be seen from the process of interview, discussion, and also worksheet-filling, during the activity of the training was conducted.

Step 1, observation/self-monitoring. Observation is done with the goal for the subjects to have the description related to the criteria of overuse of the

internet and get to know the positive and negative impacts from the overuse of the internet. In the process of self-monitoring, the subjects helped by the researcher and observer to observe their use of the internet behavioral through recording that covered types and behavioral, time and duration of the use of the internet, as well as the things that are felt and obtained by the subject after accessing the internet. The result is, the subject is able to understand the concept of excessive internet use, criteria/indicators and, the positive/negative impact of excessive internet use. All subjects use the internet for more than 2 hours per day. As for what the subject does is look for assignment materials, look for the latest information, and chat. The results of the observations showed that apart from being able to observe and record their respective internet usage behaviors, some subjects were also able to reduce their internet usage in a day. There was even one subject who did not use the internet at all within a day after doing the recording.

Step 2, environmental settings. The theory presented is about environmental regulation and ways to regulate the environment. The method used; presentations and role-plays. During the roleplay, all subjects were divided into two groups and performed two different scenarios but with the same theme regarding setting the environment for internet use. The majority of subjects acknowledged the physical environment and social environment that supports the use of the internet. The physical environment that is a factor in excessive internet use includes gadgets, there is wi-fi at home and the presence of internet quota. for the social environment, most subjects get a friend's invitation to stream video on the internet together and go to a place that provides free wi-fi. Then, the subject together with the researcher determined alternatives to regulate the environment so that internet use was reduced, including avoiding wi-fi, not buying quotas, using smartphones as needed, and spending more time on other activities. However, at this step, it has not been fully successful considering the limited training time so it cannot be known whether the environmental settings carried out by the subject can last a long time in the future.

Step 3. Behavioral reinforcement. The theory presented was about behavioral reinforcement, eliminating and reducing problematic behavior, and applying punishment. Delivery is done by using lecture; discussion, and filling out worksheets. Some subjects were able to determine the acceptable reinforcement if they succeeded in reducing internet use such as getting new

books, getting vacational tickets, and many others. Not only reinforcement, the subject also determines the appropriate punishment for the consequences of failing to regulate internet use, such as reduced pocket money, decreased academic scores, and so on. The subject also commits to himself by filling out the worksheet so that the success of the self-management training that has been carried outlasts in the long term.

Step 4. Self-evaluation. This stage is done by comparing the behavior of internet use before and after self-management training. This stage ends with filling in the posttest scale. The evaluation carried out is the success, benefits and, constraints that the subject experienced during the training process. After conducting an evaluation, it can be acknowledged that the majority of the subjects experienced change after participating in the self-management training. This training affects the subject's internet use, including duration of use, awareness to regulate internet use, and increased self-control abilities. This can be seen from the increase in self-management scores and a decrease in excessive internet use scores. However, the success of this training has not been confirmed for how long because the training is only carried out for two consecutive days so it is not possible to know the effectiveness of the long-term training on the subject.

CONCLUSION

Self-management training is effectively used to reduce excessive internet use behavior in school adolescents aged 15-18 years, in the short term.

BIBLIOGRAPHY

Akar, F. (2015). Purposes, Causes, and Consequences of Excessive Internet Use Among Turkish Adolescents. *Eurasian Journal of Educational Research, vol.60, 35-56*

Budiyani, K., Martaniah, S.M. (2011). Pelatihan Manajemen Diri untuk Meningkatkan Kepatuhan Diet pada Penderita Diabetes melitus Tipe II. *Psycho Idea, vol.9(1), 78-97*

Buente, W., Robbin, A. (2008). Trends in Internet Information Behavior. *Journal of the American Society for Information Science, vol.59(11), 1743-1760*

Charlton, J.P., Danforth, I.D.W. (2007). Distinguishing Addiction and High Engagement in the Context of Online Game Playing. *Psychology: Journal Articles, Paper 3*

Chourmain, I. (2008). *Acuan Normatif Penelitian untuk Penulisan Skripsi, Tesis, dan Disertasi.* Jakarta: Al-Haramain

Hansen, S. (2002). Excessive Internet Usage or Internet Addiction? The

Implications of Diagnostic Categories for Student Users. *Journal of Computer Assisted Learning, vol.18, 232-236*

Hasanzadeh, et al. (2012). The Prevalence of Internet Addiction Among University Students: A General of Specific Problem. *Journal of Basic and Applied Scientific Research, vol.2(5), 5264-5271*

Horrigan, J.B. (2000). New Internet Users: What They Do Online, What They Don't, and Implications for the Net's Future. *Pew Internet and American Life Project*

Koc, M. (2011). Internet Addiction and Psychopathology. *Journal of Educational Technology, vol.10(1), 143-148*

Latipun. (2010). *Psikologi Eksperimen*. Malang: UMM Press

Mariyati, L.I. (2014). Pelatihan Manajemen Diri dengan Pendekatan Choice Theory untuk Menurunkan Kecenderungan Merokok pada Remaja. *Jurnal Ilmiah Psikologi Terapan, vol.2(1), 103-114*

Miltenberger, R.G. (2008). *Behavior Modification: Principles and Procedures.* United State of America: Thomson Wadsworth

Mutohharoh, A., Kusumaputri, E.S. (2013). Teknik Pengelolaan Diri Perilakuan dalam Menurunkan Kecanduan Internet pada Mahasiswa Yogyakarta. *Jurnal Intervensi Psikologi, vol.5(2), 252-274*

Nurzakiyah, S., Budiman, N. (2011). Teknik Self Management dalam Mereduksi Body Dysmorphic Disorder. *Jurnal Penelitian: UPI Bandung.*

Pratama, A.H. (2017). Perkembangan Penggunaan Internet di Indonesia Tahun 2016 Terbesar di Dunia. Diunduh pada 17 Februari 2017 dari https://www.id.techinasia.com/Pertumbuhan-Pengguna-Internet-di-Indonesia-Tahun-2016/amp/

Purwanta, E. (2015). *Modifikasi Perilaku: Alternatif Penanganan Anak Berkebutuhan Khusus.* Yogyakarta: Pustaka Pelajar

Rini, A. (2011). *Menanggulangi Kecanduan Game Online pada Anak.* Jakarta: Pustaka Mina

Sari, R. (2011). Hubungan Antara Kontrol Diri dengan Kecanduan Internet pad Remaja Pengguna Facebook. *Skripsi.* Fakultas Psikologi Universitas Sumatera Utara.

Suler, J. (2006). Computer and Cyberspace Addiction. *International Journal of Applied Psychoanalytic Studies, vol.1, 359-362*

Widiana, H.S., Retnowati, S., Hidayat, R. (2004). Kontrol Diri dan Kecenderungan Kecanduan Internet. *Indonesian Psychological Journal, vol.1(1), 6-16*

Young, K.S. (1996). Internet Addiction Disorder: The Emergence of New Clinical Disorder. *Paper Presented at the 104th Annual Meeting of the American Psychology Association*

Zulaicha, A., Sugiasih, I. (2011). Hubungan Kecanduan Chatting dengan Prokrastinasi Akademik. *Jurnal Proyeksi, vol.4(2), 53-62*