

# The Effect of a R/T Group Counseling Program on The Internet Addiction Level and Self-Esteem of Internet Addiction University Students

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## ABSTRACT

The present study examined the effect of a R/T group counseling program derived from choice theory and control theory of reality therapy theory for group counseling on the Internet addiction level and self-esteem of Internet addiction University students. Participants in the treatment group attended the R/T group counseling program that was held 2 sessions per week for 5 consecutive weeks, whereas participants in the control group received no treatment. The findings indicated that the treatment program effectively reduced addiction level and self-esteem of Internet addiction University students. At the same time, the results revealed the significant effects of the R/T group counseling program on the dependent variables.

## INTRODUCTION

Cyber space is a virtual space in which we communicate with other people on the network due to the wide distribution of computers. Cyber space has appeared as a new environment basically different from the physical space in which we live.

However, the advancement of Internet technology not only brings benefits, but also negative results. Of these negative aspects, excessive Internet use is increasing dramatically. Typical Internet behaviors included revolving around the PC rooms, participating in chat rooms, checking e-mailbox too many times, playing online games, and surfing pornographic contents.

Internet addiction is described as an impulse control disorder that does not involve use of an intoxicating drug and is very similar to pathological gambling (Young, 1996). Internet addiction is called Addiction Disorder, Pathological Internet Use, Excessive Internet Use, and Compulsive Internet Use.

Young (1996) carried out the earliest empirical study on excessive Internet use. According to Young (1999), Internet Addiction is a broad term covering a wide variety of behaviors and impulse control problems. She categorized Internet addiction by five specific subtypes of Internet addiction such as cyber-sexual addiction (compulsive use of adult chat rooms or cyber-porn), cyber-relationship addiction (over-involvement in online relationships), net compulsions (compulsive online gambling, shopping, and obsessive online trading),

information overload (compulsive web surfing or database searches), and computer addiction (obsessive computer game including Doom, Myst, Solitaire etc.).

Internet addiction is a more common problem in our society as Internet users are increasing. The Internet has positive aspects including informative, convenient, resourceful and fun, but for the addicts, these benefits become detriments. There are various opinions on Internet addiction. A common saying is that if someone is addicted to anything and it is knowledge, this case is not addiction (Mental Health Net, 1997). Others such as Young and other psychologists, however, think that the excessive Internet use can become hazardous to one's mental and physical health. An addiction may interfere with normal, adaptive functioning. So if someone is addicted, his or her functioning is maladaptive.

South Korea is one of the most wired countries in the world. The number of Internet users has skyrocketed and is nearly 75% of the entire population as of 2004 (Korea Ministry of Information and Communication, 2004). In fact, ninety percent of homes connect to Internet by cheap costs, high-speed broadband. Online gaming is a professional sport, and social life for the young revolves around the PC room. Obviously, these numbers means that Internet has become an important vehicle of Korean life today. With such ease of access, the Internet has become an integral part of our lives (Huang & Alessi, 1997).

Some studies postulated that excessive Internet use is more likely to pose to college students as a population group (Korea Ministry of Information and Communication, 2004; Korea Agency for Digital Opportunity & Promotion, 2004; Lee, 2002). This population is deemed to be vulnerable because of the accessibility and the Internet and the flexibility of their schedules (Moore, 1995). That is, college students are vulnerable to Internet addiction because of many factors such as difficulty adapting to life away from home and underlying psychological problems, including depression or social anxiety. Thus, college students with quite a lot of discretionary time on their hands and adjusting to the new schedule on university campus are susceptible. Young (1996) points out the several dynamics that make university campuses ripe for Internet overuse. These includes free Internet access, huge blocks of unstructured time, newly experienced freedom from parental intervention, no monitoring of what they express online, full encouragement from faculty mem-

bers for Internet usage, the desire to escape college stressors, and social intimidation and alienation, etc.

University is a training center for adulthood and an individual must be responsible for oneself. But there are college students spending way too much time online, probably to the detriment of their school works and other activities.

Korea Ministry of Information and Communication implemented a survey of Internet addiction in 2004. They surveyed 2,600 ranging from elementary level to adults. This study used a Korean Internet Addiction Scale from Korea Agency for Digital Opportunity & Promotion (KADO). Of these, 4.8% were classified as Internet addiction disorder. Of Internet users, 7.9% were college students, the highest level. Lee (2002) recruited 3,000 ranging from elementary school level to college students. Approximately 4.8% of the respondents were classed as Internet addiction disorder. Of these Internet addiction disorder, college students were 36.7%, the highest level as well.

They spent at least two hours a day online, usually playing games or chatting. They even showed signs of actual addiction, like an inability to stop themselves from using computers, rising levels of tolerance that drive them to seek ever longer sessions online, and withdrawal symptoms like anger and craving when prevented from logging on (Lee, 2002).

To address the problem, the Korean government has built a network of 140 Internet addiction counseling centers, in addition to treatment programs at almost 100 hospitals and, most recently, the Internet Rescue camp, which started summer in 2007 (The New York Times, Nov, 18, 2007).

It is important that counselors recognize the signs and symptoms of Internet addiction. This includes not only determining the amount of time spent on the Internet, but also whether Internet usage has negatively disrupted any major areas of the client's life (e.g., recreational, social, occupational, legal, financial, physical or mental). Also, 21st century counselors need to be familiar with the signs of Internet addiction and some of the emerging treatment strategies.

Griffiths (2000) has argued that the Internet is largely being used only as a medium to carry out these behaviors in the majority of the cases. Namely, the Internet would be acting as a medium, and not a causal factor (Shaffer, Hall, & Vander Bilt, 2000). Some of the factors that had been found to be associated with Internet addiction disorder are self-control ability, self-esteem, mental hygiene, self-efficacy, depression, anxiety, and loneliness, etc (Baek, 2005). Armstrong, Phillips and Saling (2000) investigated the extent to which sensation seeking and low self-esteem predicted heavier Internet use, using the Internet Related Problem Scale. Results said that self-esteem was a better predictor of 'Internet Addiction' compared to impulsivity. Individuals with low self-esteem seem to spend more time online.

In Korean studies on the correlation between Internet addiction and self-esteem, Jeon (2005) investigated the

effect of the extent of Internet use, depression and self-esteem from 800 adolescent surveyed. As a result, the extent of Internet use increases depression and it decreases self-esteem. You (2006) analyzed the effect of Internet addiction on 400 elementary school students' self esteem and depression. The relationship between Internet addiction and self-esteem indicates a statistically significant negative slope ( $r = -.284, p < .01$ ). In other words, the higher Internet addiction is, the lower self-esteem is. Other studies have looked at the relationship between 'Internet addiction' and self-esteem (Lee, 2007; Kim, 2007; Park, 2007; Widyanto & McMurrin, 2004).

Goldberg and Young offer some ways Internet users who believe they are addicted can help themselves. First, Goldberg (1996) feel that Internet addicts should recognize patterns of overuse and be aware of the basic symptoms. A key signal to this could be time spent at the computer, but also time spent thinking about the Internet or in activities related to the Internet. The next step is to identify underlying problems (Young, 1999). Similar to other kinds of addicts, Internet addicts must ask themselves what is causing them to escape from everyday life. The third step is to devise and act out a plan to work through the problem, rather than escape it. Young argued that escaping from the problem through the Internet does not make the problem solving. It usually only intensifies the problem. Final step is that the addicts try to take steps to solve the addiction itself. Young suggested a gradual decline in use, until a sensible amount of time is reached (Murray, 1996).

Four-step treatment for Internet addicts proposed by Goldberg and Young is similar to a WDEP model in Reality Therapy. The WDEP model summarizes some procedures to explore of clients' direction and self-responsibility in life in the practice of Reality Therapy (Wubbolding, 2000; Corey, 1996). WDEP refers to W=wants, D=direction and doing, E=evaluation, and P=planning and commitment. After rapport has been established, counselors based on Reality Therapy explore clients' wants, needs, and perception. Wubbolding (2000) postulated that choice theory based on WDEP is very useful in helping clients to establish a healthy recovery method by exploring with them how they can meet their basic needs by questioning their doing, wants, self-evaluation, and plans as well as choosing more effective behaviors. Counselors who focused on the rationale of Reality therapy encourage clients to explore behavior and evaluate how effectively they are getting what they want. Clients make some plans that will lead to change and commit to plans. The core component of Reality Therapy is to ask clients the following questions?

**What are you doing now?**

**What did you actually do this past week or month?**

**What stopped you from doing what you want to do?**

**What will you do tomorrow or in the future?**

Reality therapy has been used widely as a treatment for addictive disorder (e.g., drugs, sex, food, work). Glasser (1985) has used Choice Theory to explain addiction. Lewis & Carlson (2003) has recently taken advantage of Reality Therapy for a core addiction recovery tool. Howatt (2003) developed a core addiction recovery tool based on Choice Theory figuring out that Choice Theory can serve as a core addiction recovery tool.

Reality therapy is designed to help individuals control their behavior and make new and difficult choices, in their lives. It is based on choice theory, which assumes that people are responsible for their lives and for what they do, feel, and think.

It is difficult to directly change our feeling or physiology separately from our doing or thinking. Nevertheless, we are able to change what we do or think despite how we feel. Thus, the key to changing behavior lies in choosing to change our acting and thinking.

By having clients commit to change their Internet addiction and explore their total behavior, he could bring about changes in their Internet abuse and stick to those plans. In doing so, he would not accept excuses from clients. Rather, he worked hard to help them take control over their Internet addiction behavior.

Reality therapy seems to be of value for counselors who deal with persons with Internet addiction. Regardless of the kind of addiction, a universal variable is that persons who demonstrate addiction behavior should make the rational choice to achieve their wants. Thus, Choice Theory in Reality Therapy can be used as an Internet addiction recovery way and provide a pathway to make effective choices.

Group counseling appears to be the predominant modality for treating addiction (Fisher & Harrison, 1997). The support, confrontation, and insight gained from other individuals experiencing similar cognition and emotions facilitate therapeutic recovery. Millions of recovering addicts have experienced success from attending 12-step support group (e.g., Alcoholics Anonymous, Narcotics Anonymous, Overeaters Anonymous, etc.). Internet addicts may experience similar success in attending a group designed specifically for individuals excessively using the Internet. A number of these support groups have already been established in the United States.

Reality therapy is well suited to individual counseling, group counseling, and marriage counseling (Corey, 1996). Group counseling is an effective method by which to apply the procedures of Reality Therapy. The group process can be powerful in helping clients implement their plans with their commitments. The clients and group members are encouraged to write down specific behavioral contracts and read them in front of the group. Involvement with other members in a meaningful way is an inducement to stick by the commitments made. The use of co-leaders is frequent

and has been found to be a valuable adjunct in Reality Therapy group counseling (Glasser & Zunin, 1973).

In Korea, for the past few years, group counseling programs for University students who have used excessively Internet or who were Internet addiction are rare (Kim, 2004). Especially, a group counseling program based on Reality Therapy and Choice Theory is very rare. Kim (2007) developed a Reality Therapy group counseling program as an Internet addiction recovery tool for college students in Korea. The purpose of the present study is to implement this program and examine the effectiveness. Two main research questions follow; (a) Does the R/T group counseling program for Internet addiction college students reduce significantly their Internet addiction level? (b) Does the R/T group counseling program for Internet addiction college students enhance significantly their self-esteem?

## RESEARCH METHOD

### Participants

The subjects for this study were 276 University students who were at D University in Busan metropolitan city. After the pretest, twenty-five participants were volunteers among thirty-two Internet addicts who had shown Internet addiction disorder. Demographic information of the participants follows. The participants consisted of twenty males and five females, twelve were sophomore, eight junior, and five senior. The average of their age was 24.2. They were randomly assigned into two groups, thirteen for the experimental group and twelve for the control group, respectively. In the experimental group, there were ten males and three females. Twelve were in the control group, of whom ten were male and two female.

### Instruments

K-Internet Addiction Scale (K-IAS). K-Internet Addiction Scale used in this study was the Korean version developed by Korea Agency for Digital Opportunity & Promotion (KADO) (2004). In this study comparisons could be made for the effectiveness of R/T group counseling program. This study used a 40-item self-report questionnaire on which participants rate themselves on Internet use using a 4-point Likert scale ranging from (1 = not at all) to (4 = very true). K-IAS was totaled for an overall effectiveness score and can be used as seven subscales: Disturbance of Adaptive Function (D-scale), Disturbance of Reality Testing (R-scale), Addictive Automatic Thought (A-scale), Withdrawal (W-scale), Virtual Interpersonal Relationship (V-scale), Deviate Behavior (B-scale), and Tolerance (T-scale). Each of the subscales consists of 3 to 9 items. The seven subscales are weighted on 3-36 scale and combined for a composite scale of 40-160 for total effectiveness.

In a study by KADO (2002), internal consistency coefficients was .96 as measured by Cronbach's  $\alpha$ . In the present study, Cronbach's  $\alpha$  was .93.

**Coopersmith's Self-Esteem Inventory (CSEI).** The Self-Esteem Scale was measured with a 10-item Self-Esteem Scale of Coopersmith (1981). Participants respond to a 4-point Likert scale (1 = not at all true of me, 4 = very true of me). The possible scores range from 10 (low self-esteem) to 40 (high self-esteem). In a study by Chang (2003), internal consistency reliability coefficients of the CSEI was .88 as measured by Cronbach's  $\alpha$ . In this study, Cronbach's  $\alpha$  was .87.

### **Description and some practical guidelines of the R/T group counseling program**

The R/T group counseling program is a plan for ten group sessions dealing with Internet addiction University students. This program was evaluated and supervised by specialists certificated by the Korea Counseling Association. Each session lasts 60 to 90 minutes in length. Procedure of each session includes an introduction of session goal, teaching, activities, homework assignment, and sharing.

Although each session has been carefully planned, circumstances from the previous session or issues that could arise might suggest to group leaders that the plan should be altered. Namely, group leaders need to be flexible.

Group leaders must be flexible and know when it is advisable to deviate from the proposed session plan. Time is frequently the enemy of the group leader. Group sessions have a time limitation in terms of both the length of time for a session and the number of planned sessions. Thus, the group leader should not try to plan for more topics than could be covered in a group session. The size of group and the quality of interaction often suggest the number of topics that can be discussed in a given session.

The group preparation can be divided into four sections:

State what the session is expected to accomplish, namely, purpose, or objectives

Check the material that will be used and what needs to be collected prior to the session. Materials, including blank paper, topic-oriented games, posters, construction paper, a chalkboard and chalk, crayons, scissors, or an overhead projector or a video, might be used during the sessions.

Detail the strategies including what the group leader plans to say to the group, group activities, topics for discussion, homework assignments, and a brief summary of what was accomplished.

Evaluate the group experience both in terms of individual growth and the extent to which the group, as a whole, accomplished its objective.

### **Procedure**

A quasi-experimental pretest-posttest control group design was completed. Prior to the initial commencement of the R/T group counseling program, all participants signed an informed consent agreement and completed a demographic information questionnaire. Subsequent to the completion of the pretest assessment, the treatment group participated in the R/T group counseling program that would be held two sessions per week for five consecutive weeks. The control group received no treatment. After completion of the program, both the treatment and the control group completed the posttest assessment.

### **Data Analysis**

The data collected were analyzed by independent samples t-test in an effort to examine the initial differences between the treatment and control groups on the pretests. Means, standard deviations, and estimated marginal means of the treatment group and the control group were calculated. An analysis of covariance (ANCOVA) was conducted for the analyses of research questions, because this procedure increases the statistical power (Keppel, 1991). ANCOVA was performed with the pretest measures of Korea-Internet Addiction Scale (K-IAS) and Coopersmith's Self-Esteem Inventory (CSEI) as the dependent variables.

## **RESULTS**

Independent samples t tests found significant differences that two groups were not statistically equivalent on two variables including Addictive Automatic Thought and Tolerance of K-IAS. As two groups were not equivalent before the intervention, in an effort to increase the statistical power, ANCOVA was conducted. The results of this study are reported in Tables 1-4.

### **Research Question 1**

Does the R/T group counseling program for Internet addiction college students reduce significantly their Internet addiction level? Means and standard deviations for the pretest and posttest of K-IAS are presented in Table 1. To examine the difference of the main effect of treatment in the K-IAS between the experimental and the controlled group, ANCOVA was conducted with means of the posttest measure as the dependent variables and the pretest measure on K-IAS as the covariates.

As exhibited in Table 2, ANCOVA was significant, resulting in the rejection of Null Hypothesis in K-IAS scores,  $F(1, 22)=172.308, p<0.001$ . In subscales of K-IAS, D-scale is  $F(1, 22)=76.140, p<0.001$ , R-scale,  $F(1, 22)=13.651, p<0.01$ , A-scale,  $F(1, 22)=10.911, p<0.01$ , W-scale,  $F(1, 22)=6.095, p<0.05$ , V-scale,  $F(1, 22)=18.568, p<0.001$ , B-scale,  $F(1, 22)=19.330, p<0.001$ , T-scale,  $F(1,$

22)=15.499,  $p<0.01$  respectively. On each of the dimensions of the subscales of K-IAS, after the treatment of the R/T group counseling program, the treatment group demonstrated significantly even lower Internet addiction than did the control group.

**Research Question 2**

Does the R/T group counseling program for Internet addiction college students enhance significantly their self-esteem? Means and standard deviations for the pretreatment, immediate post treatment measure and estimated marginal means of CSEI appeared in Table 3. To reveal the difference of the main effect of the R/T group counseling program in the self-esteem scale between the experimental and the controlled group, ANCOVA was conducted with means of the posttest measure as the

dependent variables and the pretest measure in self-esteem as the covariates.

As shown in Table 4, for Research Question 2, ANCOVA was significant, resulting in the rejection of Null Hypothesis in CSEI score,  $F(1, 22)=40.927, p<0.001$ . On the dimension of CSEI, after the treatment of the R/T group counseling program, the experimental group exhibited significantly higher self-esteem than did the control group.

In all, the findings of this study indicate that the R/T group counseling program for Internet addiction college students was an effective intervention for reducing their Internet addiction disorder and enhancing their self-esteem especially related to Internet addiction disorder. All of the null hypotheses tested were rejected in favor of the experimental group.

**Table 1. Means and Standard Deviations of K-IAS by Group**

Scale	Group	Pretest		Posttest		Estimated Marginal	
		M	SD	M	SD	M	SD
D	Treatment	23.00	3.44	12.38	1.85	12.2	1.01
	Control	21.42	3.55	24.92	4.80	25.09	1.05
R	Treatment	7.00	1.78	3.38	1.33	3.37	.56
	Control	6.83	2.17	6.33	2.53	6.35	.58
A	Treatment	13.92	3.25	8.92	3.04	8.97	.92
	Control	17.75	4.31	13.67	3.06	13.62	.96
W	Treatment	13.00	3.72	10.08	1.89	10.05	.60
	Control	11.83	3.79	12.17	2.33	12.20	.63
V	Treatment	10.46	2.57	6.77	1.79	6.82	.63
	Control	11.83	3.93	10.83	2.59	10.78	.65
B	Treatment	12.77	3.03	7.85	2.38	7.95	.85
	Control	13.67	2.96	13.50	3.68	13.39	.89
T	Treatment	14.46	2.73	9.46	2.63	9.15	.77
	Control	11.67	3.28	13.42	2.71	13.76	.81
Total K-IAS	Treatment	94.62	9.94	58.85	5.90	58.90	1.89
	Control	95.00	9.78	94.83	8.58	94.77	1.97

Note. D = Disturbance of Adaptive Function; R = Disturbance of Reality Testing; A = Addictive Automatic Thought; W = Withdrawal; V = Virtual Interpersonal Relationship; B = Deviate Behavior; T = Tolerance.

**Table 2. The results of ANCOVA on K-IAS**

Scale	Variables	SS	df	MS	F
D	Covariance	11.735	1	11.735	.915
	Group	976.875	1	976.875	76.140***
	Error	282.258	22	12.830	
R	Covariance	2.737	1	2.737	.677
	Group	55.227	1	55.227	13.651**
	Error	89.006	22	4.046	
A	Covariance	.190	1	.190	.020
	Group	105.837	1	105.837	10.911**
	Error	213.400	22	9.700	
W	Covariance	.928	1	.928	.201
	Group	28.165	1	28.165	6.095*
	Error	101.661	22	4.621	
V	Covariance	1.615	1	1.615	.322
	Group	93.142	1	93.142	18.568***
	Error	110.359	22	5.016	
B	Covariance	10.919	1	10.919	1.167
	Group	180.799	1	180.799	19.330***
	Error	205.774	22	9.353	
T	Covariance	11.501	1	11.501	1.658
	Group	107.542	1	107.542	15.499**
	Error	152.647	22	6.938	
Total K-IAS	Covariance	202.604	1	202.604	4.350*
	Group	8026.069	1	8026.069	172.308***
	Error	1024.755	22	46.580	

Note. D = Disturbance of Adaptive Function; R = Disturbance of Reality Testing; A = Addictive Automatic Thought; W = Withdrawal; V = Virtual Interpersonal Relationship B = Deviate Behavior; T = Tolerance.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**Table 3. Means and Standard Deviations and Estimated Marginal Means of CSEI by Group**

Scale	Group	Pretest		Posttest		Estimated Marginal	
		M	SD	M	SD	M	SD
CSEI	Treatment	16.31	2.25	21.38	1.80	21.8	.45
	Control	17.75	2.14	18.00	2.30	17.5	.47

Note. CSEI = Coopersmith's Self-Esteem Inventory.

**Table 4. The results of ANCOVA of CSEI**

Scale	Group	Pretest		Posttest		Estimated Marginal	
		M	SD	M	SD	M	SD
CSEI	Treatment	16.31	2.25	21.38	1.80	21.8	.45
	Control	17.75	2.14	18.00	2.30	17.5	.47

Note. CSEI = Coopersmith's Self-Esteem Inventory.

## DISCUSSION AND CONCLUSION

In general, many counselors who specialized in the treatment of addiction such as drug, alcohol, gambling, sex, and even Internet take advantage of individual, group, and family counseling with a heavy emphasis on the rational choice. Many studies on addiction recovery treatment have proved that group counseling is the predominant modality. Reality therapy, especially, is well suited to group counseling. In other words, the focus of Internet addiction treatment is not on Internet use, but on his or her decision-making and responsibility for dealing with situations in his or her life.

In South Korea, as Young (1996) argued earlier, some studies indicated that excessive Internet use is more likely to pose to college students as a population group. That is why this population is deemed to be vulnerable because of the accessibility and of the Internet and the flexibility of their schedules. College students, also, are vulnerable to Internet addiction because of many factors such as difficulty adapting to life away from home and underlying psychological problems, including depression or social anxiety.

University is a training center for adulthood and an individual must be responsible for oneself. Counselors and University administrators should treat Internet addiction University students for their recovery. Answering this requirement of the age, Kim (2007) developed a Reality Therapy group counseling program as an Internet addiction recovery tool for Internet addiction University students in Korea. The purpose of the present study was to implement this program and examine the effectiveness.

The data collected immediately after the delivery of the treatment of the R/T group counseling program revealed that the participants who participated in the experimental group demonstrated significant lower Internet addiction level than did participants in the controlled group. Exposing the experimental group to the R/T group counseling program significantly reduced their Internet addiction usage. This may be linked to the fact that exposing the experimental group to R/T group counseling program enables them to aware of their doing and wants, and to plan and implement plan. Also, self-evalua-

tion for the implementation and the choice of more effective behaviors help them improve responsibility.

This conclusion also supports Abbott's (1980) suggestion that the focus of treatment was not on Internet use, but on his or her decision-making and the responsibility for dealing with situations in his or her life that would be more helpful.

In Korean studies on the correlation between Internet addiction and self-esteem, Jeon (2005) and You (2006) prove that the extent of Internet use increases depression and it decreases self-esteem. Other studies have looked at the relationship between Internet addiction and self-esteem (Lee, 2007; Kim, 2007; Park, 2007; Widyanto & McMurrin, 2004). These results mean that the higher Internet addiction is, the lower self-esteem is. In accordance with these results, Internet addiction University students need to enhance their self-esteem. Moreover, group work was more effective to help clients to enhance self-awareness and self-esteem (Lee, 2002).

The experimental group experience psychological support from the counselor and other clients. Namely, the R/T group counseling program that was used in this study includes observation of demonstration, role-play, behavioral practice, explanation, feedback, reinforcement, encouragement, and assignment of behavioral tasks related to Internet excessive usage. In the posttest Immediate after the treatment, participants who participated in the R/T group counseling program exhibited higher self-esteem than did participants who received no treatment. Exposing the experimental group to a wide variety of group activities, such as psychological support from the other group members as well as group leader, role-play with peers and challenging their sense of shame, significantly affect their self-esteem. These results lend support to a vast literature on this subject (Jeon, 2007; You, 2007; Lee, 2007; Kim, 2007; Park, 2007).

In all, the R/T group counseling program is very effective to improve Internet addiction level of Internet addiction University students and enhance their self-esteem related to Internet use. These conclusions also support that Reality therapy has been used widely as treatment for addiction.

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## Appendix: Description of R/T group counseling program

SESSION	OBJECTIVE	PROCEDURE
1.	<b>Introduce group leader, group members, group rules and set goal</b>	<ul style="list-style-type: none"> <li>• Ice-breaking: introduce themselves and one reason they are in the group</li> <li>• Discuss purpose of the group</li> <li>• Make a contract on group norms such as confidentiality, commitment, treat each other with respect members, and so on.</li> <li>• Play matching game</li> </ul>
2.	<b>Introduce five basic needs to the group and help the group members understand more about Internet addiction</b>	<ul style="list-style-type: none"> <li>• Briefly restate the purpose and rules of the group</li> <li>• Explain five basic needs and explore what needs have been missed</li> <li>• Complete the Internet Addiction Checklist</li> <li>• Explore the factors of the Internet addiction in terms of basic needs</li> </ul>
3.	<b>Introduce choice theory and time management techniques</b>	<ul style="list-style-type: none"> <li>• Explain choice theory</li> <li>• Teach the group to use time management techniques</li> <li>• Homework assignment: Apply time management techniques</li> </ul>
4.	<b>Introduce 'Total Behaviors' and explore alternative activities</b>	<ul style="list-style-type: none"> <li>• Review confidentiality and follow up on the homework assignment</li> <li>• Explain 'Total Behaviors' with toy cars or copies of car picture</li> <li>• Encourage the group to establish an alternative acting</li> <li>• Present clients' alternative acting to the group</li> </ul>
5.	<b>Explain WDEP to the group and practice the process of WDEP</b>	<ul style="list-style-type: none"> <li>• Introduce WDEP and practice the process of WDEP</li> <li>• Encourage the group members to use WDEP in the situation of Internet abuse</li> <li>• Homework assignment: Apply WDEP to the real world</li> </ul>
6.	<b>Recognize Internet usage pattern and their addiction triggers</b>	<ul style="list-style-type: none"> <li>• Follow up on the homework assignment</li> <li>• Identify your usage pattern with some question: What days of the week do you typically log online?; What time of day do you usually begin?; How long do you stay on during a typical session?; Where do you usually use the computer?</li> <li>• Ponder your own feeling when you head for the computer and share Internet addiction triggers</li> <li>• Homework assignment and review the session</li> </ul>
7.	<b>Help the group make a concrete plan to do better</b>	<ul style="list-style-type: none"> <li>• Review the group rules and follow up on the homework assignment</li> <li>• Complete time plan form</li> <li>• Present it to the whole group</li> </ul>
8.	<b>Help the group make a verbal or written contract</b>	<ul style="list-style-type: none"> <li>• Make an oral or written contract with group members</li> <li>• Encourage the group to commit to plans</li> <li>• Homework assignment and remind the group of only two more session</li> </ul>
9.	<b>Help the group make positive reminder cards and use these cards in real world</b>	<ul style="list-style-type: none"> <li>• Review the purpose of group and follow up on the homework assignment</li> <li>• Make positive reminder cards and encourage the group to use in their real life</li> <li>• Discuss examples of Internet excessive use and major benefit of reducing online time</li> <li>• Homework assignment: Apply positive reminder cards</li> <li>• Remind the group that the next session will be the last meeting</li> </ul>
10.	<b>Discuss the goals and extent to which they have been achieved and have a group celebration</b>	<ul style="list-style-type: none"> <li>• Follow up on the homework assignment</li> <li>• Review significant accomplishments of the group and circle whip</li> <li>• Thank the group for the hard they did and its cooperation</li> <li>• Complete a group evaluation sheet</li> <li>• Remind the group that even though the group experience has ended, confidentiality is still expected and important</li> <li>• A light, healthy refreshment can be offered the end the group session</li> </ul>

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