The Effectiveness of Motivational Interviewing on Social Network Dependency

Seyed Hamid Hosseini[1], Azarmidakht Rezaei[*2], Sultan Ali Kazemi[3] and Siamak Samani[4]

Seyed Hamid Hosseini
Ph.D. Candidate in Psychology, Islamic Azad University, Marvdasht, Fars, Iran.
Azarmidakht Rezaei
Assistant Professor, Department of Psychology, Marvdasht Branch, Islamic Azad University, Marvdasht, Fars, Iran.
Sultan Ali Kazemi
Associate Professor, Department of Psychology, Marvdasht Branch, Islamic Azad University, Marvdasht, Fars, Iran.
Siamak Samani
Associate Professor, Department of Psychology, Shiraz Branch, Islamic Azad University, Shiraz.
Corresponding Author:
hosseini5824@gmail.co

Abstract

The purpose of this study was to investigate the effectiveness of motivational interviewing on social network dependency among adolescents. This study is an applied study in terms of its objectives and employed an experimental design with a pre-test, post-test, and the control group. The research population consisted of all male senior high school students in the Education Department of District 2 in Shiraz. Using the availability sampling, 30 students who were members of social networks were randomly assigned to two groups (one experimental and one control group, each with 15 students). The data were collected through the Social Network Dependency Scale (Moghimi & Latifi, 2015) and motivational interviews with the participants. The collected data were analyzed using the repeated measurement test and multivariate analysis of covariance (MANCOVA). The results of the study showed that motivational interviewing had a positive and significant effect on students' social network dependency, and this effect also persisted in the follow-up phase. The results of covariance analysis also suggested that motivational interviewing had a positive effect on the dimensions of social network dependency. Based on these findings, it can be concluded that motivational interviewing can reduce the social network dependency of high school students.

Keywords: Motivational Interviewing, Social Network Dependency, Adolescents.

[1] - Ph.D. Candidate in Psychology, Islamic Azad University, Marvdasht, Fars, Iran.

[2] - Assistant Professor, Department of Psychology, Marvdasht Branch, Islamic Azad University, Marvdasht, Fars, Iran.

[3] - Associate Professor, Department of Psychology, Marvdasht Branch, Islamic Azad University, Marvdasht, Fars, Iran.

[4] - Associate Professor, Department of Psychology, Shiraz Branch, Islamic Azad University, Shiraz.

*- Corresponding Author: hosseini5824@gmail.com

Introduction

Today, despite the abatement of initial fever of cell phone use in our society, its acceptance has grown to such an extent that sometimes the serious disadvantages and problems associated with this modern technology remain unnoticed. These problems can be addressed from psychological, social, cultural, behavioral, medical, legal, and criminal perspectives. Most students use cell phones for different purposes and one of their hobbies is to use cell phones for communication. The excessive use of mobile phones by students may result in poor academic performance or even dropout in some cases (Atadakht, Hamidifar, & Mohammadi, 2014).

The development of the Internet in recent years has also led to the development of internet-based applications. Social networking is one of the most important and successful Internet applications. Facebook, Twitter, Watermark, Viber, Telegram, etc. are among the fast-growing virtual social networks that are becoming more and more popular among individuals (Lee & Lee, 2010). Social networks are websites that allow people to express their beliefs and interact with others. They have some educational benefits and advantages. For instance, students are now using social networks to facilitate the performance of individual and group works in the learning process. These websites allow students to link their leisure time with formal education in an environment that is very attractive to them (Zarei Zavaraki & Ghorbani, 2015). The use of these networks has become an integral part of many students' lives and has had a direct impact on all aspects of their personal lives, including their study hours, academic performance, and other academic skills. Therefore, providing educational interventions for students who are dependent on social networks is essential. One of these interventions is motivational interviewing.

Motivational interviewing is an empowering technique that enables people to discover how they can make a change in their health. Motivational interviewing is neither a completely new intervention model nor a separate one, but rather a combination of principles and techniques derived from a set of models and presents one of the most important principles of psychotherapy and behavior change (Cox & Klinger, 2004). By increasing intrinsic motivation and pushing individuals to higher levels of psychological readiness to modify and accept health recommendations, motivational interviewing promotes individuals' participation by turning them into active rather than passive participants, builds a stronger commitment to the treatment plan, reinforces positive behavior, raises concerns about unhealthy behavior, and emphasizes the negative consequences of persistence on inappropriate behavior in an environment free from coercion. Besides, it helps people to assess

the costs of resisting change (persistence of current behavior) and the benefits of changing behavior, looking forward and understanding the future, determining the core values of life, and enhancing positive challenges between values and behaviors. Motivational interviewing also enables the transfer of information to facilitate decision-making, enhances self-efficacy, emphasizes a sense of autonomy and freedom of action, and enhances the effectiveness of counseling services (DiMarco, Klein, Clark, & Wilson, 2009; Webber & Tate, 2008).

There are many reasons for the appeal of motivational interviewing and people's greater interest in it in comparison to traditional and conventional techniques. First, motivational interviewing directly addresses and resolves the major and common problem in all treatments, namely resistance to change. Second, it is a flexible method and can be used as an "independent" approach in combination with other treatments. Third, there is a significant amount of research evidence supporting the effectiveness of motivational interviewing on substance abuse and physical and mental health problems. Fourth, research has shown that motivational interviewing is learnable and can bring about significant therapeutic effects in relatively few sessions (Arkowitz, Westra, Miller, & Rollnick, 2008). Dehghani Firouzabadi et al. (2012) investigated the effectiveness of motivational interviewing on the

prevention of addiction relapse in opiate-dependent women. The results of the study showed that counseling sessions using motivational interviewing were effective in reducing addiction relapse and drug abuse. Najafi et al. (2013) examined the effectiveness of mindfulness-based stress reduction training and emotional regulation on internet addiction and self-efficacy with an emphasis on the mediating role of coping study in female adolescents. The results of covariance analysis showed that mindfulness-based stress reduction training and emotional regulation in the experimental group reduced internet addiction and increased self-efficacy in social and emotional domains, especially in adolescents with emotional coping style rather than problem-solving coping style. Also, a meta-analysis study by Knight et al. (2006) also found that the majority of studies reported positive results concerning the effect of motivational interviewing on lifestyle changes. Hayman et al. (2007) studied the effectiveness of motivational interviewing on diet and other healthy behaviors. Their results showed that at the end of six months, the treatment had the highest impact on the group receiving synchronous motivational interviewing in terms of lifestyle changes indicating the effectiveness of this motivational approach on behavior change. In their meta-analysis, Lindson et al (2015) examined the effectiveness of motivational interviewing (MI) on quitting smoking. The results

showed that more than 16,000 participants used motivational interviewing in 28 studies published between 1997 and 2014. Motivational interviewing was conducted in one to six sessions and each session lasted from 10 to 60 minutes. The subgroup analysis showed that the motivational interviewing performed by primary care physicians was about 95% effective with a greater effect on smoking cessation than short-term counseling or routine care. Manong et al. (2018) studied the effects of a group activity-based motivational enhancement therapy program (GA-MET) on social media addictive behaviors among junior high school students in Thailand. They performed a cluster randomized trial on 245 high school students using social networks in the lower part of Northeast Thailand. The GA-MET program and control group sessions lasted 8 weeks and were followed for 4 weeks. The GA-MET program significantly reduced the average duration of social media use on weekdays and weekends. There was also a decrease in emotional behavior and depression in the treatment group compared to the control group. This program can reduce the risk of social media addictive behaviors among high school students in Thailand by reducing the time spent on social media, emotional behaviors, and depression. Motivational interviewing, rather than a medical school, is mainly a way of dealing with and living with others. Motivational interviewing and other types of psychotherapy techniques share a common understanding of resistance and ambivalence as a phenomenon that provides important therapeutic information, but they differ in terms of the type of information that is considered important and how to deal with it (Rolenik et al, 2010). The nature of motivational interviewing is based on identifying and mobilizing the core values of clients to change behavior. The result of emotionally communicating with participants and enhancing their abilities leads to increased self-awareness, increased self-esteem, and increased self-efficacy. Given the nature and efficiency of motivational interviewing, this study seeks to answer the key question of whether motivational interviewing has a significant effect on academic procrastination and social network dependency.

Research Methodology

The method used in this study is a pre-test, post-test, and follow-up design with the control group. In this study, motivational interviewing is considered as the independent variable, and academic procrastination and social network dependency as the dependent variables. The research population consisted of all of the male senior high school students in the Education Department of District 2 in Shiraz. Given the purpose of the study and individuality of motivational interviewing, the participants were selected through availability. To this end, the Academic

Procrastination Questionnaire (APQ) and the Social Network Dependency Scale were distributed among the students. After collecting and scoring the students' responses, of 129 students 30 students with the highest scores on academic procrastination were selected. Besides, of 69 students with the highest scores on social networking dependency, 30 students were selected. It should be noted that 24 students had high scores both on academic procrastination and social network dependency. Then, the clinical interviews were conducted to ensure that the participants had no depression and drug abuse. Each group was then homogenized pairwise based on their scores. Subsequently, the participants were randomly assigned into two experimental groups and two control groups (four groups in total), each with 15 participants.

Instrument

The data in this study were collected using the Social Network Dependency Scale (Moghimi & Latifi, 2015). This scale was developed by Homa Moghimi, holding a Master's degree in Psychology and Dr. Zohreh Latifi, a faculty member of Isfahan Payame Noor University. The scale contains 37 items and 3 subscales: individual, social, and cultural-ethical dimensions. The items are scored using a five-point Likert scale (Rarely = 1, Sometimes = 2, Moderately = 3, Often = 4, and Very often = 5). When interpreting the results, it should be noted that scores above 128 always indicate high social network dependency

and scores below 128 indicate a low level of social network dependency. The validity of this scale was assessed by checking its content validity. To this end, four lecturers and researchers including university professors and officers from the Iranian Cyber Police were interviewed and several items were developed. Subsequently, 60 married men and women in Isfahan were interviewed about different aspects of social networks. The validity of the items was verified by several professors in the field and their reliability index was calculated by Cronbach's alpha method, and the items with low-reliability coefficient were omitted, and those with a high-reliability coefficient were selected. Finally, 37 items with a Cronbach's alpha coefficient above 0.87 were included in the scale. This means that the Cronbach's alpha coefficient of the scale for a sample of 217 persons is equal to 0.87. The reliability index of the scale in the present study was equal to 0.76.

Conducting motivational interviewing

In the first session, the researcher became familiar with the participants and welcomed them. Then, they talked about the reasons for the poor academic performance of some of the participants and their parents' complaints. They were also informed of their academic procrastination scores and discussed the potential impacts of their academic performance and

how some changes could be made by counseling and negotiations.

In the second session, the researcher asked some open-ended questions:

1. Can you tell me what happened that you gained such low scores?
2. What are the main problems that lead to your poor academic performance?
3. Can you talk about your inner feelings right now?
4. Can you tell me what is going on in your heart?

When talking to the participants, more information was elicited from them using verbal feedback. Besides, the conflicts and contradictions stated by the participants were discussed:

1. You want to study and become the top student among the classmates and at the same time, you don't feel like it?
2. You want to get admitted to an engineering program but you cannot give up using your mobile phone and spending time on social networks?
3. You want to pass the Olympiad test but you feel sleepy?
4. You want to be a top student in the class, be praised and rewarded and at the same time get up very late in the morning, watch TV, play on your mobile phone, and browse the internet and social networks?

In the third session, while talking about the participants' concerns and reviewing the previous discussion, their statements about change were emphasized:

1. I feel I need to change.
2. I'm fed up with this situation.
3. I want to show my real self?

The participants' sense of self-efficacy was reinforced by encouraging and inciting them and emphasizing the need for change.

The fourth session ended with working on inducing the participants' self-efficacy, evaluating changes, summarizing the discussions provided in the counseling sessions, and taking the post-test (Navidian et al., 2011). Accordingly, motivational interviewing was conducted for all experimental groups with a post-test. The post-test was also taken from the participants in the control group. Besides, a follow-up test was taken from the four groups after 6 weeks. The questionnaires were then collected and scored. The collected data were analyzed using the repeated measures test and multivariate analysis of covariance (MANCOVA) by SPSS-23 software.

Results

Table 1 presents the mean and standard deviation for the participants' scores on the social network dependency scores and its components on the pre-test, post-test, and follow-up test.

Table 1: The participants' scores on the pre-, post-, and follow-up tests

Variable	Group	Experimental			Control		
		Pre-test	Post-test	Follow-up	Pre-test	Post-test	Follow-up
Individual	Mean	61.33	45.27	44.60	50	61.93	60.93
	Std. Deviation	5.05	8.08	7.28	3.82	4.98	4.25
Cultural	Mean	36.67	33	32.53	35.13	33.93	33.53
	Std. Deviation	6.63	4.85	4.66	3.33	3.26	3
Cultural-ethical	Mean	24.53	23.07	22.73	23.53	23.13	23.33
	Std. Deviation	3.81	4.51	4.03	2.95	3.36	3.15
Social network dependency	Mean	122.53	101.33	99.87	118.67	119	117.80
	Std. Deviation	9.30	13.51	12.70	6.01	7.03	6.47

Hypothesis 1: Motivational interviewing reduces social network dependency among students.

The results of the Box test were not statistically significant (P> 0.05, F = 10.15), indicating that the assumption of covariance matrix homogeneity is confirmed.

Table 2: Levine's test for determining the equality of variances

Variable	F	df 1	df 2	Sig.
Dependency (Pre-test)	1.59	1	28	0.22
Dependency (Post-test)	2.60	1	28	0.12
Dependency (Follow-up)	3.20	1	28	0.08

Since the Levin test is not significant, the variances are equal.

This is important as it confirms the reliability of subsequent results.

Table 3: Pillai's test to check variance analysis assumptions with repeated measurement

Source	Value	F	Sig.
Social network dependency	0.70	32.18	0.001

The results of Mauchly's sphericity test were not statistically significant (P> 0.05, F = 0.25). Therefore, the assumption of the

intragroup variances is established. Therefore, the Hayan-Field test was used for further analysis.

Table 4: Testing repeated measures for social network dependency

Effects	Sources of change	Sum of squares	df	Mean of squares	F	Sig	Eta squared
Intragroup	Dependency	2490.87	2	2066.44	64.64	0.001	0.70
	Group dependency	2347.49	2	1947.49	60.92	0.001	0.68
Intergroup	Group	2517.51	1	2517.51	10.47	0.003	0.27

As it can be seen the intra-group effects (P = 0.001, F = 64.64) are significant for the main intra-group effects of dependency. The intra-group interaction effects were also significant (P = 0.001, F = 60.92). Also in the intergroup factor results, the main group effect is significant (P = 0.001, F = 10.47).

Table 5: The paired samples t-test for social network dependency in the experimental group

Group	Stages	Mean	Std. Deviation	t	Sig.
Motivational interviewing	Pre-test	122.53	2.74	8.74	0.001
	Post-test	101.33	4.78		
	Pre-test	122.53	2.74	9.68	0.001
	Follow-up	99.87	12.70		
	Post-test	101.33	4.78	3.14	0.007
	Follow-up	99.87	12.70		

As it can be seen, the mean scores of the experimental group show significant differences between pre- and post-test (p = 0.001), pre- and follow-up test (p = 0.001), and post- and follow-up test (p = 0.007). Given that that students' social network dependency scores decreased in the post-test and follow-up stages, i.e., motivational interviewing had a positive effect on students' social network dependency, and this effect persisted in the follow-up phase, so the first hypothesis is confirmed.

Hypothesis 2: Motivational interviewing reduces the dimensions of social network dependency in students.

The results of the Box test were not statistically significant (P> 0.05, F = 1.06), indicating that the assumption of covariance matrix homogeneity is confirmed.

Table 6: Levine's test for determining the equality of variances

Variable	F	df 1	df 2	Sig.
Individual dimension (Pre-test)	1.48	1	28	0.24
Social dimension (Post-test)	019	1	28	0.67
Cultural-ethical dimension (Follow-up)	1.21	1	28	0.28

As shown in the above table, since the Levin test is not significant, the variances are equal.

This is important as it confirms the reliability of subsequent results.

Table 7: Multivariate covariance analysis (MANCOVA) effects

Effect	Statistics	Value	F	Sig.	Partial Eta Squared	Statistical power
Group	Pillai's effect	0.80	30.91	0.001	0.80	1

Considering the F value and the significance level of the MANCOVA indices, it can be suggested that the linear combination of variables is significantly different concerning group affiliation. The effect size of the test (eta squared) indicates that motivational interviewing had a significant effect on the dimensions of social network dependency among the students.

Table 8: Univariate covariance analysis test to determine the effectiveness of motivational interviewing on social network dependency dimensions

Effects	Sources of change	Sum of squares	df	Mean of squares	F	Sig	Eta squared	Statistical power
Post-test comparisons	Individual dimension	2398.31	1	2398.31	90.17	0.001	0.78	1
	Social dimension	25.88	1	25.88	8.01	0.009	0.24	0.78
	Cultural-ethical dimension	10.72	1	10.72	2.53	0.12	0.09	0.33

As it is shown, the results of the post-test indicated that the difference for the individual dimension were significant between the groups (F = 90.17, df = 1, P <0.001). This suggests that the experimental group showed greater improvement than the control group. The motivational interviewing effect was 0.78, implying that this treatment had a positive effect on improving the individual dimension. Similarly, the results of the post-test for the social dimension were significant between the groups (F = 8.01, df = 1, P <0.009), indicating that the experimental group was significantly better than the control group. The motivational interviewing effect was 0.24, which means that this treatment had a positive effect on improving the social dimension. But motivational interviewing had no significant effect on the cultural-ethical dimension.

Discussion and conclusion

The results of this study showed that motivational interviewing had a positive effect on students' social network dependency and this effect continued in the follow-up phase. This treatment has had a positive effect on improving the individual and social dimensions. However, motivational interviewing had no significant effect on the cultural-ethical dimension. A review of the literature showed that no research has examined the impact of motivational interviewing on social network dependency.

One of the consequences of having a social network addiction for a dependent person is changing his/her lifestyle to spend more time on the Internet, neglecting his/her health as a result of working with the networks, avoiding important life activities to spend more time on these networks, declining social relationships, ignoring family and friends, running into financial problems stemming from social

networking costs, and educational and employment problems for the dependent person. During motivational interviewing, the therapist refers indirectly to the consequences of this dependency and pushes the student to the reflection stage. At this point, he/she is partially aware of the need for change but does not do anything to bring about change. In the next step, the student realizes the need for change and does small and simple things. Then, he/she takes serious action to make the necessary changes. In the retention phase, he/she employs strategies to maintain the changes he/she has made and to prevent relapse. In fact, in motivational interviewing, the therapist pushes the clients to the change stage using specific techniques. DiMakro et al. (2009) believe that motivational interviewing increases the amount of support provided reduces treatment abandonment, and increases adherence to behavioral strategies by enhancing self-efficacy and behavior control in tempting situations.

Accordingly, motivational interviewing is to help clients resolve ambiguous issues on the side of change and begin to move toward improvement and behavioral change. This is a cognitive process that helps individuals achieve their goals works by making a distinction between what the person is doing and what he or she is seeking to do. This cognitive process is used in motivational interviewing as an essential strategy is to make a distinction between what one

expresses concerning a particular behavior and the actual behavior that he/she displays. In other words, motivational interviewing aims to increase intrinsic motivation and thus directly discovers and solves the ambiguity faced by clients for change. At the same time, motivational interviewing focuses on how to help a person to decide on his/her behavior change. The impetus for change is completely flexible and changeable and is particularly shaped in the context of communication. However, it should be noted that the real motivation for change is reinforced by the perception that one freely gains from the process of action. This mechanism is especially effective for cases of dependency. Concerning the effectiveness of motivational interviewing, review and meta-analysis studies emphasize three points: First, short motivational interviewing sessions lead to broader results. Second, the impact of motivational interviewing is determined when compared to control groups or when used as a prerequisite for serious treatments. And third, motivational interviewing slows down at the beginning of the follow-up phase to motivate behavior change (Vasilaki, Hosier, & Miles Cox, 2006)

Motivational interviewing is a good way to speed up change. It increases intrinsic motivation and pushes individuals to higher levels of psychological readiness to modify and accept practical advice, promotes participation, especially provides support for active rather

than passive audiences, builds a stronger commitment to treatment, reinforces positive behavior, raises concerns about incorrect behavior indirectly, emphasizes the negative consequences of continuing current behavior in an environment free from coercion, evaluates the costs of resistance to change (continuity of current behavior), and the benefits of changing behavior, provides insights about the current situation and the future, determines the core values of life and enhances the positive challenges between values and behaviors, help sharing information to facilitate decision-making, improve self-efficacy, emphasis on autonomy, and freedom of action to increase the effectiveness of counseling (Webber & Tate, 2008). However, the ineffectiveness of this cultural-ethical dimension of motivational interviewing, it should be noted that that social network dependency was formed in the long run and was institutionalized in the subconscious of the students and that short-term education seems unlikely to change it. Also, during this treatment, more attention was paid to cognitive aspects than cultural and ethical issues, and the emphasis was on the academic performance and strengthening the student's intrinsic motivation to improve their academic position. However, given the effectiveness of this approach on the individual and social dimensions of social network dependency, conducting motivational interviewing, the low rate of the participants' dropout, the stability of the research environment, the short duration of

sessions, and the uniqueness of the sessions can be regarded as contributions and strengths of the present study.

This study was conducted with some shortcomings. Since the participants were all male high school students in Shiraz, it difficult to generalize the results to other groups because of some specific factors including age, sex, and social characteristics of the participants.

Based on the findings of this study, teachers, and education professionals are advised to use motivational interviewing to reduce students' social network dependency. Teachers and parents can help reduce students' academic procrastination by carefully planning and using incentives and providing the necessary reinforcement for homework, and by creating interest in students. Finally, education authorities at both school and university levels are suggested to consider training programs for parents to raise their awareness and insight so that they can enhance their children's motivation in the family.

References

Dehghani Firouzabadi, S. Ghasemi, H. Montazerash, R. Fatehizadeh, M. Zolfaghari, S. & Ebrahimi, A. A. (2012). *The Effectiveness of Motivational Interviewing (MI Model) on Predicting Recurrence of Drug Dependent Women*, Addiction Research, No. 29(In Persian).

Rolenik, S.M. & Willem R-Butchler, Christopher (2010). *Motivational Interviewing in*

Health Care (Helping to Change Patients' Behavior) Translated by Ali Navidian, Seyed Ahmad Ahmadi, Nour Mohammad Bakhshani and Hamid Poursharifi. Mashhad: Sokhan Gostar Publications (In Persian).

Zarei Zavaraki, I. & Ghorbani, H.R. (2015). *The Impact of Virtual Social Networks on Students' English Language Learning,* Quarterly Journal of Education and Learning Technology, 3, 14-27 (In Persian).

Atadokht, A. Hamidifar; V. & Mohammadi; I. (2014). *Simplicity and type of user experience in high school students and its relation to individual and group motivation.* 3 (2), 122-136(In Persian).

Najafi, A. Ghamari, M. & Jabarzadeh Gheshlagh, R. (2013). *The Effectiveness of Mindfulness-Based Stress Reduction Training and Emotional Regulation on Internet Dependency and Self-efficacy through the Role of Coping Styles in Female Adolescents.* 1st National Congress of Child and Adolescent Psychology, Shahid Beheshti University(In Persian).

Arkowitz, H. Westra, H.N. Miller, W.R. & Rollnick, S. (2008). *Motivational interviewing in the trea*

tment of psychological problems. New York: Gilford Press.

Cox, W.M. & Klinger, E. (2004). *Handbook of motivational counseling: concepts, approaches, and assessment.* New York, John Wiley & Sons, 265-80.

Di Marco, I.D. Klein, D.A. Clark, V.L. & Wilson, G.T. (2009).

The use of motivational interviewing techniques to enhance the efficacy of guided self-help behavioral weight loss treatment, Eat Behavior, 10(2), 134-6.

DiLillo, V. Siegfried, N.J. Smith West, D. (2003). *Incorporating motivational interviewing into behavioral obesity treatment*, Cognitive Behavior Practice, 10, 120-130.

Hyman, D.J. Pavlik, V.N. Taylor, W.C. Goodrick, G.K. & Moye, L. (2007). *Simultaneous vs sequential counseling for multiple behavior change.* Archives of Internal Medicine. 167, 1152-1158.

Knight, K.M. Mc Gowan, L. Dickens, C. & Bundy, C. (2006). *A systematic review of motivational interviewing in physical health care settings.* The British Psychological Society. 11, 319-32.

Lee, J. & Lee, H. (2010). *The Computer-Mediated Communication Network: Exploring the Linkage between the Online Community and Social Capital*, New Media and So, (5), 12.

Lindson-Hawley, N. Thompson, T. & Begh, R. (2015). *Motivational interviewing for smoking cessation.* Cochrane Database Syst Rev., 3:CD006936. pmid: 25726920.

Manwong, M. Lohsoonthorn, V. Booranasuksakul, T. & Chaikoolvatana, A. (2018). *Effects of a group activity-based motivational enhancement therapy program on social media addictive behaviors among junior high school students in Thailand: a cluster randomized trial.* Psychological Research and

Behavior Management, 11, 329–339.

Miller, W. & Rollinick, S. (2002). Motivational Interviewing (2nd Ed.) New York: The Guilford Press. Webber KH, Tate DF, Quintiliani, L.M. (2008). *Motivational interviewing in internet groups: a pilot study for weight loss*, J Am Diet Association; 108 (6), 1029-32.

Vasilaki, E.I. Hosier, S.G. Miles Cox, X. (2006). *The efficacy of motivational interviewing as a brief intervention for excessive drinking: a meta-analytic review*, Alcohol, 41,328–35.

Navidian, A. Haghshenas, L. Abedi, M.R. Baghban, I. & Fatehizadeh, M. (2011). *Comparison of the Effectiveness of Cognitive-Behavioral Group Therapy and Combined Therapy with Motivational Interview on Symptoms of Obsessive-Compulsive Patients*. Behavioral Sciences Research, 9 (1), 112-125 (In Persian).