

## Original Article

## The Role of Anticipation of Anxiety and Emotion Regulation among Adolescents with Internet Addiction

Amin Rafiepoor<sup>1\*</sup>*1- Assistant Professor of Psychology, Payame Noor University of Tehran, Tehran, Iran**(\*Corresponding Author: Amin Rafiepoor, Email: rafiepoor2000@yahoo.com)*

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### Abstract

**Introduction:** Internet addiction among adolescents is a growing problem in every society. The present study aimed to investigate the role of anticipation of anxiety and emotion regulation in Internet addiction among adolescents.

**Methods:** 263 adolescents between the ages of 12 and 18 (121 boys, 142 girls) were selected using available sampling method and participated in this study. The participants completed the Beck Anxiety Inventory (BAI), Young Internet Addiction Test (IAT), and Cognitive Emotion Regulation Strategies Questionnaire (CERQ). Pearson correlation and stepwise regression were used to analyze the data.

**Results:** The results of this study showed that there is a significant positive correlation between maladaptive emotion regulation strategies and anxiety with Internet addiction. There was a significant negative correlation between adaptive emotion regulation strategies and Internet addiction ( $P < 0.01$ ). Based on the results of regression analysis, Two variables of maladaptive emotion regulation strategies and anxiety explained 38% of the variance for Internet addiction ( $p < 0.01$ ).

**Conclusion:** Based on the findings of this research, it can be concluded that it is necessary to emphasize the role of emotion regulation strategies and anxiety in designing interventions for the prevention and treatment of Internet addiction in adolescents.

**Declaration of Interest:** None.

**Key words:** Internet addiction, Anxiety, Emotional regulation, Adolescent.

### Introduction

Internet has become popular and has grown wildly in recent years. It has transformed into an indispensable tool for ease of communication, access to information, learning tools, search engines for several services, leisure, and entertainment tools (1). A range of users are unable to control their internet use, often resulting in problems at work, in their social life, financial complications, a decline in academic or school performance and other negative consequences (2). According to various studies, between 75% and 90% of children and adolescents at school ages, use computer games (3).

Computer games are popular among children, adolescents and even adults (3, 4). Many researchers, physicians and psychiatrists emphasize on pathological aspects the excessive use of the Internet and the virtual environment, and they are considered as a cause of mental disorder and impairment in functional daily living (4). This phenomenon has been termed “Internet addiction,” “pathological Internet use,” and “problematic Internet use.” Although a standardized definition has not been uniformly agreed on, Internet addiction is generally recognized as an individual’s inability to control his/her use of the Internet, having negative consequences

(e.g., failing in school and having decreased productivity), and resulting in marked distress and/or functional impairment. In fact, Internet addiction has been the focus of increasing attention for several years (5), due to its seemingly high prevalence (6) and association with dysfunctional social behaviors, mood and attention deficit disorders (7). Internet addiction has been likened to other behavioral addictions (6), and is thought to share defining features of substance dependence (7) such as excessive use, tolerance, withdrawal and negative repercussions from use (8). Negative consequences of overuse of the Internet addiction include psychological dependence to the Internet, craving for its use, loss of beneficial function, social isolation, loss of tolerance, and loss of self-control (8). In fact, greater use of the internet is associated with some social and psychological maladaptive variables such as, decrease in social interaction leading to loneliness (9), lower self-esteem, lower life satisfaction (10), sensation seeking (11), poor mental health (12,13), dysfunctional family (13) and may enhance anxiety and stress.

It has been shown that anxiety can be a mediator for a teenager's tendency toward solitary activities and separation from society (14), which can lead to more introversion and loneliness (15, 16). Anxiety is one of the most common disorders in human societies that afflict many people (17). Anxiety is a response to uncertainty about a possible threat or challenge. More specifically, when one feels anxious, one sees one's situation as involving a threat or challenge whose potential is unpredictable, uncontrollable, or otherwise open to question (15). Anxiety is an unpleasant emotion that is expressed in terms of distress, worry and fear, and with behavioral, cognitive and physiological symptoms such as sweating, tremor, and lack of concentration (18). Anxiety causes changes in social and human relationships, especially in the life of a teenager and younger, and has a negative impact on individual performance and communication with others (19). In fact, due to psychological, physical, emotional and social changes, adolescence is associated with anxiety and tension (19, 20) and this in turn

causes teens to be separated from others and lonely (20). Emotional responses to stressful situations appear under a wide range of joy to the usual emotions of anxiety, anger, despair and depression. Anxiety is the most common response to a stressful stimulus and permanent feeling of vulnerability is a major symptom of anxiety disorders (17).

In recent theories and research, it is assumed that problems in emotional states such as emotional responsiveness, emotional distress, or difficulty in emotional regulation play a significant role in depression, anxiety and other psychological disorders (21). Some researchers have argued that emotional regulation is a major contributor to anxiety, because emotional responses provide important information about one's experience with others (22). With this information, humans learn how to behave in the face of emotions, how to express emotional experiences verbally, what strategies to respond to emotions, and how to deal with others when appearing emotions (23). The emotional regulation refers to a set of automated and controlled processes that include the onset, maintenance, and change of emotions, which affects the occurrence, severity and duration of emotional states (24, 25). The general concept of cognitive emotion regulation refers to the cognitive mode of manipulation of emotional input. In this process, the individual regulate his emotions in order to appropriate respond to environmental demands, consciously and unconsciously (25). Successful emotional regulation enables the individual to effectively function, even in the face of intense emotional experiences (26). Conversely, emotional distress reflects problematic ways to experience and respond to emotional states, including the inability to understand and accept their emotional experiences (27). It has been shown that emotional maladaptation is associated with a variety of negative consequences including symptoms of depression, anxiety, substance abuse, aggression, and suicidal thoughts (28, 29). Emotional maladaptation can disrupt daily functioning and make itself a mental disorder (29).

Internet/gaming addiction is one of the major problems among teenagers. With the extreme time spent on playing computer games, adolescent waste much of their internal resources and energy. Therefore, it is necessary to identify the factors associated with this problem in order to take the necessary measures to prevent the occurrence and intensification of this social phenomenon. Adolescence seems to be the time period associated with experiencing anxiety and disability in emotion regulation, and these two variables can lead to the phenomenon of addiction to online games. Accordingly, due to the lack of research literature on the role of anxiety and emotion regulation in addiction to Internet and games among adolescents, the present study aims to investigate the role of anticipation of anxiety and emotion regulation in Internet addiction in adolescents.

## Methods

The cross-sectional study was conducted at Tehran. 263 adolescent (142 girls and 121 boys) in 1397 were participants of this study. The sample population was between the ages of 12 and 18 and selected by available sampling method. The data were collected using Young Internet Addiction Questionnaire, Beck Anxiety Inventory (BAI) and Cognitive Emotion Regulation Questionnaire (CERQ).

**Internet Addiction Test (IAT; Young, 1998).** The IAT is a self-report measure consisting of 20 questions assessing the extent to which internet usage interferes with one's daily routine, sleeping patterns, emotional feelings, and social life. Dysfunction is assessed on a 6-point Likert scale (0 = does not apply to 5 = always), with higher scores denoting a higher level of problems related to internet use. Those who score under 39 are classified as typical internet users, a score between 40 and 69 suggests that use is causing a moderate level of problems, and a score of 70 or greater suggests that internet use is causing a severe level of problems (27). Factor analysis of the IAT by Widyanto and McMurran (28) yielded six factors (salience, excessive use, neglecting work, anticipation, lack of control, and neglecting social life) with all factors reportedly showing good internal consistency

and concurrent validity. They concluded that the IAT is a valid and reliable instrument for research on IA. The Cronbach's alpha reliability index was .90 in the current study.

**Beck Anxiety Inventory (BAI).** The Beck Anxiety Inventory (BAI) (29, 30) is a 21-item self-report inventory of the severity of anxiety symptoms (e.g., feeling hot, or fear of losing control). Participants were asked to rate how much each symptom bothered them 'during the past week, including today' on a 4-point-rating scale ranging from 'not at all' (0) to 'severely-I could barely stand it' (31). The possible range of the total score goes from 0 to 63 with scores between 0 and 21 indicating low anxiety, scores between 22 and 35 moderate anxiety, and scores of 36 and above indicating potentially concerning levels of anxiety. In the current sample, the BAI had good internal consistency (Cronbach's  $\alpha = .82$ ).

**Cognitive Emotion Regulation Questionnaire (CERQ).** This questionnaire was constructed for people who have experienced negative events or situations. The cognitive emotion regulation questionnaire (CERQ) is a 36-item questionnaire consisting of the following nine conceptually distinct subscales, each consisting of four items and each referring to what someone thinks after the experience of threatening or stressful life event: self-blame, blaming others, rumination, catastrophe, putting into perspective, positive refocusing, positive reappraisal, acceptance, and planning. Cognitive emotion regulation strategies were measured on a five-point Likert scale ranging from one (almost never) to five (almost always). Individual subscale scores were obtained by summing the scores belonging to the particular subscale (ranging from 4 to 20). Previous research showed that all subscales have good internal consistencies ranging from 0.68 to 0.86 (32). Numerous researchers have considered psychometric properties of this questionnaire among the Iranian population. For example, Abdia, Tabanb and Ghaemian (33) investigated the Persian translation of the CERQ questionnaire in students and found adequate construct validity. Dadkhah and Shirinbayan (34) and Hasani during (35) reported that CERQ is an

appropriate instrument for research and clinical purposes in Iran (36, 37). Briefly, principal component analysis provided the original CERQ nine-factor model, which explained 74% of the variance. The degree of interrelations among the subscales was high (0/32 to 0/67) (38, 39). The internal consistency for the reappraisal subscale in this sample was satisfied (Cronbach's alpha between 0.91 and 0.96).

## Results

Descriptive findings including mean and SDs and bivariate correlations among study measures are displayed in Table 1. As shown in the table, internet/gaming addiction was positively and significantly related to anxiety and maladaptive cognitive emotion regulation strategies ( $P < 0.01$ ). Adaptive cognitive emotion regulation strategies had negative correlation with internet/gaming addiction ( $P < 0.01$ ).

**Table 1.** Mean scores and standard deviations and correlations between internet/gaming addiction, anxiety and cognitive emotion regulation strategies

Variable	<u>M</u>	<u>SD</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
1. Internet/gaming addiction	52.38	14.94	1			
2. Anxiety	39.62	11.78	0.51**	1		
3. Adaptive cognitive emotion regulation strategies	30.16	9.22	-0.31**	0.36**	1	
4. Maladaptive cognitive emotion regulation strategies	33.72	10.73	0.37**	0.59**	0.21**	1

\*\*All  $p$  values  $< 0.01$

Stepwise regression method was used to investigate the predictive role of anxiety and cognitive emotion regulation strategies to Internet addiction. Based on findings in table 2, In Step 1 anxiety was a significant predictor of Internet addiction (33% explained

variance). In Step 2, maladaptive cognitive emotion regulation strategies increased explained variance of Internet addiction by 38%. Thus, anxiety and cognitive emotion regulation strategies could anticipate the 38% of variance of Internet addiction significantly.

**Table 2.** Regression results for the predictive role of anxiety and cognitive emotion regulation strategies to Internet addiction

Variable	Predictor	<u>R</u>	<u>R<sup>2</sup></u>	<u>F</u>	<u>B</u>	<u>β</u>	<u>t</u>
1. Step 1	Anxiety	0.58	0.33	214.33**	0.67	0.59	11.86**
2. Step 2	Anxiety	0.62	0.38	197.39**	0.55	0.47	9.58**
	Maladaptive cognitive emotion regulation strategies				0.41	0.34	4.52*

\*\*  $p$  values  $< 0.01$

\*  $p$  values  $< 0.05$

## Discussion

The aim of this study was to investigate the role of anticipation of anxiety and cognitive emotion regulation among adolescents with Internet addiction. Findings have demonstrated that there are significant relationships among these variables. So, it can be said that this finding is consistent with other studies that have found a positive relationship between anxiety (12, 30, 39, 40, and 41) and emotion

regulation (42,43,44,45,46) with addictive behaviors. The results of the research confirmed the role of anxiety and maladaptive cognitive emotion regulation in anticipating Internet addiction.

In explaining these findings, it can be concluded that adolescent with negative emotions, such as anxiety or depression, may use the Internet to relieve these emotions externally. People with anxiety, stress and depression often play online games to escape from their distress and emotional problems and

replace their lifeless life, which leads to more dependence on the Internet. In fact, anxious people use the internet in order to overcome their anxiety, to escape from uneasy thoughts that lead to anxiety, and finally to attempt to replace their turbulent thoughts with the attractions and amusements existing in the internet (39, 40). Anxious individuals who feel misunderstood and lonely may use virtual relationships to seek out feelings of comfort and community. For instance, Chang et al. (44) found that neuroticism displayed a negative relationship with subjective well-being of online game players and argued that neurotic individuals are prone to online gaming addiction, and therefore neurotic gamers may be playing as a way of counteracting negative emotions (i.e., neurotic feelings). Also, adolescent are faced with temporary unpleasant emotional arousal stemming from high workload. In order to decrease such anxieties, adolescent may use online gaming as a coping strategy to reduce tension (i.e., as a mood modifier). On the other hand, these emotional disturbances are likely to be a negative consequence of the addiction to the Internet, so that Internet addicts are prone to these mental disorders due to their dependence and inappropriate changes in their lifestyle, and if they do not have access to the Internet, they have anxiety, stress and depression (43). There are several factors that influence whether a certain emotion-regulation strategy is adaptive in a particular situation; certain strategies appear to be costly and maladaptive. Experimental investigations support the notion that the effort of suppressing emotions drains mental resources, which could lead to decreased self-control (24). On the other hand, addictive behaviors seem to be associated with a deficit in self-control processes that may be exacerbated by reliance on coping styles characterized by avoidance and escape. At a more basic level, difficulties managing emotions effectively may contribute to the use of maladaptive coping strategies and result in failures in self-regulation and impulse control (24, 26). Optimal self-regulation relies on being able to focus on long-term goals in the presence of emotional distress that tends to shift attention to the immediate present.

Ricketts and Macaskill (45) investigated several techniques that addicts use to modify their emotions, one of which was the technique of ‘shutting off’ or using addicting games in order to stop an unpleasant emotional state. People who used the technique of ‘shutting off’ were often the ones who also reported poorly tolerating emotional discomfort. According to Baumeister, Zell, and Tice (46), emotional distress leads to an increase in self-awareness, which consequently leads to a desire to decrease ones self-awareness, but at the cost of self-regulation. If one is unable to self-regulate, this could lead to an addiction or a relapse of an addictive behavior.

In addition, struggling with one’s feelings may deplete coping resources and leads to decreased self-control, leading to increased risk of disinhibited or impulsive behavior. Finally, individuals who are feeling acute emotional distress will likely wish to escape via activities that promise immediate pleasure and people with internet gaming addiction often report using internet to escape from negative mood states. Also, individuals with self-regulating deficiencies try to soften their conflicts and psychosocial problems by entertaining themselves through online games or membership in various groups and friendship on the Internet. Such people are faced with weak self-esteem and social skills due to their inability to regulate emotions and experience high levels of anxiety. Therefore, they are not capable of establishing interpersonal communication, and inevitably turn to online games to compensate for this weakness and failure. In fact, the use of the Internet and virtual space has a positive and immediate effect in reducing the high levels of anxiety, and this is an incentive for the greater use of the Internet, and this way, such behaviors is strengthened.

Limitations of this study include its cross-sectional design and reliance on self-report measures. In addition, the sample consisted of adolescent in at Tehran city; thus, results may not be generalizable across individuals of different age groups, socioeconomic levels, and geographic regions.

#### **Conflict of interest**

Authors declare no conflict of interest.

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### References

- 1- Lee S, Kim S, Choi K, Shon T. Game theory-based security vulnerability quantification for social internet of things. *Future Generation Computer Systems*. 2018;82:752-60.
- 2- Pontes HM, Kuss DJ, Griffiths MD. Clinical psychology of Internet addiction: a review of its conceptualization, prevalence, neuronal processes, and implications for treatment. *Neuroscience & Neuroeconomics*. 2015;4:11-23.
- 3- Holtz P, Appel M. Internet use and video gaming predict problem behavior in early adolescence. *Journal of adolescence*. 2011;34(1):49-58.
- 4- Brand M, Young KS, Laier C, Wölfling K, Potenza MN. Integrating psychological and neurobiological considerations regarding the development and maintenance of specific Internet-use disorders: An Interaction of Person-Affect-Cognition-Execution (I-PACE) model. *Neuroscience & Biobehavioral Reviews*. 2016;71:252-66.
- 5- Chou C., Condron L., Belland J. C. A review of the research on internet addiction. *Educ Psychol Rev* 2005; 17: 363–88.
- 6- Byun S., Ruffini C., Mills J. E., Douglas A. C., Niang M., Stepchenkova S. et al. Internet addiction: metasynthesis of 1996–2006 quantitative research. *Cyberpsychol Behav* 2009; 12: 203–7.
- 7- Aboujaoude E. Problematic internet use: an overview. *World Psychiatry* 2010; 9: 85–90
- 8- Przepiorka AM, Blachnio A, Miziak B, Czuczwar SJ. Clinical approaches to treatment of Internet addiction. *Pharmacological Reports*. 2014;66(2):187-91.
- 9- Morahan-Martin J. Internet abuse: Addiction? disorder? symptom? alternative explanations?. *Social Science Computer Review*. 2005;23(1):39-48.
- 10- Nie J, Zhang W, Liu Y. Exploring depression, self-esteem and verbal fluency with different degrees of internet addiction among Chinese college students. *Comprehensive Psychiatry*. 2017;72:114-20.
- 11- Kuss DJ, Griffiths MD. Online social networking and addiction—a review of the psychological literature. *International journal of environmental research and public health*. 2011;8(9):3528-52.
- 12- Widyanto L, Griffiths M. ‘Internet addiction’: a critical review. *International Journal of mental health and Addiction*. 2006;4(1):31-51.
- 13- Kim EJ, Namkoong K, Ku T, Kim SJ. The relationship between online game addiction and aggression, self-control and narcissistic personality traits. *European psychiatry*. 2008;23(3):212-8.
- 14- Stein MB, Sareen J. Generalized anxiety disorder. *New England Journal of Medicine*. 2015;373(21):2059-68.
- 15- Ang CS, Chan NN, Lee CS. Shyness, Loneliness Avoidance, and Internet Addiction: What are the Relationships? *The Journal of psychology*. 2018 Jan 2;152(1):25-35.
- 16- Yap MB, Pilkington PD, Ryan SM, Jorm AF. Parental factors associated with depression and anxiety in young people: A systematic review and meta-analysis. *Journal of affective disorders*. 2014;156:8-23.
- 17- Carthy T, Horesh N, Apter A, Edge MD, Gross JJ. Emotional reactivity and cognitive regulation in anxious children. *Behaviour research and therapy*. 2010;48(5):384-93.
- 18- Chukhraev N, Vladimirov A, Zukow W, Chukhraiyeveva O, Levkovskaya V. Combined physiotherapy of anxiety and depression disorders in dorsopathy patients. *Journal of Physical Education and Sport*. 2017;17(1):414.
- 19- Xu J. Research on the Relationship among Phone Addiction, Social Anxiety and Loneliness in High School Students. *Open Journal of Social Sciences*. 2017;5(06):18.
- 20- Eiland L, Romeo RD. Stress and the developing adolescent brain. *Neuroscience*. 2013;249:162-71.
- 21- D’Avanzato C, Joormann J, Siemer M, Gotlib IH. Emotion regulation in depression and anxiety: examining diagnostic specificity and stability of strategy use. *Cognitive Therapy and Research*. 2013;37(5):968-80.
- 22- Mennin DS. Emotion regulation therapy: An integrative approach to treatment-resistant anxiety disorders. *Journal of Contemporary Psychotherapy*. 2006;36(2):95-105.
- 23- Sanders W, Zeman J, Poon J, Miller R. Child regulation of negative emotions and depressive symptoms: The moderating role of parental emotion socialization. *Journal of Child and Family Studies*. 2015;24(2):402-15.
- 24- Marusak HA, Martin KR, Etkin A, Thomason ME. Childhood trauma exposure disrupts the

- automatic regulation of emotional processing. *Neuropsychopharmacology*. 2015;40(5):1250.
- 25- Laborde S, Lautenbach F, Allen MS, Herbert C, Achtzehn S. The role of trait emotional intelligence in emotion regulation and performance under pressure. *Personality and Individual Differences*. 2014;57:43-7.
- 26- Aldao A, Jazaieri H, Goldin PR, Gross JJ. Adaptive and maladaptive emotion regulation strategies: Interactive effects during CBT for social anxiety disorder. *Journal of Anxiety Disorders*. 2014;28(4):382-9.
- 27- Hemmingsson E. A new model of the role of psychological and emotional distress in promoting obesity: conceptual review with implications for treatment and prevention. *Obesity Reviews*. 2014;15(9):769-79.
- 28- Ansari N, Ebrahimzadeh Mousavi M, Mohammadkhani P, Aminoroaya S, Sabzainpoor N. Role of Emotional Dysregulation and Childhood Trauma in Emotional Eating Behavior. *Practice in Clinical Psychology*. 2018;6(1):21-8.
- 29- Yu Y, Jiang C, Xu H, Yang Q, Li J, Xu Y, Xiang W, Peng L, Liu B, Lv F, Li M. Impaired cognitive control of emotional conflict in trait anxiety: a preliminary study based on clinical and non-clinical individuals. *Frontiers in psychiatry*. 2018;9:120.
- 30- Young KS. Internet addiction: The emergence of a new clinical disorder. *Cyberpsychol Behav*. 1998;1(3):237-244.
- 31- Widyanto L, McMurrin M. The psychometric properties of the internet addiction test. *Cyberpsychology & behavior*. 2004;7(4):443-50.
- 32- Michael T, Zetsche U, Margraf J. Epidemiology of anxiety disorders. *Psychiatry*. 2007 6:136-42.
- 33- Beck AT, Epstein N, Brown G, Sreer RA. An inventory for measuring clinical anxiety: Psychometric properties. *J Cons Clin Psychol* 1988; 56: 893-7.
- 34- Margraf J, Ehlers A. BAI: Beck Angst-Inventar. Manual. Deutsche Bearbeitung [BAI: Beck Anxiety Inventory. Manual. German Adaptation]. Frankfurt am Main: Harcourt Test Services GmbH; 2007.
- 35- Garnefski N, Kraaij V, Spinhoven P. Negative life events, cognitive emotion regulation and emotional problems. *Personality and Individual Differences*. 2001;30(8):1311-27.
- 36- Abdi S, Taban S, Ghaemian A. Cognitive emotion regulation questionnaire: Validity and reliability of Persian translation of CERQ-36 item. *Procedia-Social and Behavioral Sci*. 2012;32:2-7. [Persian]
- 37- Dadkhah A, Shirinbayan P. Cognitive Emotion Regulation in aged people: Standardization of Cognitive Emotion Regulation Questionnaire in Iran. *Iranian Rehabilitation J*. 2012;10 (15):24-7. [Persian]
- 38- Hasani J. the Psychometric Properties of the Cognitive Emotion Regulation Questionnaire (CERQ). *J Clin Psychol*. 2010;2(3):73- 84. [Persian]
- 39- Dalbudak E, Evren C, Aldemir S, Coskun KS, Ugurlu H, Yildirim FG. Relationship of internet addiction severity with depression, anxiety, and alexithymia, temperament and character in university students. *Cyberpsychology, Behavior, and Social Networking*. 2013;16(4):272-8.
- 40- Weinstein A, Dorani D, Elhadif R, Bukovza Y, Yarmulnik A, Dannon P. Internet addiction is associated with social anxiety in young adults. *Annals of Clinical Psychiatry*. 2015;27(1):4-9.
- 41- Mosher CE, Danoff-Burg S. Addiction to indoor tanning: relation to anxiety, depression, and substance use. *Archives of dermatology*. 2010;146(4):412-7.
- 42- Hormes JM, Kearns B, Timko CA. Craving Facebook? Behavioral addiction to online social networking and its association with emotion regulation deficits. *Addiction*. 2014;109(12):2079-88.
- 43- Williams AD, Grisham JR, Erskine A, Cassidy E. Deficits in emotion regulation associated with pathological gambling. *British Journal of Clinical Psychology*. 2012;51(2):223-38.
- 44- Chang WH, Cheng SH, Sun ZJ, Lee IH, Lee CT, Chen KC, Tsai CH, Yang YK, Yang YC. The psychosocial indicators related to neuroticism in both sexes: A study of incoming university students. *The Kaohsiung journal of medical sciences*. 2015;31(4):208-14.
- 45- Ricketts T, Macaskill A. Gambling as emotion management: Developing a grounded theory of problem gambling. *Addiction Research & Theory*. 2003;11(6):383-400.
- 46- Baumeister RF, Zell AL, Tice DM. How emotions facilitate and impair self-regulation. *Handbook of emotion regulation*. 2007:408-26.