

# The Role of Depression and Attachment Styles in Predicting Students' Addiction to Cell Phones

Abdollah Ghasempour MSc<sup>1</sup>, Mansour Mahmoodi-Aghdam MSc<sup>1</sup>

## Short Communication

### Abstract

**Background:** The present study aimed at investigating the role of depression and attachment styles in predicting cell phone addiction.

**Methods:** In this descriptive correlational study, a sample including 100 students of Payame Noor University (PNU), Reyneh Center, Iran, in the academic year of 2013-2014 was selected using volunteer sampling. Participants were asked to complete the adult attachment inventory (AAI), Beck depression inventory-13 (BDI-13) and the cell phone overuse scale (COS).

**Findings:** Results of the stepwise multiple regression analysis showed that depression and avoidant attachment style were the best predictors of students' cell phone addiction ( $R^2 = 0.23$ ).

**Conclusion:** The results of this study highlighted the predictive value of depression and avoidant attachment style concerning students' cell phone addiction.

**Keywords:** Cell phone addiction, Depression, Attachment styles

**Citation:** Ghasempour A, Mahmoodi-Aghdam M. **The Role of Depression and Attachment Styles in Predicting Students' Addiction to Cell Phones.** *Addict Health* 2015; 7(3-4): 192-7.

Received: 28.06.2015

Accepted: 03.09.2015

1- Department of Psychology, School of Educational Sciences and Psychology, University of Mohaghegh Ardabili, Ardabil, Iran  
Correspondence to: Abdollah Ghasempour MSc, Email: a\_gh\_1985@yahoo.com

## Introduction

Addiction to cell phone involves a situation where cell phone is used abundantly causing great preoccupation.<sup>1</sup> Literature review indicates that depression is one of the variables that can play an effective role in a variety of behavioral and non-behavioral addictions.<sup>2</sup> Depression is characterized by both psychological symptoms such as lack of a sense of joy and failure tolerance, and vegetative symptoms such as decreased or increased appetite and fatigue.<sup>3</sup> A various studies carried out by Zulkefly and Baharudin,<sup>4</sup> Ha et al.<sup>5</sup> and Koo and Park<sup>6</sup> have shown that excessive and addicting use of cell phone is related to depression symptoms, more interpersonal anxiety, poor self-control, low self-sufficiency, and self-esteem.

Another psychological factor, which can influence on addiction to a cell phone, is the attachment styles. According adult attachment theory, individual differences in attachment styles arise from the previous experiences concerning intimate relationships with their starting point in the attachment relationships between the baby and his mother (caregiver).<sup>7</sup>

Hazan and Shaver categorized adult intimate relationships into three main attachment styles as secure, avoidant, and ambivalent and showed their differences.<sup>7</sup> Studies have shown that excessive use of communication devices are inversely related to the ability of individuals to establish family relationships.<sup>8</sup> Lee showed that excessive use of communication means is positively associated with anxious and avoidance attachment style.<sup>9</sup>

In sum, previous studies and research indicate that addiction to communication means including cell phones is associated with multiple personal background variables such as depression and attachment styles. However, personal and social consequences of the increasing use of cell phones among Iranians students and youths are a topic not considered and investigated by experts, professionals and researchers in human sciences, especially psychology, despite its importance. Given the cultural differences and widespread progressing wave of using cell phones among youths and university students and the risk of dependency and addiction to it, the present study aims at investigating the role of depression and

attachment styles in predicting addiction to cell phone among university students.

## Methods

The research methodology of the present study is descriptive correlational. Statistical population in this study included all students of Payame Noor University (PNU), Reyneh Center, Iran, in the academic year of 2013-2014. A total of 100 students were selected as a sample by volunteer sampling according to the predefined criteria for selection such as being a student, voluntary participation, participant satisfaction, and having no serious medical and psychiatric illnesses. Next, they were asked to complete the study questionnaires. 64% (n = 64) of participants were female and 36% (n = 36) were male. 79% (n = 79) were single and 21% (n = 21) were married. The average age of participants was 21.54 [standard deviation (SD) = 2.761].

Questionnaires used in this study are as follows:

### *Beck depression inventory (BDI-13)*

This questionnaire consists of 13 self-report items that express specific symptoms of depression. BDI-13 was normalized by Rajabi in Iran.<sup>10</sup> Convergent validity of BDI-13 with the original form of the questionnaire, BDI-21, was obtained as  $r = 0.67$  in his study. Rajabi reported internal consistency of BDI-13 as 0.89 and 0.82 based on Cronbach's alpha coefficient and split-half respectively.<sup>10</sup> The reliability of BDI-13 in the present study was obtained using Cronbach's alpha as 0.88.

### *Cell phone overuse scale (COS)*

The scale was developed by Jenaro et al. in 23 items.<sup>1</sup> The COS was normalized by Golmohammadian and Yasaminejad in Iran.<sup>11</sup> They reported the test reliability as 0.90 using Cronbach's alpha. The reliability of the scale was calculated as  $r = 0.71$  by scale retest that was significant in 0.001.<sup>11</sup> Reliability of COS scale in this study was obtained as 0.87 using Cronbach's alpha test.

### *Adult attachment inventory (AAI)*

This questionnaire developed by Hazan and Shaver.<sup>7</sup> The AAI which is composed of 15 items includes three subscales namely avoidant, ambivalent, and secure attachment styles.<sup>7</sup> Hazan and Shaver<sup>7</sup> reported the questionnaire reliability

as 0.81 and 0.78 using test-retest and Cronbach’s alpha. AAI scale reliability was obtained as 0.73 using Cronbach’s alpha test in this study.

Students entered the study based on the desired criteria were first became acquainted with the general objectives of the study and then, pointing to the importance of the study results, were made aware of their responsibility for providing true and careful replies. On their agreement, they individually completed BDI-13, COS, and AAI as a questionnaire set. Efforts were made no item left unanswered as far as possible. It should be noted that in order to respect the rights of participants and research ethics, questionnaires were completed without a name in addition to a clear declaration of voluntary participation in the study, either orally (before the research) or in writing (at the top of the questionnaire).

Pearson correlation coefficient and stepwise regression methods, via SPSS software (version 21, SPSS Inc., Chicago, IL, USA), were used to analyze the data.

### Results

Table 1 shows the descriptive characteristics of the study variables. As can be seen in table 1, the highest average among participants was related to an addiction to cell phones variable and the lowest one to depression variable.

**Table 1.** Descriptive characteristics of the study variables

Variable	Mean ± SD
Mobile phone addiction	55.92 ± 15.03
Depression	11.91 ± 8.74
Secure attachment style	16.45 ± 3.77
Avoidance attachment style	12.94 ± 3.33
Ambivalence attachment style	13.12 ± 3.68

SD: Standard deviation

The result of Pearson correlation coefficients showed that, there is a significant positive correlation ( $P < 0.010$ ) between cell phone addiction in students with depression ( $r = 0.43$ ),

avoidant attachment style ( $r = 0.43$ ), and ambivalent attachment style ( $r = 0.31$ ); whereas, there is a significant negative correlation ( $P < 0.050$ ) between the cell phone addiction in students with secure attachment style ( $r = -0.25$ ).

The results in table 2 indicate a significant relationship between predictor variables, depression, avoidant attachment style, and the criterion variable. Furthermore, secure and ambivalent attachment styles did not have the necessary ability to enter the regression equation to account for addiction to a cell phone. According to table 2, in the first step, depression could alone predict 19% ( $R^2 = 0.19$ ) of changes in cell phone addiction. In the second step, the introduction of avoidant attachment style could increase this amount to 23% ( $R^2 = 0.23$ ).

### Discussion

The results showed a significant positive relationship between depression and addiction to cell phones and also indicated that depression is able to predict and account for the addiction to cell phones among students. These findings were consistent with the results found in research, for example, by Zulkefly and Baharudin,<sup>4</sup> Ha et al.<sup>5</sup> and Koo and Park<sup>6</sup> Possible explanation for this finding could be that depression and its symptoms cause affected people experience a sense of inferiority, lack of self-esteem, low self-esteem and poor social face-to-face relationships.<sup>5</sup> Thus, these negative experiences cause depressed people seek communication technologies such as the internet, social networks, text messaging, and cell phones to experience secure and supportive social relations, which are less stressful for them.<sup>6</sup>

Our findings showed that cell phone addiction has a negative relationship with secure attachment style and a positive relationship with insecure, avoidant, and ambivalent attachment styles. These findings were consistent with the results of research done, for example, by Rao and Madan<sup>8</sup> and Lee.<sup>9</sup>

**Table 2.** Stepwise multiple regression analysis of cell phone addiction over depression and attachment styles

Predictors variables	R <sup>2</sup>	F	P	B	Beta	t	P
Depression	0.191	23.078	< 0.001	0.751	0.437	4.804	< 0.001
Depression	0.235	14.907	< 0.001	0.475	0.276	2.476	< 0.015
Avoidance				1.195	0.265	2.375	< 0.019

In explaining such findings, it can be said of individuals with secure attachment style establish a better and closer relationships with other people, have a better interpersonal communication, enjoy a higher self-confidence, and are less likely to turn to addictive behaviors when the obstacles appear on their way.<sup>8</sup> However, those with insecure attachment style prefer isolation and loneliness when they fail to communicate with others and it is due to the feeling of insecurity, anxiety, and lack of confidence in themselves or others.<sup>8</sup> Therefore, this makes such people more likely to overuse cell phones.

The results showed that cell phone addiction will be predicted better based on avoidant attachment style among the three attachment styles. This finding was in line with the results of Lee.<sup>9</sup> The main characteristic of avoidant attachment style is the negative attitude toward themselves and others and complete mistrust to others. These features that are negative built-in patterns set the ground for forming defensive preparedness, resistance to external influences, limitations of emotions, distrust, and suspicion to others and their blaming.<sup>9</sup> This tendency to isolation is a part of the symptoms which are evident in people addicted to communication technologies such as Facebook, the internet, and cell phones.<sup>8</sup> Particularly, a study showed that tendency to isolation and loneliness is one of the main features of addiction to communication technologies and devices such as the internet in Iran.<sup>12</sup> Therefore, avoidant attachment style sets

the ground for the formation of cell phone addiction with negative built-in patterns.

### Conclusion

In general, our results indicate a significant relationship among the depression, attachment styles with addiction to cell phones and also depression and avoidant attachment style can predict significantly the addiction to cell phones in university students. Therefore, examining the role and importance of depression and attachment styles in expressing addiction to cell phones in students is highly recommended, because it can be useful for Student Consulting Center in decreasing addiction to cell phones symptoms through considering variables and the related treatments (e.g. treatment based on attachment styles).

The appraisal of depression, attachment styles, and addiction to cell phones based on the self-report of subjects, which may be biased, are among the limitations of this study. Another limitation is related to the sample group, which takes caution in generalizing the results to the external subjects.

### Conflict of Interests

The Authors have no conflict of interest.

### Acknowledgements

At the end, researchers need to appreciate all students participating in this study.

### References

1. Jenaro C, Flores N, Gómez-Vela M, González-Gil F, Caballo C. Problematic internet and cell-phone use: Psychological, behavioral, and health correlates. *Addiction Research and Theory* 2007; 15(3): 309-20.
2. Li SM, Chung TM. Internet function and Internet addictive behavior. *Computers in Human Behavior* 2006; 22(6): 1067-71.
3. Kenny MA, Williams JM. Treatment-resistant depressed patients show a good response to mindfulness-based cognitive therapy. *Behav Res Ther* 2007; 45(3): 617-25.
4. Zulkefly SN, Baharudin R. Mobile phone use amongst students in a university in Malaysia: Its correlates and relationship to psychological health. *European Journal of Scientific Research* 2009; 37(2): 206-18.
5. Ha JH, Chin B, Park DH, Ryu SH, Yu J. Characteristics of excessive cellular phone use in Korean adolescents. *Cyberpsychol Behav* 2008; 11(6): 783-4.
6. Koo HY, Park HS. Cell phone addiction in high school students and its predictors. *Journal of Korean Academy of Child Health Nursing* 2010; 16(4): 304.
7. Hazan C, Shaver P. Romantic love conceptualized as an attachment process. *J Pers Soc Psychol* 1987; 52(3): 511-24.
8. Rao G, Madan A. A study exploring the link between attachment styles and social networking habits of adolescents in urban Bangalore. *International Journal of Scientific and Research Publications* 2013; 3(1): 1-12.
9. Lee DY. The role of attachment style in building

- 
- social capital from a social networking site: The interplay of anxiety and avoidance. *Computers in Human Behavior* 2013; 29(4): 1499-509.
10. Rajabi GH. Psychometric properties of beck depression inventory short form items (BDI-13). *developmental Psychology* 2005; 1(4): 291-8. [In Persian].
11. Golmohammadian P, Yasaminejad P. Normalization, validity and reliability of Cell-phone Over-use Scale (COS) among university students. *Journal of Social Psychology* 2011; 6(19): 37-52. [In Persian].
12. Savari K, Bashlideh K. The relationship between shyness and loneliness on internet addiction. *Journal of the Psychological Achievements* 2012; 4(2): 199-212. [In Persian].

## نقش افسردگی و سبک‌های دلبستگی در پیش‌بینی اعتیاد به تلفن همراه در دانشجویان

عبداله قاسم‌پور<sup>۱</sup>، منصور محمودی اقدم<sup>۱</sup>

### مقاله کوتاه

#### چکیده

**مقدمه:** پژوهش حاضر با هدف بررسی نقش افسردگی و سبک‌های دلبستگی در پیش‌بینی اعتیاد به تلفن همراه انجام شد.

**روش‌ها:** این مطالعه از نوع توصیفی-همبستگی بود که در آن نمونه‌ها شامل ۱۰۰ نفر از دانشجویان دانشگاه پیام نور مرکز رینه در سال تحصیلی ۹۳-۱۳۹۲ با روش نمونه‌گیری داوطلبانه انتخاب شدند. از شرکت کنندگان درخواست گردید که مقیاس دلبستگی بزرگسال (AAI) یا (Adult attachment inventory)، فرم کوتاه پرسش‌نامه افسردگی Beck (Beck depression inventory-۱۳ یا BDI-۱۳) و مقیاس استفاده مفرط از تلفن همراه (Cell phone overuse scale یا COS) را تکمیل نمایند.

**یافته‌ها:** تحلیل رگرسیون چند متغیره به روش گام به گام نشان داد که افسردگی و سبک دلبستگی اجتنابی به ترتیب بهترین پیش‌بین برای اعتیاد به تلفن همراه در دانشجویان بود ( $R^2 = 0/23$ ).

**نتیجه‌گیری:** نتایج پژوهش حاضر ارزش پیش‌بینی‌کنندگی افسردگی و سبک دلبستگی اجتنابی را در اعتیاد به تلفن همراه دانشجویان برجسته نمود.

**واژگان کلیدی:** اعتیاد به تلفن همراه، افسردگی، سبک‌های دلبستگی

**ارجاع:** قاسم‌پور عبدالله، محمودی اقدم منصور. نقش افسردگی و سبک‌های دلبستگی در پیش‌بینی اعتیاد به تلفن همراه در دانشجویان. مجله اعتیاد و سلامت ۱۳۹۴؛ ۷ (۳-۴): ۷-۱۹۲.

تاریخ پذیرش: ۹۴/۶/۱۲

تاریخ دریافت: ۹۴/۴/۷

۱- گروه روانشناسی، دانشکده علوم تربیتی و روان‌شناسی، دانشگاه محقق اردبیلی، اردبیل، ایران

Email: a\_gh\_1985@yahoo.com

نویسنده مسؤول: عبدالله قاسم‌پور