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A SURVEY ON ADDICTION TO THE INTERNET AND ITS PSYCHOLOGICAL/ SOCIAL EFFECTS AMONG FEMALE INTERNET USERS IN ESFAHAN CITY IN THE YEAR 2006

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Abstract

The purpose of this investigation is to study the internet addition and its psychological-social effects in female internet users in Esfahan City, in the year 2006. The statistical population of this study was the whole population of the female internet users of the cities of Isfahan and Shaheenshar. 115 people (54 single females and 61 married females) who were the internet users of Isfahan City comprised the sample of this study. They were selected using the multistage cluster sampling method. The instrument of this investigation was a researcher-made questionnaire which contained 23 items measuring addiction to the Internet.

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The following four questions were suggested in this study:

1. *What are the characteristics of the population of the Internet-addicted users in Esfahan City?*
2. *How is the addiction to the Internet among the female Internet users in Esfahan City?*
3. *How are the common psychological disorders among the female Internet addicted users in Esfahan City?*
4. *How are the social effects of using the internet among the Internet addicted females in Esfahan City?*

What follows is some of the obtained results. Addiction to the internet among the internet-addicted females is more than the average level. The percentage of addiction to the Internet is not the same in different female age groups. The internet-addicted female users prefer using the Internet to being with their family, walking around with others, and visiting the relatives and friends. Use of the Internet is interesting and different for the usual life of people who are emotionally depressed. It may also lead to the seclusion of some female Internet-dependent users. Most of the female Internet-addicted users believe that the use of the Internet is psychologically pacifying and the troubles caused by others or disruption in internet connection makes them nervous. Statistical methods used in this study: one-variable tests, Chi-square, Analysis of recognition

Key words: *The Internet, User, Psychological effects, Social effects.*

Introduction:

The Internet plays a crucial role in the access of information resources. "Sources of information and other opportunities available via the Internet are increasing exponentially. This comes with the steady increase in Internet use for education" (Edwards & Bruce, 2002p180-188) and research. Also, with the growth of information on the Internet and the development of more sophisticated searching tools, there is now the more likely possibility of finding information and answers to real questions. But, within the morass of networked data are both valuable nuggets and an incredible amount of junk (Tillman, 2003p17) their E-versions providing full text of news items and feature articles (Patil et al., 2004p15). As a result, it has become difficult to decide about the quality and authenticity of such information available in digital form. In addition, a user or information searcher needs to have basic skills in finding relevant information in the Internet's ocean of information. "Web search services are now a major source of information for a growing number

of people. We need to know more about the information searching habits by users to improve the effectiveness of their information retrieval" (Spink, Bateman, & Jansen, 1999p26)

The present article has focused on the information searching habits of Internet users, to find out the status of information searching nature. In the light of this study, efforts are on to find the search requirements, related to the use of the Internet information.

Developmentally, young people gain more control over their media use as they mature. Individuals may selectively use and change their use of media, in ways not clearly understood. Age, gender, race/ethnicity and social class may influence what internet individuals have access to and choose to pay attention.(Huesmann, L.R., Moise, J.F., & Podolski, C.L. 1997p21).

Significant advances have been made in research into the cognitive effects of the internet, for example, that provide effective illustrations of a fruitful convergence of research perspectives. Qualitative data can be collected within experimental frameworks in which aspects of media exposure are systematically manipulated by the researcher (Waite, B.M., Hillbrand, M., & Foster, H.G. 2002p43).

A glance at the historical changes of the media at the beginning of the 21st century shows how much the human thinking is dependent on communication instruments, and the complex instruments of data transfer, such as electronic lines and satellites. Man at the beginning could name the phenomena, laws, and objects and in this way, he could prove or reject some concepts and in total, with the increasing complexity of societies and the communication instruments suitable to it, think of sending data and skills easily to the remotest areas and taking the best advantage of others' information and having access to the facilities that we are witnessing today (Dadgaran, 2002p34).

Perhaps no invention and innovation in the 20th century was as effective as the growth and development of the Internet on changing and revolutionizing the society. When the phrase "global village" was coined and used in the press, many-specially in traditional and conservative societies- conceived it as a new imperialistic plot against them. However, this baseless theory was not stated (Valas,M .2003p215).

Different theories and Review of literature.

There are six theories used to predict due to the impact of different kind of electronic media programmes effect the increased aggression after violence

1) Social Learning Theory

Social learning theory suggests that at least some aggression is learned by observing, and then by imitating. Aggressive video game characters might serve as models for aggressive behavior. Further, rewards such as higher points and longer spending time with the different electronic media and due to the impact of different kind of electronic media programmes motivation for increased aggression occurs by reinforcing the behavior.

2) Arousal Theory

An arousal theory predicts that, if the video game player has an aggressive disposition or is angered, electronic media programmes might cause increased aggression. According to this theory, violence due to the impact of different kind of electronic media programmes would be expected to increase aggression only in the presence of anger from some other cause.

3) Cognitive Priming Theory

A cognitive priming theory suggests that violence due to the impact of different kind of electronic media programmes will activate related cognitive structures making it more likely that other incoming information would be processed in an "aggression" framework and possibly increase aggressive behavior.

4) Catharsis Theory

The catharsis theory suggests that violence due to the impact of different kind of electronic media programmes can provide a safe outlet for aggressive thoughts and feelings.

5) Drive-Reduction Theory

Drive-reduction theory suggests, similar to catharsis theory, that violent behaviour due to the impact of different kind of electronic media programmes may be useful in managing aggression. According to this theory, highly stressed or frustrated individuals may re-establish emotional equilibrium through arousal or relaxation.

6) General Affective Aggression Model

The general affective aggression model integrates social learning, arousal, and cognitive processing theories and includes individual variables (such as aggressive personality) as well as situational variables (as due to the impact of different kind of

electronic media programmes). According to this model, whenever exposure to violent media primes aggressive thoughts, increases hostile feelings, or increases arousal, short-term increases in aggression would be expected.

Long-term increases might result due to the impact of different kind of electronic media programmes led to changes in aggression-related Knowledge structures or scripts.

Statement of the problem:

Most probably, no other invention from the beginning of its development caused such great changes. Any invention that is dependent on and associated with the great mass of the public will cause several psychological and social changes. This undeniable point is by far more attributable to the media. (Valas,M .2003p176).

The Internet is becoming widespread in the world and finds no limitation or boundary for itself. It removes the social, national, and geographical boundaries and produces the 'global village' and day by day, the number of its users increases. In our country the use of the Internet is dramatically on the increase, too. With regard to the progressive increase in the number of the Internet users in Iran and the spread of addiction to the Internet (IAS) among its users in the world, in this investigation, the researcher tries to study addiction to the Internet and its social and psychological effects on its users in Esfahan city.

Instruments

In this study two questionnaires were used as given below:

1- Questionnaire about the characteristics of population of the subjects of the study.

2- The researcher-made questionnaire.

Data analysis

The data collected from the subjects of the study were analyses through descriptive and interpretive statistics using the SPSS software. In descriptive statistics of this study, the frequency, percentile rank, mean, and standard deviation of the collected data about the characteristics of the subjects were studied. In interpretive statistics the following tests were used to analyses the data of this study:

A: The one-variable T- test for studying addiction to the Internet and its social and psychological effects;

B: Chi Square, for studying the relations between nominal variables;

C: Cromer test, (with the Degree of Freedom of two and above);

D: Phi (with the Degree of Freedom of one) for studying the strength of the relationship between nominal variables, predicting the degree of the effect of each recognition Analysis, recognizing the characteristics effective on addition to the Internet between two groups with addiction and without addiction to the Internet.

Research Questions

Question 1: What are the characteristics of the population of the Internet-addicted users in Esfahan City?

As it is represented in table 1, the obtained X2 is greater than the critical value of the table at .01 level of significance. Therefore, the percentage of addiction to the Internet is greater in single females than in married females.

Table 1. The distribution of single and married female users based on the percentage of their addiction to the Internet

Total	Addiction to the Internet	No addiction to the Internet	Marital Status
53	29 54/7%	24 45/3%	Married
62	56 90/4%	6 9/7%	Single
115	85	30	Total

$X^2 = 18/78$ DF= 1 phi= 0/404

As shown in table 2, the obtained X^2 is greater than the critical value of the table at .01 level of significance. Therefore, the percentage of addiction to the Internet is not the same in different age groups. The percentage of addiction to the Internet in the age groups of under 20 and between 20 and 30 is more than other age groups.

Table 2. The distribution of female users based on the percentage of their addiction to the Internet in different age groups

Total	Addiction to the Internet	No addiction to the Internet	Age
24	22 41/7%	2 8/3%	Under 20
54	45 84/9%	8 15/1%	20-30
24	9 37/5%	15 62/5%	31-40
13	8 61/5%	5 38/5%	Over 41
115	85 73/9%	30 26/1%	Total

$X^2 = 24/64$ DF= 3

As represented in table 3, the obtained X^2 is greater than the critical value of the table at .01 level of significance. Therefore, the percentage of addiction to the Internet is greater in female users with associate and master's degree than other groups.

Table 3. The distribution of female users based on the percentage of their addiction to the Internet with respect to their education degree

Total	Addiction to the Internet	No addiction to the Internet	Education degree
34	22 64/7%	12 35/3%	Under diploma and diploma
16	16 100%	-	Associate degree
44	27 61/4%	17 38/6%	Bachelor's degree
21	20 95/2%	1 4/8%	Master's degree
115	85	30	Total

$X^2 = 15/68$ DF= 3

As it has been shown in table 4, there is no significant difference between employed and unemployed Internet users as far as the percentage of their addiction to the Internet is concerned.

Table 4. The distribution of female users based on the percentage of their addiction to the Internet with respect to their education degree

Total	Employed		Marital Status
30	22 73/3%	8 26/7%	No addiction to the Internet
85	54 64/5%	31 36/5%	Addiction to the Internet
115	76	39	Total

$X^2 = 0/951$ DF= 1

According to table 5, the observed t is significant at .05 level of significance. Thus, there is a significant difference in each group between the mean of the number of memberships in electronic posts in different Internet sites.

Table 5. The comparison of the means of the number of memberships in electronic posts in different Internet sites by female Internet users

The possibility of providing Internet services	Home	Place of work	The place of using the Internet for users
80 92%	30 34/5%	60 69%	No addiction to the Internet
35 40/25%	85 97/7%	55 63/2%	Addiction to the Internet
115	115	115	Total

$X^2 = 15/8$ DF= 2

According to the findings represented in table 6, the place of use of the Internet by Internet-addicted users is more at home than any other places

Table 6. The distribution of female users based on the percentage of their addiction to the Internet with respect to their place of use of the Internet

Total	Employed		Marital Status
30	22 73/3%	8 26/7%	No addiction to the Internet
85	54 64/5%	31 36/5%	Addiction to the Internet
115	76	39	Total

$X^2 = 15/8$ Degree of freedom (DF)= 2

The findings in table 7 show that the time spent on use of the Internet is longer in users who are addicted to the Internet than those who are not.

Table 7. distribution of female users based on the percentage of their addiction to the Internet with respect to the length of time of use

Total	More than 12 months	10-12 months	7-9 months	6 months and less	The length of time of use of the Internet among users
30	1240%	310%	516/7%	1033/3%	No addiction to the Internet
85	4755/3%	1922/4%	1011/8%	910/6%	Addiction to the Internet
115	5951/3%	2219/1%	1513%	1916/5%	Total

$X^2 = 10/13$ Degree of freedom (DF)= 3

As represented in table 8, the t observed is significant at $p<0.05$ level. Therefore, there is a significant difference between the mean of the hours devoted to the Internet use during a week in the two groups.

Table 8. Comparison of the mean of the hours spent on the internet use during a week

Total	More than 12 months	10-12 months	7-9 months	6 months and less	The period of use of the Internet among users
30	1240%	310%	516/7%	1033/3%	No addiction to the Internet
85	4755/3%	1922/4%	1011/8%	910/6%	Addiction to the Internet
115	5951/3%	2219/1%	1513%	1916/5%	Total

$X^2 = 10/13$ Degree of freedom (DF)= 3

Question 2: How is the addiction to the Internet among the female Internet users in Esfahan City?

Tables 9, 10 and 11 will answer to this question.

As represented in table 9, the t observed is greater than the critical value of the table at .05 level of significance. Therefore, addiction to the Internet among its users is more than the mean (x=3.12).

Table 9. Comparison of the mean score of addiction to the Internet with criterion score of 3

t score	Standard	Deviation (SD)	Mean (X)
6.53	1.03	3.12	Addiction to the Internet

According to the findings in table 10, 73.9% of the users under study were addicted to the Internet and26.1% were not.

Table 10. distribution of the percent of addiction to the Internet

Percent	Frequency	
26.1	30	No addiction to the Internet
73.9	85	Addiction to the Internet
100	115	Total

As represented in table 11, items 1 and 2 show the greatest means of addiction to the Internet, meaning that most of the users stated that the were using the Internet more than what they had decided to use and during their use of the Internet they increased the hours of its use.

Table 11. Mean distribution and standard deviation of the questions related to addiction to the internet

Standard Deviation	Mean (x)	Question
1.45	3.59	1. Have you increased the hours of use of the Internet during your use of it?
1.45	3.71	2. Do you use the Internet more than the time you had decided to use it?
1.45	3.53	3. Do you check your emails (electronic mails) before doing anything else in the Internet?
1.44	3.06	4. How much do you think that life is boring without having access to the Internet?
1.53	3.06	5. Is it difficult to you not to have access to the Internet for some days?
1.54	2.48	6. Have you ever tried to reduce your browsing hours?
1.80	2.56	7. Do you use the Internet for chatting?

Question 3: How are the common psychological disorders among the female Internet-addicted users in Esfahan City?

Question 4: How are the social effects of using the internet among the Internet-addicted females in Esfahan City?

Tables 13 through 18 will answer these two questions.

Table 12. Significance of recognition between the two groups with respect to the predicted variables

F index	Predicted variables
33.03	Social effects
29.89	Psychological disorders
21.35	Depression
19.66	Paranoiac thoughts
16.91	Physical complaints\

Table 13. Percentage of true/false predictions based on variable equations

Spread of addiction to the Internet	No spread of addiction to the Internet	Users distribution
7 24.4%	23 76.7%	No addiction to the Internet
73 85.5%	12 14.1%	Addiction to the Internet

The percentage of the cases that recognition analysis has correctly classified addiction to the internet in its users according to social and psychological effects is 63.5%.

As shown in table 15, the t observed is smaller than critical value of the table at .05 level of significance. Thus, the amount of the psychological disorders among its users is greater than the mean (X= 2.61).

Table 14. Comparison of mean scores of common psychological disorders of female Internet users

t score	Standard deviation (SD)	Mean (X)	
1.02	1.21	2.61	Common psychological disorders

Based on the findings of table 16, the t observed is greater than critical value of the table at .05 level of significance. Therefore, the social effects of the use of the Internet among its users is greater than the mean (x= 4.19).

Table 15. Comparison of the mean score of the social effects of the Internet use, with the criterion score of 3

t score	Standard deviation (SD)	Mean (X)	
14.7	1.22	4.19	Social effects of the use of the Internet

Based on the findings in table 17, the greatest mean of the common psychological disorder is related to the question 11, "How much do you feel angry when somebody bothers you while working on the Internet?", with x= 2.95, and question 13, " Is the use of the Internet pacifying to you", with X= 2.85.

Table 16. Mean distribution and standard deviation of questions related to the common psychological disorders in female internet users

SD	X	Question
1.04	2.2	8- Do you think about the Internet when you are not connected to it?
1.70	2.10	9- If you are asked what you do on the internet, how much do you hide the true response?
1.69	2.46	10- If you are asked what you do on the internet, how much do you treat the question defensively?
1.60	2.95	11- How much do you feel angry when somebody bothers you while working on the Internet?
1.82	2.43	12- How much do you feel bad-tempered, depressed, or upset from the time you are disconnected till the time you are you are connected again?
1.48	2.85	13- Is the use of the Internet pacifying to you?
1.66	2.71	14- Do you forget your problems using the Internet?
1.77	2.57	15- Has the time and way of your sleeping been disturbed because of using the Internet?

As represented in table 18, the greatest mean of the social effects of the use of the internet is related to the questions 16 and 17 meaning that female Internet users prefer being busy on the Internet to being with their family and walking around with relatives and friends.

Table 17. Mean distribution and standard deviation of questions related to the social effects of use of the Internet

SD	X	Question
1.75	2.53	16- How much do you prefer working on the Internet to being with your family?
1.73	2.52	17- How much do you prefer being busy on the Internet to walking around with others or visiting relatives or friends?
1.72	2.32	18- How much do others complain of you about spending too much time on the Internet?
1.79	2.93	19- How much do you tell lies to your family or friends about hiding the amount of time spent on the Internet?
1.59	1.60	20- How much have you put the function of your occupational/educational relationships or job opportunities in danger because of the use of the Internet?
1.53	1.37	21- How much have you put your occupational/ educational relationships or job opportunities in danger because of the use of the Internet?
1.74	1.29	22- How much family or matrimonial problems do you have because of the use of the Internet?
1.72	1.57	23- How much have you postponed or cancelled your occupational, educational, or family tasks because of the use of the Internet?

Discussion and conclusion

The percentage of addiction to the Internet between a married and single female users is the same. The percentage of addiction to the internet in married females is 72.1% and in single females is 75.9%. The percentage of addiction to the internet in different age groups is not the same. Based on the findings related to the first research question, the percentage of addiction to the internet in age groups of fewer than 20 and 20-30 is more than other age groups. The results of this study were not in line with the findings of Young (1996). In Young's (1996) study users

independent of the Internet were mainly males between 12 to 30 years of age. The reason for the fact that Young's findings are not in harmony with the findings of this study may be that in recent years the Internet has been more easily accessible to this age group. In addition, this age group probably has more information about the Internet and its recreational, entertaining, and informative aspects. Based on the observation learning theory it can be inferred that in teenagers and youngsters age groups the interest of peers and their use of the Internet are also effective in the use of the Internet and the talk of the internet and different Internet sites is probably more common in this age group than other age groups as well.

The percentage of the addiction to the Internet is not the same in female users of different education degrees. The highest percentage of the addiction to the Internet is in female users with associate and master's degree and above. This, in the opinion of the researcher, may be due to the research needs of this age group of users and maybe this group of female users, and in particular female users with an associate degree, with respect to their field of study, have more information about how to use the different Internet resources(these results are not so much comparable with the findings of other studies because most of the studies have considered such variables as control variables or because there is not much information about such variables).

The percentage of the addiction to the Internet in single female users (9/3%) is more than the married female users (54/7%). The percentage of addiction to the internet in employed female users In comparison to the unemployed female users (79/5%) is the same.

The difference between the number of membership in the electronic mail in the two groups of female users addicted to the Internet (X=3.34) and female users non-addicted to the Internet (X=2) is significant.

With respect to the place of use of the Internet based on the percentage of addiction to the internet, the female users addicted to the Internet use the Internet at home with a high degree of probability (97.57%), whereas the users non-addicted to the Internet use the Internet at places which provide Internet services with a high degree of probability (92%). In the researcher's opinion and based on the findings represented in tables (4-12) and (4-17), the reason for the use of the Internet by the users addicted to he Internet at home, is probably having no time limitation for its use at home. Another reason is that these users demanded calm places without trouble for the use of the Internet (it should be mentioned that no research work was available to the researcher related to this finding).

Question 2: How is addiction to the Internet among the female Internet users in Esfahan cities?

The analysis of the data related to this question showed that the mean score of addiction to the Internet is more than the mean level (X=3.12), with a standard deviation of 1.03. Comparison of the mean of scores with the criterion score of 3 using the one-variable. T-score showed that addiction to the internet in internet users is more than the mean level According to the research findings 73.9% of the internet users in this study were addicted to the Internet and 26.1% of them were not. Addiction to the Internet showed that internet users spent more time working on the Internet than they had decided to and increase the hours of use of the Internet during its use. Based on the criteria set by American Psychological Association from this result it is inferred that in order to be satisfied from being connected to the Internet people have to increase their period of being connected to the internet and this will continue many times and as a result this negative cycle will lead to dependence on the Internet and its unwelcome consequences.

Question 3: How are the common psychological disorders among the female Internet addicted users in Esfahan City?

The analysis of the data related to this question showed that the mean score of common psychological disorders among the female users addicted to the Internet at the mean level is (X=2.61), with the standard deviation of 1.21.

Question 4: How are the social effects of using the internet among the Internet-addicted females in Esfahan City?

The analysis of the data related to this question showed that the mean score of the social effect of using the Internet on female users addicted to the internet is more than the mean level (X= 4.19), with the standard deviation of 1.22. Female users with addiction to the Internet prefer working on the internet to being with their family, walking around with others and visiting relatives and friends. The findings of this study are in line with the research findings of Lin and Tessay(2002), Cheo and Hesi Ava (2000), and Young (1996). In all these studies, the fading of the relationships with family and friends has been mentioned as one of the social effects of using the Internet by its users. With respect to the obtained results and their harmony with the two mentioned studies and also with respect to the findings of the third research question, it is probable that the Internet is interesting and different for the ordinary or unhappy life of people who are emotionally depressed (with respect to the second research question). It may also lead to the isolation

some of the users who are dependent on the internet because in most cases virtual friendships and relationships will cause social isolation. The Internet may separate one from all daily needs through making and accepting role plays, anonymity, obtaining new identity, new methods of relationships, and relationships with several people of different interest. In addition, while being connected to the Internet, one can control and set their social distance from others and without the pressure of family relationships and friendships which may not be under any obligation create cordiality, empathy, and company with others.

Applied Suggestions

It is suggested that educational programs be introduced for the education of the Internet users, especially for teenagers and youngsters in order to better understand the psychological and social effects of using the internet.

It is suggested that some plans be introduced to inform the authorities and programmers of the Internet networks of the effects of the Internet (with respect to being a direct model) on the behavior and feelings of its users. It is also suggested that some programs be introduced to make the Internet uses healthy.

It is suggested that due to the rapid growth of technology and the ability of being connected to the Internet, managers and programmers (with regard to problems associated with the excessive use of the Internet at work) arrange some specific and limited hours for the use of the Internet for the employees in order for the employees to use the Internet with controlled planning and to use the internet to meet the work goals.

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