Research Paper: Effect of Family Communication Patterns on Internet Addiction

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ABSTRACT

Objective: This study investigated the role of family communication patterns, including consensual, pluralistic, protective and laissez-faire, on Internet addiction.

Methods: A total of 230 Jahrom Medical University students (120 females and 110 males) answered the questionnaires of the study. The samples were selected based on the random cluster sampling method. In this research, we used Young's Internet Addiction scale and Family Communication Patterns scale. We used two-ways ANOVA for analyzing the effect of communication patterns on Internet addiction, considering gender as a moderator.

Results: Our findings indicated that among the four types of family communication, there are significant differences in individuals' scores in Internet addiction: $F(3,190)=10.16$, $P<0.000$). Also, Internet addiction in consensual and laissez-faire patterns was higher in males than in females.

Conclusion: According to the results of the study, children with laissez-faire familial patterns have the highest levels of using Internet and the pluralistic family has the lowest scores of Internet use.

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1. Introduction

The use of online services has recently become a necessity for many people around the world. While time spent online can be hugely productive, compulsive Internet use and its effects on daily life, work, and relationships cannot be ignored. Hence, considering the extensive time spent on the Internet, a new kind of addiction, called "Internet addiction", has been observed.

Problems arising from excessive Internet use have been documented worldwide. Several international studies have pointed out that Internet addiction is a particularly common problem among students (Niemz, Griffiths, & Banyard, 2005; Ko, Yen, Yen, Lin, & Yang, 2007; Lam, Peng, Mai, & Ing 2009; Thomas & Martin, 2010). Research works have showed that greater time spent on the Internet contributed to higher likelihoods of smoking and use of alcohol (Liu, Desai, Krishnan-Sarin, Cavallo, & Potenza, 2011; Carson, Pickett, & Janssen, 2011; Huang et al., 2012; Chiao, Yi, & Ksobiech, 2014) (Liu et al., 2011; Denniston, Swahn, Hertz, & Romero, 2011; Epstein, 2011; Chiao et al, 2014). These studies also showed that extensive Internet use was associated with a reduction in academic achievement, sleep, interests, and

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quality of desires (Chou, Condorn & Belland, 2005). It also has higher scores in loneliness scale (Whang, Lee & Chang, 2003) and mental health reduction (Samson and Keen, 2005; Tsai et al., 2009). In addition, Internet addiction has been related to low levels of social self-efficacy (Iskender & Akin, 2010) and lack of social support (Tsai et al., 2009).

Although there is no standardized definition of Internet addiction, researchers agree that this phenomenon does exist. In a derivative from the index associated with pathological gambling in the Diagnostic and Statistical Manual (fourth edition) (DSM-IV) (Young (1998a) described Internet-related disorders, called Problematic Internet Use (PIU). Ko et al (2007) showed that low self-esteem, playing online games, and poor family functions are critical predictive factors related to Internet dependency. Park, Kim and Cho (2008) reported that the risk factors of family violence, such as marital violence and parent-to-child violence, were strongly associated with excessive Internet use. Elements of family life, such as parenting style and parental attitudes, intra-family conflicts, and permissive or indulgent parenting have been reported to contribute to a higher degree of substance dependency and poorer psychosocial outcomes for children (Beal, Ausiello, & Perrin, 2001). Therefore, it is not unexpected that poor family function and interfamily conflicts have been correlated with adolescent Internet addiction (Amato & Fowler, 2002).

Family communication patterns have also been studied in different cultural contexts. The conversation orientation has a positive relationship with self-esteem and social support (Koerner & Maki, 2004) and a negative relationship with depression and anxiety (Gudykunst, 1997; Kouroshnia & Latifian, 2006). On the contrary, conformity orientation has a positive relationship with anxiety (Kouroshnia & Latifian, 2006) and a negative relationship with self-esteem and social support (Koerner & Maki, 2004). Promoting family conversation is a positive predictor of children's quality of life, whereas emphasizing conformity decreases children's quality of life (Rahimi & Khayyer, 2006). Additionally, conversation orientation correlates positively and conformity orientation correlates negatively with children mental health and emotional intelligence (Tajalli & Latifian, 2008a), self-efficacy, and academic adjustment (Tajalli & Ardalan, 2010).

Most of the extensive researches using family communication instruments have categorized families as high or low on each dimension (conversation orientation and conformity orientation), creating a four-fold typology of pluralistic, protective, consensual, and laissez-faire families (Fitzpatrick & Ritchie, 1994). In comparison to protective and lassez-faire patterns, consensual and pluralistic patterns have a higher score in happiness scale (Jowkar & Rahimi, 2007) and communication skill (Hoseinchari, Tajalli & Ardalan, 2008) and a lower score in physical symptoms, anxiety, depression, and social dysfunction (Tajalli & Latifian, 2008b). Also, Charoenthaweesub and Hale (2011) reported that the pluralistic family communication style was associated with the highest rates of family well-being, followed by the consensual style. The lowest levels of family well-being were reported by laissez-faire families and protective communication pattern.

In the latest review of 42 studies reported in the English and Chinese literature on Internet addiction (Lam, 2016), it was found that a range of different familial and parental variables have been investigated. These included family satisfaction (Yen, Yen, Chen, Chen, & Ko, 2007), dysfunctional family (Xu et al., 2014), parental drinking (Yen et al., 2007), family conflict or cohesion (Park et al., 2008; Wu et al., 2013), family communication (Park et al., 2008; Van den Eijnden, Spijkerman, Vermulst, Van Rooij, & Engels, 2010; Liu, Fang, Deng, & Zhang, 2012), parenting styles (Huang et al., 2012; Kalaitzaki & Birtchnell, 2014; Yang, Sato, Yamawaki, & Miyata, 2013), and parental attitudes toward excessive Internet use. Senormancie, Şenormancı, Güçlü and Konkan (2014) showed that people with Internet addiction were dissatisfied with their family function. The research results of Habibi, Danesh & Zahedi Mazandarani (2015) emphasized the importance of family environment on the intensification of Internet addiction.

Since a few studies evaluated the effects of protective factors, family limitations and family conversation on Internet use, the objectives of this study were to determine whether Internet dependency was associated with family communication patterns (including consensual, pluralistic, protective and laissez-faire). According to The Association of Iranophile Tehran -IRAN report, the Internet penetration in the country has reached from 11.7 to 16.1 percent, indicating an 80 percent growth. Based on the latest statistics, the number of Internet users in Iran till the end of March 2017 reached to 11260000 people. However, in last June, it was 7350000 users (Hasanzadeh, Beydokhti, & Danesh Zadeh, 2012).

Therefore, the aim of the present research is to examine the effects of family communication patterns on Internet addiction. In previous research works, the effect of the dimensions of family communication patterns (conversation orientation and conformity orientation) on Inter-

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net addiction was investigated, but in the present study, the effect of family communication pattern styles (consensual, pluralistic, protective and laissez-faire) on Internet addiction has been investigated. This present study also aimed to determine which of the family communication patterns types led their children to be addicted to the Internet. The effect of the gender variable was also examined in this research.

2. Methods

Statistical population included undergraduate college students from the Jahrom Medical University (Fars province), which was randomly selected from all the medical universities in the Fars province, Iran. The samples (120 females and 110 males) were selected from each base (first, second, and third grades of medicine) using random cluster sampling. All students of the selected classes were tested. Inclusion criteria were the participants should be at least in the second year of the university studying medicine and should be aged between 18 and 24 years. The exclusion criteria were incomplete questionnaire and incomplete information. Questionnaires used in the study were distributed by the researcher in different classes, and the students participated voluntarily in the study. The average age of the participants was 21(1.5). To determine the sample size, a Cohen table (Sarmed, Bazargan and Hejazi, 1997) was used, with a magnitude of 0.5 for each house, with a plot of nearly 26 people. Considering that the proposed plan (gender and family pattern) was 2*4, the sample size was 230 persons.

The study used the Revised Version of the Family Communication Pattern (RFCP) instrument. The instrument contained 26 items: 15 items for conversation orientation and 11 items for conformity orientation. The scale of measurement was from 1 for 'Never' to 5 for 'Very often' (Fitzpatrick & Ritchie, 1994; cited in Koerner & Fitzpatrick, 2002a). Reliabilities for these revised scales were assessed to be higher than 0.80 for conversation orientation and conformity orientation (Jowkar & Rahimi, 2007; Tajalli, 2007; Tajalli & Latifian, 2008a). In the present study, to measure the reliability of the RFCP questionnaire, Cronbach's alpha coefficient was calculated. The Cronbach's alpha coefficient was found to be 0.93 for conversation orientation and 0.89 for conformity orientation. The validity of the measure was investigated by the factor analysis method. The results of exploratory and confirmatory factor analyses confirmed the validity of the measure. To determine the construct validity and factor structure, the factor analysis method was used by main component method and varimax rotation (KMO=0.85 and Bartlett test=1948.90). The results of factor analysis showed that the communication pattern of the conversation varied from 0.34 to 0.76, and the coefficient of the conformity ranged from 45.0 to 0.73. By combining the scores of the end groups of the two subscales (conversation and conformity), four family communication patterns (pluralistic, protective, consensual, and laissez-faire) were formed.

To collect the Internet addiction data, Young's Internet addiction scale (1998b) was administered. This questionnaire has 20 items that were rated on a five-point Likert scale from 1 to 5 (1: rarely, 2: between times, 3: frequently, 4: often, and 5: always). The scores were within the range of 20 to 100, and the higher score was the indicator of the individual Internet dependency. To assess the total score, Young's test has been followed: normal user (score of 20-39); mild addiction (score of 40-60) and severe level of Internet addiction (score of 70-100). Using Young's Internet addiction test, Young et al. (2005, cited in Salehi, Shahryari Ahmadi, & Noei, 2012) reported a reliability coefficient of 0.85 after two weeks. In the present study, Cronbach's alpha coefficient was calculated to be 0.95, which confirmed the reliability of Young's Internet addiction questionnaire. The validity of the measure was confirmed by the factor analysis method.

3. Results

Table 1 shows the means and standard deviations of conversation, conformity and Internet use for two groups (females and males). As shown in Table 2, this analysis revealed a significant difference in individuals' scores of Internet addiction between male and female university students. The male students were more addicted to the Internet than the female students [F(1,190)=9.45, P<0.002]. In addition, it was a significant moderator role in the interaction with the communication patterns [F(3,190)=7.58, P<0.000]. MANOVA test was used to analyze Internet abuse in each communication pattern (consensual, pluralistic, protective and laissez-faire), Internet addiction and sex (Table 3). The result of this analysis, as presented in Table 4, shows a significant difference among the family communication patterns (P<0.04). By using two-ways ANOVA, the effect of communication patterns on Internet abuse, considering gender as a moderator, was verified (Table 2). The results of Table 3 showed that there is a significant difference among the family communication patterns, Internet addiction and sex (P<0.01). The results of Table 3 showed a significant difference among the family communication patterns with respect to sex (P<0.04).

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Table 1. Descriptive results of study variables

Specifications	Conversation		Conformity		Internet Addiction		Consensual		Protective		Pluralistic		Laissez-Faire	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Female	52.83	12.95	25.78	10.23	36.97	15.22	34.25	13.07	44.25	20.14	32.20	9.08	44.25	20.14
Male	50.32	11.79	26.07	6.29	40.00	17.41	41.47	6.22	40.29	15.54	29.23	7.56	40.29	15.54
Total	51.62	12.44	25.91	8.55	38.42	16.34	38.85	9.81	42.18	17.86	31.00	8.57	42.18	17.86

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Table 2. Result of family communication patterns of Internet addiction of mail & female

Source	df	F	P
Communication patterns	3	10.16	0.000
Sex	1	9.45	0.002
Interaction	3	7.58	0.000
Error	190		
Total	198		

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4. Discussion

Based on Tables 1 and 2, children with laissez-faire family patterns have the highest levels of using Internet. In contrast, the lowest scores of Internet use belonged to the pluralistic family. This difference was found to be significant based on the Scheffe's test. Laissez-faire families obtained low scores on both dimensions of conversation and conformity orientation; the family members could not sufficiently engage with each other in conversations (Koerner, Fitzpatrick, 2002a). Therefore, we expected this family pattern to have a lower score in well-being (Charoenthaweesub and Hale, 2011) and a higher score in physical symptoms, anxiety, depression, and social dysfunction (Tajalli & Latifian, 2008b) besides tendency towards Internet abuse.

The second type of family that led to the propensities of children to the Internet use was protective families.

Table 3. Result of MANOVA on Mean Internet addiction of different patterns of family communication

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	0.26	4.06	2	222	0.01
Wilks lambda	0.73	4.06	2	222	0.01
Hotelling trace	0.35	4.06	2	222	0.01
Roy's largest root	0.35	4.06	2	222	0.01

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Table 4. Result of MANOVA on family communication patterns scores

		Sum of Squares	df	Mean Square	F	Sig.
Sex	Communication patterns	150.27	1	150.27	10.16	0.04
	Internet addiction	190.32	1	190.32	1.60	N.S

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There has been a significant difference between pluralistic and protective families too with respect to the studied parameters. Protective parents obtained low scores in conversation-oriented and high scores in conformity-oriented communication. Such families valued obedience, conformity, and social harmony (Koerner & Fitzpatrick, 2002a). Therefore, it is not surprising that students from protective families showed a higher level of Internet use than those from pluralistic families. Consensual parents obtained high scores on both dimensions of conversation orientation and conformity orientation. They emphasized approval of each other, even when they are encouraging one another to express different ideas (Koerner & Fitzpatrick, 2002a). Despite the fact that students from consensual families use less Internet than those from protected and laissez-faire families, there is no difference in Internet use among the students of consensual families compared with other groups.

The pluralistic families scored the lowest scores of Internet use, and this difference was significant. Pluralistic parents obtained high scores in conversation-oriented and low scores in conformity-oriented communication. There are opportunities for the child to express thoughts, feelings, and independence in such families. These results are consistent with the results of Salehi et al. (2012) who showed that conversation orientation and conformity orientation had a positive and negative relationship with Internet addiction, respectively. Also, according to the results of the study, the average score for Internet addiction of male students was higher than that of the female students (Tables 2 and 3). This finding is consistent with the results of some studies that found gender to be a significant factor influencing Internet addiction (e.g., Salehi et al., 2012; Ko, Yen, Chen, Chen & Yen, 2005).

However, the results of previous studies on gender differences related to Internet addiction are still a matter of controversy (Greenfield, 1999, Lin and Tsai, 2002, cited in Ko et al., 2005). Ko et al. (2005) showed two models of explanations for these differences: "First, they believe that boys more than girls have online for playing game to pursue feelings of achievement and make social contacts. Previous studies showed that more boys than girls engage in drug use for social support and to raise self-esteem (Moon et al., 1999, Newcomb et al., 1988, cited in Ko et al., 2005). they also argue that Online gaming can increase self-image by offering opportunities to interact with others sharing the same interest and to follow a powerful, and bright self-identification, both of which increase the risk of addiction among males. Second, female often receive more family control than males, which may prevent females from spending as much time on online gaming".

In addition, gender has observed to have a significant moderator role in the interaction with the communication patterns and Internet addiction. According to Table 3, there were significant differences among the male and female students with respect to Internet abuse. In other words, in comparison to the females, the male students have a higher level of Internet usage in consensual and laissez-faire patterns. Since the family bonds are high in the consensual patterns, it reduces Internet addiction in girls. Laissez-faire families also showed low scores on both dimensions of conversation and conformity orientation; this indicates that boys are likely to suffer from addiction. According to the research of Ensminger et al. (1984, cited in Ko et al., 2005), stronger family bonds are associated with the reducing use of all substances except cigarettes in females, whereas males with strong attachments to peers report heavier use of substances.

In total, this study explores the significance of family communication with regards to conversation and conformity orientations in the relationship with children's Internet addiction. In families with a high conformity communication, having different opinions can cause serious conflicts and create many problems for the individual. Hence, the individual uses Internet excessively as a way of escaping from troubles (Salehi et al., 2012). Conversely, families with a high conversation orientation protect their children from developing psychological and emotional problems (Tajalli & Latifian, 2008a) and excessive tendency towards the Internet (Salehi et al., 2012). While intimate relationships create friendly environment for relieving the distress of individual's problems, communication is the connecting link between family members for solving the problems. Thus, to build a better society, attention should be given to increase the effectiveness of family communication.

Our research findings are indicative of problems such as lack of family responsibility, absence of family support, presence of family isolation, prevalence of failure in job and education, and the feeling of worthlessness. These constitute both the consequences and causes of improper and addictive use of the Internet. Those affected by these problems in the family feel more attached toward the Internet and its virtual space, thus, becoming addicted to it. Such an addiction, in turn, intensifies the ordeal that of these kinds of users.

Although the results of this research will lead to increased knowledge in the field of Internet addiction, this

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study also has limitations. The use of a questionnaire to evaluate the variables may not be enough. This sample consisted of students from a medical university in Jahrom; thus, it may not be generalized to other groups. The study can be strengthened by doing the same research from other samples from different parts of Iran. Finally, it is expected from other researchers to do surveys on different groups to further contribute to this area of research.

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Conflict of Interest

All authors certify that this manuscript has neither been published in whole nor in part nor being considered for publication elsewhere. The authors have no conflicts of interest to declare.

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