

The Impact of Excessive Internet Use on Communication Skills and Mental Health in Cafe Internet Users

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Background: The Internet is commonly used among young adults; however, Internet use may become a problematic behaviour. Past researches have examined Internet use in young adults and its relationship to some behaviours and health issues, yet further research is needed to gain a more comprehensive understanding of this relationship.

Objectives: This study aims at determining the impact of excessive internet use on communication skills and mental health in adolescents who use internet in the cafe.

Materials and Methods: The sample group consisted of 160 customers (80 girls and 80 boys) of the internet cafes in Tehran, who aged from 13 to 23 years. These persons were randomly selected from clients of the Internet cafes. The participants completed the communication skills questionnaire (Harje and Marshal, 1986), General Health questionnaire (Goldberg, 1979) and the researcher-developed questionnaires.

Results: The results showed no difference between adolescents' communication skills regarding the use of internet games. However, there was a difference between adolescents' mental health in terms of frequency of using the internet games. Those who spend fewer (less than 6) hours using the Internet games exhibited lesser physical symptoms, reduced level of anxiety and depression and were more socializing.

Conclusions: According to the results of this study, it can be concluded that excessive internet use impact on the physical and mental health of internet users.

Keywords: Internet; Communication; Mental Health

1. Background

Examining psychological, social, cultural, and familial effects and consequences of new communication technologies such as internet is nowadays remarkably considered by psychiatrists and psychologists. In addition, such psychological elements as enjoyment, arousal, and feeling of mastery when using these technologies such as the Internet and satellite have doubled the number of their attractions for users, and behavioral science specialists are increasingly concerned about their negative effects on individuals' personal and social life. Any technology powerfully causes major, fundamental changes in society. In this respect computer is an invention which is more powerful particularly due to its importance for successful continuity of the global communication network (Internet). Massive increase in use of the Internet cannot be overlooked, and extensive studies are being carried out in this regard (1). The Internet is one of the technologies that familiarize people with a new type of space. This technology plays an important role in the life of humans, particularly adolescents and the youth, and has changed their lifestyles with respect to spending their leisure time and engaging in their hobbies as well as affecting their way of communication. On the other hand, the at-

tractiveness and potential influence of the internet on the life of individuals, especially adolescents, cannot be overlooked, so we feel the necessity to conduct further studies in this area. Despite the rapid growth of Internet users in recent years, some questions are posed regarding its effects on humans, since improper use of the Internet has caused users to develop problematic behaviors and exhibit many psychological effects. A negative consequence arising from improper use of the Internet and internet games are their impact on mental health. Mental health refers to successful mental functioning, which results in constructive activities, socialization, and bolstering learning abilities and self-confidence. This is of great significance to adolescents, as using effective social interactions is essential for behavioral, emotional adaptation and successful functioning. Children and adolescents' socialization ability improves their communication skills and makes them more receptive to social influences, and grow better with good communication skills. Effective communication makes individuals prosperous and improves the quality of their relationships (2). Studies carried out in 2001 reveal that more skilled individuals cope with stress more easily, better adapt themselves to

important lifestyle transitions and are more resilient, and less likely to suffer from depression, loneliness, and anxiety. They are also more satisfied with their personal and intimate relationships. In his studies, Segrin (2006) arrived at the conclusion that communication skills prevent undesirable experiences and make people resilient to the destructive effects of life crises. In contrast, those with fewer skills experience worse psychological and social problems in the face of life stressors (3). Nowadays, accessing different information and using communication technologies enable us to communicate and exchange information faster. Information technology is developing with a startling speed, and the Internet as the most practical means of communication in the late 1990s has almost entered all organizations, schools, and even families (4).

The results of some studies show that although the Internet has been introduced as an amazing technology, it has negative effects on individuals' social life, and communication skills (5). Using the Internet reduces people's motivation for interacting with each other, thereby causing them to spend less time in the company of friends and family members with subsequent isolation and depression. Moreover, the Internet encourages parents and adolescents to compete for using it and thus fosters new struggles in the family leading to incompatibility and, on the whole, a deteriorating mental health and increasing stress and isolation (6). Arshelurabery (7) investigated the impact of electronic media, such as the Internet, on students' mental identity and health. The results suggested that increasing use of the internet negatively affected national and religious identity, self-identity, and mental health. The more the Internet is used, the poorer becomes the mental health of the user. A study on the prevalence of Morbid Use of the Internet among University Students and its relationship with self-esteem, mental health and disinhibition, was carried out in the department of psychiatry at the University of Nottingham in England. The results revealed that 18.3% of the subject who made morbid use of the Internet exhibited interpersonal, social, and academic problems. Those making morbid use of the Internet had lower self-esteem and experience more social disinhibition (8). Results of some studies, including those conducted by Engelberg et al. (5), Marshall (9), and Gross et al. (10) were consistent with the foregoing entities and suggested that the excessive use of Internet leads to increased loneliness, depression, reduced communication and social skills, decreased intra-familial participation, identity disorder, and, in general, poorer mental health.

2. Objectives

Thus, the present study primarily aims to determine the impact of extravagant use of internet on adolescents' mental health and communication skills, the practical exploration of which can prove useful to physicians and psychologists.

3. Materials and Methods

This research is a descriptive and cross-sectional study, measuring individuals' communication skills and mental health in relation to the use of internet. The statistical sample comprises 160 people (80 girls and 80 boys) aged from 13 to 23 years and randomly selected from customers of internet cafes in Tehran. Communication skills questionnaire used in this study was designed by Harje and Marshal (1986) and included 34 five-point items, ranging from "never" to "always". This questionnaire measures 4 factors, namely, others' perception, emotional management, self-assertion and social relationship. Scoring items varies from 1 (never) to 5 (always). Some items are reversely scored. Eventually, the total is obtained through counting up scores. Item reliability was shown by Cronbach's alpha to be 0.92, and the scope of Cronbach's alpha coefficient ranged from 0.51 to 0.90, indicating that the items were internally consistent. Item validity proved ideal as determined by criterion-referenced validity and construct validity (3). General Health Questionnaire (Goldberg, 1979) is a screening questionnaire used to distinguish between mental illnesses and health. This 28-item questionnaire includes 4 subscales: physical symptoms, anxiety, social malfunctioning, and depression. Adding up subscales' scores yields the total score of individual's mental health (11). The reliability and validity of this questionnaire have been assessed in different cultures. Using the retest method, Cheung and Spears (12) showed the questionnaire's reliability coefficient to be 0.47, which is significant at $p < 0.05$ level. In addition, Alpha's coefficient for the entire scale was 0.88 and its coefficients for physical symptoms, anxiety, social malfunctioning, and depression were 0.66, 0.72, 0.79, and 0.85 respectively. Goldberg & Hillier (11) has shown the questionnaire's reliability to be 0.89. The questionnaire used to gather personal data including age, gender, education and the frequency of daily use of the Internet, was taken from the Internet by the researcher.

The sample group was selected from three regions of Tehran (1, 2, 3) where 9 cafe were selected randomly including 3 cafe from each region. Having spoken with the managers of the cafes and obtaining their approval for the study, the copies of the questionnaire were distributed among the Internet users in coordination with the Internet cafes and the project executive, who were briefed about objectives of the study. The participations were asked to truthfully reply to the questions and assured them about the strict confidentiality of the procedure. It took 30 minutes to complete the questionnaires and collect the data. The data were analyzed using SPSS software program where, the one-way ANOVA and the t-test were used for independent groups.

4. Results

As shown in Table 1, most of the participants aged from

17 to 20 years, 49 participants were between 21 and 23 years, and 38 people were between 13-16 years. In terms of education levels most participants were university students (82) and 78 people were school students.

Table 2 shows descriptive information on boys and girls along with frequencies of daily hours of using Internet and satellite programs as observed in Table 2, the highest frequency for using the Internet is between 3-6 hours, and then 6-10 hours.

The t-test for independent groups was used in order to determine the difference in average communication skills between adolescents using the Internet for shorter or longer hours, the results are displayed in Table 3. According to the results shown in Table 3, in terms of emotional management, no difference was found between the adolescents using the Internet for fewer and longer hours. Also in regard to others' perception, self-assertion and social relationships no difference in communication skills was observed between the adolescents using the Internet for fewer (less than 6) and longer hours (more than 6). P value in all variables is higher than 0.05 and show that there is no significant difference between the adolescents using the Internet for fewer and longer hours in terms of these variables.

Similarly, the t-test for independent groups was used, in order to determine the difference in the average levels of mental health between individuals using the Internet for longer and shorter hours, and the results are displayed in Table 4. As shown in Table 4, there was a significant difference in general health and all of its subscales, i.e. mental health is different between the adolescents using the Internet for shorter and longer than 6 hours. P value in all variables is lower than 0.05 and shows that there is significant difference between the adolescents using the Internet more than 6 hours and less than 6 hours in terms of these variables.

Moreover, different averages indicate that the adolescents who spend less time using the Internet have fewer physical and anxiety symptoms and lower social malfunctioning, are less depressed, and enjoy better general health condition. In order to investigate the difference between the level of internet use among adolescents in terms of communication skills and general health, the one-way ANOVA test was used, the results of which are displayed in Table 5 and Table 6. According to $F(3, 156)$ the proportion of $F(0.421)$ is not significant at $p < 0.73$ level, it can be concluded that there is no difference in adolescents' communication skills in terms of using the Internet.

Given that the proportion of $F(4.98)$ is significant at $P < 0.002$ level, it can be concluded that there is a difference in adolescents' general health condition in relation to the use of Internet. Scheffe's test was used to compare average general health between different levels of the Internet use.

According to Scheffe's test general health is compared between different levels of the Internet use. For example, the difference between less than 3 hours internet use,

compared with 6-10 hours ($P = 0.05$) and more than 10 hours ($P = 0.02$) is significant. In both of them P value is lower than 0.05. The difference between more than 10 hours internet use compared to less than 3 hours ($P = 0.02$) and 3-6 hours ($P = 0.01$) internet use is significant in terms of general health. P value of both of them is lower than 0.05. Results of the follow-up test suggest that the individuals using Internet for less than 6 hours have a better general health condition and are healthier than those using Internet for longer than 6 hours.

Table 1. Demographic Data of Cafe Internet Users

Characteristics	Values
Gender	
Female	80
Boy	80
Age, y	
13-16	38
17-20	73
21-23	49
Education	
School	78
College	82

Table 2. Time Frequencies of Daily Use of Internet by Both Genders

	Use of Internet			
	Less Than 3, h	3-6, h	6-10, h	More than 10, h
Girl	18	24	22	16
Boy	21	17	22	10
Total	39	51	44	26
Percent	24	32	28	16

Table 3. Summarized T-Test Results for the Persons' Score of Communication Skills by Long-Term and Short-Term Use of the Internet

Variable	Mean \pm SD	P Value ^a	T-Test
Emotional management		0.32	158
Less than 6	36.76 \pm 10.52		
More than 6	38.64 \pm 10.39		
Others' perception		0.47	158
Less than 6	41.45 \pm 9.41		
More than 6	40.23 \pm 9.56		
Self-assertion		0.68	158
Less than 6	37.55 \pm 7.26		
More than 6	37.02 \pm 6.77		
Social relationship		0.97	158
Less than 6	115.76 \pm 17.89		
More than 6	115.88 \pm 17.00		

^a $p < 0.05$.

Table 4. Summarized T-Test Results of the Scores of Mental Health by Short and Long-Term Internet Users

Use of Internet	Mean ± SD	P Value ^a	T-Test
Physical symptoms		0.003	2.11
Less than 6	7.29 ± 5.68		
More than 6	5.25 ± 4.26		
Anxiety		0.002	2.28
Less than 6	8.90 ± 5.37		
More than 6	6.87 ± 3.48		
Social malfunctioning		0.001	2.56
Less than 6	8.36 ± 4.43		
More than 6	6.44 ± 3.27		
Depression		0.006	2.84
Less than 6	8.24 ± 6.19		
More than 6	5.33 ± 3.89		
General health		0.003	3.13
Less than 6	32.79 ± 17.55		
More than 6	23.90 ± 9.05		

^a P < 0.05.**Table 5.** Summarized Variance Analysis for Communication Skills

Variable	Sum of Squares	df	Mean Square	F	P value ^a
Communication skills	377.05	3	125.86	0.421	0.73
	46609.34	156	298.77		
	46986.40	159			

^a P < 0.05**Table 6.** Summarized Variance Analysis for General Health

Variable	Sum of Squares	df	Mean Square	F	P value ^a
General health	2160.03	3	720.01	4.98	0.002
	22516.41	156	144.33		
	24676.44	159			

^a P < 0.05**Table 7.** The Results of Scheffe's Test to Determine the Differences in General Health^a

Use of Internet	Dependent Variable		
	Mean Difference	Std. Error	Sig.
Less than 3			
3-6	0.59	2.56	1
6-10	-4.28	2.64	0.05 ^a
More than 10	-9.54	3.04	0.02 ^a
3-6, h			
Less than 3	-0.59	2.56	1
6-10	-4.88	2.47	0.08 ^a
More than 10	-10.13	2.90	0.01 ^a
6-10, h			
Less than 3	4.28	2.64	0.45
3-6	4.88	2.47	0.28
More than 10	-5.25	2.97	0.38
More than 10, h			
Less than 3	9.54	3.04	0.02 ^a
3-6	10.13	2.90	0.01 ^a
6-10	5.25	2.97	0.38

^a P < 0.05

5. Discussion

The results of this study reveal that there is a difference between adolescents' mental health and their subscales regarding Internet use, such as the Internet games. These involve adolescents' mental health and its subscales (physical symptoms, anxiety, social functioning, and depression). The adolescents, who spend longer than 6 hours using the Internet encounter physical problems and their physical health will be at risk, experience more stress and anxiety, have social malfunctioning, exhibit more symptoms of depression, and, generally have poorer mental health. The results demonstrated that there was not any difference in adolescents' communication skills in relation to using the Internet, nor did it exist between those adolescents who spend more hours using the Internet and the ones who spend less time doing this in terms of communication skills. Results obtained in this study were in keeping with those of previous studies. For example, according to Favaretto (13) a significant relationship was found between using the Internet and scores of mental health and psychiatric disorders. Yang explored the level of mental health and indiscriminate use of the web in high school students. The results indicated more psychiatric symptoms in people who spent longer time using the Internet than the other groups. They were easily affected by feelings, emotionally less stable, fantasizing, and introverted (14). Results of the study carried out by Pourramezan on mental health of the Internet-addicts revealed that there was a negative, significant relationship between the Internet addiction disorder and all subscales of mental health, with the Internet-addicts exhibiting poorer mental health than the ordinary people (2).

Fattahi Bayat examined the impact of new communication technologies including the Internet, satellite and computer games on social education, placing emphasis on adaptation in high school students. Results suggested that there was no significant relationship between using new technologies and students' adaptation (15). Some studies referred to the positive effects of the Internet and its wide application. For example, Sohrabi Haghghat investigated the impacts of using the Internet on users' social isolation. Results showed an inverse significant relationship between excessive Internet use and social isolation, but those making inordinate use of the Internet acquire higher social skills (6) Another study reported the positive effect of using Internet on alleviating depression and feeling of loneliness and leading to increasing self-esteem and socialization. In contrast, another study demonstrated in their study that using the Internet was related to increased depression and loneliness. In the study done by Marshall, it became clear that 8 to 13% of the students who are dependent on the Internet had many problems, including tiredness, sleep deficiency, poor academic performance, and decreased social interactions (9). There are different results as to the impact of

the Internet on communication skills. In a study carried out by Fattahi (15) no relationship was found between the length of using the Internet and social adaptation and also communication skills, which is consistent with the studies conducted by Nikdel (16).

Niemz et al. (8) found that individuals spending more time using the Internet spend less time being with their families, and this loneliness leads to a decrease in their social interaction and eventually reduces their social skills. Morrison & Krugman (17) considering the indispensable role of new technologies, especially the Internet, in human life indicated that all individuals, particularly adolescents and the youth should be able to benefit from these technologies properly, and in doing so, maintain their mental and physical health and perfect their social and communication skills. Do et al. (18) found that among adolescent school students in South Korea, shorter sleep duration and excessive Internet use are independently and additively associated with multiple indicators of adverse health status. Shorter self-reported sleep duration was associated with a higher likelihood of reporting depressive symptoms, suicidal ideation, and overweight or obesity, and a lower likelihood of reporting better self-rated health, in regard to the time spent on using Internet. Excessive Internet use was found to be an independent risk factor for these entities. Excessive Internet use may not only have direct adverse health consequences, but also have indirect negative effects through sleep deprivation. Derbyshire et al. investigated the Problematic Internet use and its associated risks in college students and showed that moderate to severe Internet use is associated with a range of psychosocial problems in young adults (19). In research conducted by Rayna Sariyska showed the personality dimension self-directedness was negatively correlated with the internet addiction score of the participants in all samples. In contrast, there was no interaction effect on internet addiction was observed between implicit and explicit self-esteem (20). According to research by Chen, there is no relationship between psychological well-being and online entertainment, also greater problematic Internet use increased the likelihood of adverse psychological well-being and decreased the probability of good psychological status (21). Beranuy et al. found that psychological distress is related to maladaptive use of both the Internet and the mobile phone. In this context, females scored higher than males on the mobile phone questionnaire, showing more negative consequences of its maladapted use (22). According to the research of Sinkkonen et al. on disadvantages of using the Internet, students reported that it was time-consuming and causing mental, social, and physical harm and poor school attendance (23). Finally, according to the results of previous research and our findings it can be concluded that excessive or problematic internet use leads to negative impact on physical and mental health of internet users, but more research is needed to better understand the effect of Internet use on physical and

mental health of excessive use of Internet, and its associated academic variables.

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