





Use of Virtual Social Networks by Adolescents in Zanjan, Iran (2016-2017)

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Abstract

Background: Virtual social networks are the most important communication tools in the modern era, which have gained remarkable popularity in various communities. The use of social networks by different age groups has been on the rise, especially among adolescents.

Objectives: The present study aimed to assess adaptation to motherhood and its influential factors in the first year postpartum in Iranian women.

Methods: This descriptive, cross-sectional study was conducted on 180 students aged 16-18 years during 2016-2017. The research samples were selected by multi-stage method. Data were collected using demographic questionnaires and a researcher-made questionnaire to assess the rate and mode of using social networks. Data analysis was performed in SPSS version 16 using descriptive statistics.

Results: In total, 77.8% of the adolescents were registered in various social networks, and the majority were the users of Telegram (75.6%). Moreover, 58.9% of the participants had been using virtual social networks for more than 12 months, and 19.4% used the networks for more than four hours per day for non-educational purposes. On the other hand, 47.2% of the students used social networks for educational purposes for less than one hour.

Conclusion: According to the results, adolescents frequently used virtual social networks, especially for non-educational purposes. Therefore, it is recommended that various scientific channels and networks with greater magnetism be designed for entertaining adolescents.

Keywords: *virtual social network, adolescents, Zanjan, Iran*

Introduction

In recent years, virtual social networks have gained remarkable popularity [1]. The rapid growth of these networks has resulted in the membership of more than one billion individuals [2]. Social networks refer to the social media that allow a new way of online communication and content sharing [3]. Some of the main functions of these networks are the formation of social groups, interpersonal communications, and virtual

communities, as well as exchanging information and opinions among the members [4]. In other words, virtual social networks are the social structures that are composed of various groups of individuals who are connected through mutual relations [5].

Virtual social networks are the spaces that have been developed for the communication of different people with variable access [4]. Today, communication and information technologies

have become an inherent element in the lives of individuals [6]. With the advent of virtual social networks, a new form of life has flourished in the cyberspace, which has in turn altered human interactions leading to adverse effects on social relations [3].

The first virtual social networks were developed in 2003, and Facebook was established on February 4, 2004. Ever since, there has been an astonishing growth in the number of the users of virtual social networks. For instance, Facebook was reported to have 100 million users in 2008, which reached approximately two billion in 2016. Instagram was established as the second largest social network on October 6, 2010. This social network had only 30 million users in April 2012, and the number has currently reached 500 million; it is notable that 90% of these users are aged less than 35 years [7]. According to a survey that was conducted in 24 countries in 2010, six per 10 internet users visit social networks on average. In Iran, the popularity of social networks has increased significantly [4]. According to another survey performed in 2010, 30% of Smartphone users had access to various social networks via their devices, and the number reached 60% in 2013 [5].

Previous studies have been indicative of the rapid growth of using the internet, particularly social networks, in the Iranian community [8]. Today, numerous technology researchers and social critics believe that the cyberspace (especially social networks) is causing considerable changes in the social and cultural aspects of communities. However, some analysts have proposed contradictory views regarding the nature of these changes, classifying them as favorable and unfavorable [9]. Furthermore, some studies have been focused on the positive and negative effects of the increased use of social networks on the Iranian community. For instance, Mojaradi et al. (2014) investigated the use of social networks among the students in North Khorasan province, concluding that approximately 54% of the subjects were social network users. According to the mentioned study, some of the main disadvantages of social networks were the ambiguous identity of the users and the unethical atmosphere for adolescents [2].

Another study in this regard was conducted by Akhavan Malaieriy et al. (2014), the results of which indicated that membership and participation in virtual social networks could increase social capital and contentment [10]. The findings of another research demonstrated an association between membership in virtual social networks and the lifestyle of youngsters [11]. Similarly, Afshar et al. (2015) reported significant, positive correlations between the duration of using Facebook, extent of use, motivation and purpose of users, participation level, and activity of Facebook users with believing in the reality of the contents published on Facebook and modern individual identity [12]. According to Pew Research Center, the adolescents and youngsters who use virtual social networks share significantly larger bodies of information compared to the other members of these networks. According to one of the reports that was published by this center on May 21, 2013, the information shared by adolescents on social networks today is considerably more than before [13]. As such, it seems that special attention must be paid to the adolescents who frequently use virtual social networks.

According to the definition provided by the World Health Organization (WHO), adolescence is defined as a stage of human development, which is between childhood and adulthood [14]. In other words, adolescence is the transition period from childhood to adulthood [15]. According to the Population and Housing Census (2011), the Iranian adolescent population is approximately 12 million, constituting almost 16% of the country's population [14,16]. The health of adolescents directly affects the health of the community as they are considered to be one of the most important populations [16].

As the future generation of the country, adolescents constitute a large part of the population nationwide [17]. Adolescence is a critical period, which is associated with physical, cognitive, and social development [18]. Considering that adolescence is one of the most important stages in life, and since this period represents the beginning of physical and psychological changes [19], the present study aimed to investigate the use of virtual social

networks and identify the associated risks in the adolescents in Zanjan, Iran.

Methods

This descriptive, cross-sectional study was conducted on the male and female students aged 16-18 years at the secondary high schools in Zanjan, Iran during 2016-2017. The study protocol was approved by the Ethics Committee of Zanjan University of Medical Sciences.

Initially, the researcher conducted a pilot study on 30 adolescents at the selected secondary high schools in order to determine the required sample size for the study. Afterwards, a complete list of the public and private secondary high schools for boys and girls in districts one and two of Zanjan was prepared. The subjects were selected via multistage sampling proportional to the sample size.

According to the pilot study, the required number of the samples was roughly estimated at 140, and 154 subjects were selected considering a 10% possibility of incomplete questionnaires and sample loss. As such, four incomplete questionnaires were eliminated from further evaluation.

In total, 150 questionnaires were analyzed, which consisted of 19 items developed by the researchers to assess the demographic characteristics of the subjects. Overall, the items in this questionnaire included data on age, gender, religion, type of school, place of residence, ethnicity, grade, field of study, grade point average of the previous year, number of family members, birth order, live-in partners, parental education level, parental occupation status, family income status, having a private room, and type of communication devices.

Another data collection tool in the present study was a researcher-made questionnaire consisting of 11 items to evaluate the extent and mode of using virtual social networks. After reviewing the resources (e.g., books and valid articles) focusing on social networks, the questionnaire was developed by the researchers, and its validity was assessed based on content validity and face validity. To do so, the questionnaire was provided to 10 experts and faculty members, and necessary

modifications were applied based on their comments.

To determine the reliability of the questionnaire, a pilot study was conducted on 30 secondary high school students in Zanjan, and the reliability was confirmed at the Cronbach's alpha of 0.71. The items in the researcher-made questionnaire included having a mobile phone, ability to connect to the internet and use virtual social networks via Smartphone, parental consent to use wireless network at home, possibility of using wireless network without restrictions at home, ability to use the other family members' mobile phones to use virtual social networks, membership in virtual social networks, type of the virtual social networks often used by the subject, duration of using social networks, duration of using virtual social networks for scientific and non-scientific purposes (hour), and motivation of subjects for membership and activity in social networks.

Data analysis was performed in SPSS version 16 using descriptive statistics (frequency and percentage).

Results

In total, 62.8% of the subjects were female, and the remaining were male. Among the participants, 84.4% were students in public schools. In terms of the field of study, 43.83% of the subjects studied experimental sciences, 30% studied mathematics, 13.9% studied humanities, and 12.8% studied technical fields. In addition, the number of family members was four in 48.9% of the students, and 37.2% and 26.1% of the subjects were residents in districts one and two of Zanjan, respectively.

With regard to the parents, 82.2% of the mothers of the students were housewives, and 57.8% of the fathers were self-employed. In terms of parental education level, 35% of the fathers and 38.3% of the mothers had high school diploma. According to the findings, 49.4% of the families had average income status, and 23.9% had low income status. Moreover, 76.1% of the students had a private room, and 90% had mobile phones. Also, 78.3% of the subjects had access to the internet via mobile phone, and 46.7% had unlimited internet access.

According to the information in Table 1, 78.3% of the subjects used the internet via Smartphone, 66.7% had internet access at home, and 46.7% had unlimited internet access at home.

Table 1: Distribution of Absolute and Relative Frequency of Subjects in Terms of Internet Access via Smartphone, Internet Access at Home, and Unlimited Internet Access at Home

Type of Internet	Frequency	N	%
Internet via Smartphone	No	39	21.7
	Yes	141	78.3
	Total	180	100.0
Internet Access at Home	No	60	33.3
	Yes	120	66.7
	Total	180	100.0
Unlimited Internet Access at Home	No	96	53.3
	Yes	84	46.7
	Total	180	100.0

According to the findings, the majority of the subjects (77.8%) were members of virtual social networks, 75% of whom used Telegram social network (Table 2).

Table 2: Distribution of Absolute and Relative Frequency of Subjects in Terms of Type of Social Network

Type of Social Network	N	%
Telegram	135	75.0
Instagram	2	1.1
Other	3	1.7
None	40	22.2
Total	180	100.0

The obtained results of the present study indicated that the majority of the subjects (58.9%) had been using virtual social networks for more than 12 months, 47.2% of whom used them for scientific purposes for less than one hour per day. Moreover, 19.4% of the subjects used virtual social networks for non-scientific purposes more than four hours per day (Table 3)

Table 3: Distribution of Absolute and Relative Frequency of Subjects' Membership in Virtual Social Networks in Terms of Duration of Us

	Frequency	N	%
Duration of Use (month)	<3	30	16.7
	3-6	10	5.6
	6-12	12	6.7
	>12	106	58.9
No Answer	No	22	12.1
	Total	180	100.0
Duration of Use for Scientific Purposes (hour)	<1	85	47.2
	1-2	56	31.1
	2-4	14	7.8
	>4	7	3.9
No Answer	No	18	10.0
	Total	180	100.0
Duration of Use for Non-scientific Purposes (hour)	<1	58	32.2
	1-2	35	19.4
	2-4	31	17.2
	>4	35	19.4
No Answer	No	21	11.8
	Total	180	100.0

According to the obtained results, the majority of the subjects started membership in social networks aiming to further communicate with friends, while 1.1% of the students joined social networks to communicate with their family and relatives (Table 4)

Table 4: Absolute and Relative Frequency of Subjects in Terms of Motivation

Motivation for Membership in Virtual Social Networks	N	%
Further Communication with Friends	80	44.4
Making New Friends	16	8.9
Finding Old Friends	20	11.1
Joining Scientific Groups	37	20.6
Communication with Family and Relatives	2	1.1
Other	1	0.6
Entertainment	3	1.7
General Interest	1	0.6
No Answer	20	11
Total	180	100.0

Discussion

The present study aimed to assess the status of using virtual social networks by the adolescents in Zanjan city, Iran. According to the findings, more than half of the subjects noted their membership in at least one social network. In addition, the majority of the subjects used the internet via mobile phone, and 66.7% had internet access at home. In a study conducted on the students at Qom University of Medical Sciences (Iran), Mohammadi et al. concluded that 60.3% of the subjects used the internet at home, and the majority had a mild dependence on the internet [19].

According to a similar study in Poland, 83.24% of the research population acknowledged the use of social networks, and a large number of the respondents were members of Facebook (79.17%) [20]. On the other hand, Bagherifar et al. evaluated the students in Torbat Heydarieh (Iran), stating that all the subjects used social networks via phone applications, such as Line, Viber, Tango, and WhatsApp [1]. Furthermore, Artemis et al. reported that 70% of the participants used virtual social networks [21], while Klendwood et al. claimed that 97% of the participants used virtual social media [22].

In another research by Mojaradi et al. (2014), 54% of the students were reported to use virtual social networks [2], suggesting that the popularity of social networks has increased significantly in recent years. As such, using the internet (especially social networks) has been growing rapidly, and this trend continues in various communities. In the viewpoint of the researcher, the rapid advancement of technology and constant growth and use of mobile devices (Smartphones and tablets) by the public have contributed to this issue. As a result, the number of social network users increased considerably shortly after the introduction of social networks.

According to the results of the present study, 75% of the adolescents were members of Telegram social network. The high rate of using Telegram among the young students in Zanjan city could be due to the proper functioning and higher necessity of this type of network in the community compared to the other types of virtual social networks during the study period. On the other

hand, considering that the majority of the social network users were members of Telegram, the access and communication of the users of this application has increased dramatically, enabling individuals to exchange more information within a shorter time. In addition, the limitations imposed by the national policies due to the perceived cultural, moral, and social threats associated with other types of networks have led to the increased tendency of adolescents to use Telegram.

In the current research, the majority of the subjects reported using virtual social networks for more than 12 months (58.9%). Moreover, most of the students in the present study (47.2%) used virtual social networks for scientific purposes for less than one hour per day, and 19.4% used these networks for other purposes for more than four hours per day. In this regard, the findings of Artemis et al. indicated that 40% of the adolescents spent two hours or more per day using virtual social networks [21]. These networks seem to play a key role in the daily lives of the users. According to the study by Mojaradi et al., 70% of students used virtual social networks for more than one hour per day [2]. In the viewpoint of the researcher, due to the lack of restrictions and monitoring of using virtual social networks by the family, the duration of using these networks among university students may be higher compared to adolescents.

In the present study, the most significant motivation of the adolescents to subscribe to virtual social networks was to further communicate with friends (44.4%). It seems that in recent years, the transformation of the family structure from extended families to nuclear families, as well as the emphasis of parents on the attendance of adolescents in educational programs due to limited communication with their peers, are among the contextual factors associated with the tendency of adolescents to join virtual social networks. It is also noteworthy that only 1.1% of the subjects in the current research mentioned communication with family and relatives as the motivation from subscribing to virtual social networks.

Adolescence is one of the most critical stages of life, which coincides with psychological, physical,

and social puberty. Furthermore, adolescence is an important stage in terms of the social, cognitive, and psychological development of individuals. During this stage, the family needs to assign responsibilities to adolescents and provide them with moderate freedom. Poor relationship of adolescents with the family requires special attention from families due to the importance of family in the formation of their personality and their guidance in the community.

According to the results of the present study, the majority of the students were members of at least one virtual social network. Therefore, it is recommended that they be instructed on proper time management to use the internet and cyberspace. Moreover, the awareness of adolescents must be raised regarding the advantages and disadvantages of membership in social networks in order to encourage the purposeful use of these tools and avoid the adverse effects of cyberspace.

Considering that adolescents spend several hours a day at school, proper educational programs must be implemented regarding the management of virtual spaces as a critical issue in the education of this vulnerable population. On the other hand, if the tensions and anxieties associated with adolescence are accompanied by the mental pressures imposed by the parents and community, they may cause adolescents to recourse to the cyberspace. In the past few years, there has been a constant growth in using the internet and subscription to virtual social networks. By overcoming the barriers of time and place from social communications, these new media have been able to bring human beings closer through interactions via the cyberspace. Considering that adolescence is one of the most significant stages in the life of each individual representing the beginning of major physical and psychological changes, it is essential to address the health of adolescents not only for themselves, but also for the sake of their families, the community, and future generations. As such, their issues should be considered in national health promotion plans.

In conclusion, considering the age of adolescents and the fact that they are one of the most vulnerable populations in the community, it is of paramount importance to have a thorough

knowledge of the influential factors in their health and provide a rational insight into the effects of the cyberspace on adolescents.

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