Journal of Fundamentals of Mental Health

Mashhad University of Medical Sciences

Psychiatry and Behavioral Sciences Research Center

Original Article

A study on the knowledge, attitudes and students' performance concerning IT and the barriers to use IT in their free-time

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Abstract

Introduction: Nowadays, the knowledge and information technology have developed to fill individual's free-time. This study aimed to investigate the knowledge, attitude, the students' performance and the barriers to use IT in the free time for female students of high in Tehran city (2004-2005).

Materials and Methods: In this descriptive study using self-made questionnaire, number of 300 students were cases selected among 124000 via the cluster and stratified sampling method and Morgan table. In order to analyze the data, descriptive statistics such and SPSS software were used.

Results: The results showed that the majority of the students (84.2%) were less familiar with IT. Most of them had a positive attitude to the technology. There was a negative relationship between their knowledge level and the way of IT usage (R= -0.169) while there was a positive relationship between the knowledge level and the level of their IT usage (R= 0.23). Most of them considered lack of motivation, technology limitation and high costs of IT as a barrier of using IT.

Conclusion: It seems that the majority of samples had a low knowledge to use IT and considered its high costs and technology limitations and lack of motivation effective, in low using of this technology.

Keywords: Attitude, Information technology, Knowledge, Students

Please cite this paper as:
Haseli Mofrad N. A study on the knowledge, attitudes and students' performance concerning IT and the barriers to use IT in their free-time. Journal of Fundamentals of Mental Health 2016; 18(Special Issue): 409-415.

Introduction

Even though man started fighting with nature to meet his needs from the very beginning of his presence on the planet and a kind of occupation appeared in his daily life, but the nature of this occupation and the amount of attention to this occupation has been such that it can be stated Not only does it not cause him fatigue, depression and boredom, but sometimes it is a form of entertainment. Work and employment in human social life, even in the agricultural age, was not of the type that appeared in the industrial age. In this era, in terms of the characteristics of work and employment, it is still not possible to talk about leisure in the sense that it is meant today, because the farmer himself was the employer and the owner of his own work, and therefore he worked willingly and willingly. He started the work himself and stopped it by his own will. Work was limited to certain seasons of the year. Since

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Received: Aug. 22, 2016
Accepted: Sep. 29, 2016

ancient times, since the time when the early man succeeded in discovering fire and making sharp tools for hunting and creating different types of clay vessels, in parallel, more opportunities for him to rest were created. Because with successive inventions, working hours in human life were reduced and all kinds of artistic and tasteful activities such as sculpture and painting appeared (1). In general, it can be said that before the industrial revolution, leisure time was not separated from work. At this time, people worked permanently and when nature did not allow them to stop working, but after the industrial revolution, working time was defined, working time was calculated as one of the bases of production, and as a result, leisure separated from work time. At the beginning of the industrial revolution, the working hours were so long that there was practically no free time left, but after successive struggles and struggles, the working hours were finally limited and the concept of leisure with new dimensions and concepts was formed in the society. Rapid industrial and technological developments and transformations, especially computers and the Internet, in addition to increasing leisure time, have also created tremendous changes in the way and quality of society's leisure time (2).

Therefore, leisure in its new meaning is a new phenomenon that has emerged as a result of industrialization and urbanization, and it cannot be compared with the unemployment of the past centuries. In this sense, free time is a time in which a person acts as he wants and there is no obligation. As a result, it is spent with a kind of good mood and satisfaction, therefore leisure time can be considered as the most important and pleasant time of human being. These times may include meditation and thinking, creating and inventing for some people, and for some people, it may include the recreation of physical and mental powers, and for others, it may simply include entertainment and fun.

Leisure in the contemporary world has different characteristics from the past, the most important of which are mentioned below.

In new societies, leisure is no longer reserved for privileged and privileged classes and has been extended to other classes as well. Changing and transforming leisure time from informal and informal to formal and commercial: Previously, leisure time was spent informally and in the form of companionship and conversation with friends and acquaintances, but with the development of the society, leisure time has gradually acquired an official aspect and many devices have been used to The purpose of making people's leisure time enjoyable has emerged. Use of electronic devices: The increasing spread of electronic devices such as computers, televisions, etc. plays a big role in spending free time. Separation of leisure time from work: the emergence of information technology has affected individual and social life to such an extent that it has led to the emergence of a topic called the sociology of leisure time (3).

A research was conducted by Manouchehr Ashraf Al-Katabi on the topic of examining the changes in the way of spending leisure time in the families of Tehran during three generations. With this research, it shows the effects of technology in the way of spending leisure time during three generations. The results of this research are as follows:

21.3% of men of the first generation perform religious duties in their free time, which is the second largest group in terms of how they spend their free time in this generation.

In the second generation, some people spent their free time in this way, they are the fifth group in terms of population and in the third generation, they are the tenth most populated group.

Among the women of the first generation, those who spent their free time by performing religious duties, formed the second most populated group.

Another significant result is that the participants in training courses such as sewing, computer, internet, bodybuilding, etc. are only seen among the third generation people and are not present in the first and second generation.

Based on the findings of this research, the researcher concludes that from the simple and less diverse types of leisure time in the first generation, it has moved towards a set of several types of activities in different dimensions in the second and third generations (4).

Most of the studies related to generational leisure and generational differences have been investigated (5,6). Based on these studies, people's tastes, political views and relationships change with age, and youth culture is very oriented towards mass culture, which is mostly

based on video and electronic media. Also, young people are more influenced by the peer group and mass media than the family and collective and local values , and their free time is dominated by the process of individualism and the development of gender identities.

In the current era, the central role of the Internet is so fundamental that without it, planning, development and productivity in cultural, social, economic and scientific fields will not be possible in the future world. Despite this, one should not ignore its unfortunate and destructive consequences, especially in its social and cultural contexts, as some of the adverse effects of the Internet are mentioned below:

Addictiveness: Making people addicted to roaming the back alleys of the Internet for hours every day, and loss of people's intellectual independence and one-sided dependence on the network and the information in it (7). In the psychological dimension, many harms such as unclear identity, anxiety or depression, isolation, strengthening the sense of violence, loss of emotional characteristics are noticed by the users.

Sexual abuse that mostly affects children and teenagers. According to studies conducted in the West in this field, most of the teenagers who are neglected and sexually abused are under 18 years old (8). The physical effects of using the computer and the Internet include stretching the muscles of the wrists, legs, back of the neck, the risk of developing arthritis, scratching the iris and lens of the eye, increasing the vision score, bending the back, bending the bones of the spine, and the risk of contracting Lumbar disc, skin, infectious and cancer diseases, hair loss, sterility and damage to the fetus of pregnant women (9).

Information technology has caused information pollution or the influx of too much information to humans, and this information pollution causes various side effects such as insomnia, loss of concentration, destruction of the immune system, indigestion, heart trouble, anger, irritability and disorder in it follows performance and efficiency.

In this case, Dr. Rosen says: "The human brain, in contrast to computers, cannot perform multiple tasks at the same time, we are currently putting a lot of pressure on our human abilities (10).

On the other hand, the Internet creates many opportunities for people, the most important of which is the Internet that creates employment and creates unemployment. Because it attracts many young people, it confronts the newly emerging phenomenon of youth dumping, that is, it turns the disturbing and crowded presence of young people in the streets and intersections into their presence at the computers connected to the Internet.

It makes administrative and publishing offices paperless, and as a result of this paperlessness, fewer forests are destroyed by human hands. It guarantees the intellectual growth of users. It makes life standards uniform. In the era of individual and collective migrations, it connects the fragments of separated families (11).

Provides timely access to information and knowledge. It creates unique situations for women in developing countries to go beyond their traditional role and find their real place in society by actively participating in all economic fields (8). Working with the Internet. It causes cultural change. It makes communication faster and easier. Therefore, this technology acts as a double-edged sword that can have positive and negative effects, and the officials are required to know the effects of this technology in their free time and make the necessary plans to expand the optimal use of these technologies. In this way, people and the society are safe from its adverse effects.

The following factors can be effective in the amount of use of IT in the world:

Literacy: Language and literacy limitations are important factors and common obstacles for the general public to use the Internet.

Rate of local phone calls: The rate of phone calls is an important factor for user access. Obviously, where the rate of telephone calls is high, using the Internet will not be affordable for the general public. According to the studies of the European Center for Technology and Democracy, the rate of telephone conversations is a big obstacle for many people to access the Internet. All over the world, the most popular method of accessing the Internet is still the dialing method, and therefore the description of the conversation is considered a limiting factor. In the same way, it can be said that it is usually necessary to pay two fees for internet connection based on the amount of usage time:

a . Paying phone bills to telecommunications companies

b. Paying for access to the ISP

Of course, in many parts of the world, these two costs are different based on the connection time during the day and night or the days of the week. Of course the end rate

Competition in the ISP market: Web service providers are called ISPs. Therefore, it can be said that there are three different types of ISP, which are: first-tier or highway, second-tier ISP or downstream and web host, third-tier ISPs or online service providers. Competition in the field of these three types of ISP is important for the development of ICT in a country. Healthy competition in the ISP market can lead to cheaper prices, improved quality, improved communication speed, and ultimately ICT development.

According to the given explanations, this article examines the knowledge, attitude and performance of middle school female students in Tehran in the academic year 2013-2014 regarding information technology.

The research of Homa Zanjanizadeh and Ali Mohammad Javadi has shown:

44.7% of Guyanese respondents used the Internet and 55.3% did not use it. The rate of internet use among girls was 46.7% and among boys was 53.3%.

62.2% of users used the Internet at home, 21.1% at Internet cafes and 16.7% at home and Internet cafes. 1.1% of users do not spend their free time on the Internet. 43.3% of respondents on the internet spent their free time, 49.4% somewhat, 12.2% a lot of users and 2.8% a lot of users. The results of the research show that internet users tend to chat and e-mail due to the lack of sufficient knowledge of the appropriate ways to use this technology, so that the average use of the internet is 498 minutes per week and the amount of chat use is 127 minutes per week is the highest average among the types of internet usage. The average use of internet environments among female users per week, e-mail 74 minutes, scientific-educational information 75 minutes, news environments 32 minutes, watching movies from the Internet 32 minutes, using Jack 47 minutes, sexual images 16 minutes, listening 138 minutes for music, 31 minutes for postcards, 18 minutes for downloading software, and 122 minutes for blogs. The average use of all kinds of internet environments among male users per week, e-mail 54 minutes, chat 122 minutes, games 67 minutes, scientific-educational information 60 minutes, news environments 35 minutes, watching movies on the Internet 31 minutes, using Jack 36 minutes, sexual images 50 minutes, listening to music 50 minutes, postcards 19 minutes, downloading software 39 minutes and blogs 49 minutes (13).

According to the results of Azarnia's research, 44.1% of young people in the age group of 15-29 years use the Internet. 57.5% of these people are men and 42.5% are women. 76.2% were single, and 23.8% were married. 31.2 percent of non-users have a high and very high tendency, and 31.6 percent have a low and very low tendency to use the Internet.

70.5% of respondents use email and 74.1% chat. The rate of interest in chatting with friends and acquaintances was 52.9% and 55.3% with non-same-sex people. The amount of interest in chatting in specialized and scientific topics was 4.30%, artistic and literary topics 23%, dating 45.9%, entertainment and recreation 66.9%, and love and sex topics 39.4%. 47% of users have internet friends. Out of the total number of these people who had internet friends, 40.7% had more than three friends of the same sex. 35.7% of people with internet friends have met each other after becoming friends on the internet. 38.3 percent of the respondents refer to blogs or write on the web. 19.9% of users had personal blogs. 92.1% of users search on the Internet. The average internet search was 16.6 hours per month. The average search time according to the topic was as follows: specialized and scientific topics 4.8 hours, political and social topics 8.5 hours, fun and humor 2.5 hours, literary and artistic 7.3 hours, film 7.4 hours. Clock, music 4 hours, photo 4.5 hours, fashion 4.4 hours, catalog 5 hours per month. 5.18 percent of the respondents use online games. The average duration of their use was 4.8 hours per month (14). The majority of users, i.e. 1/56, give up viewing filtered sites. 25.1 percent use the filter breaker and 18.7 percent refer to sites with similar themes. Interest in the Internet did not differ between men and women.

Based on the research, 36% of the respondents use the Internet for some of their free time at home for entertainment. The number of chats in Iran is very high and it is said that 80% of Internet

users are engaged in this activity. The percentage of Internet research works in Iran is less than 5%, while in advanced European countries this statistic reaches over 80%. Computer games also have very high statistics among teenagers (14).

Studies by social science and social communication researchers show that the dominant function of chat for Iranian users is to fill their free time and entertainment, which in positive and negative forms, facilitates and compensates for their communication needs in the real world.

Based on the results obtained from the youth trend survey, it was found that 24% of young people and teenagers turn to the chat space for entertainment. Also, social science researchers have conducted a research on the tendency of young people to internet chats and have come to the conclusion that 88% view chat as a game (15).

Materials and Methods

This research is survey, descriptive and correlational. The sample of this research is 300 female high school students in Tehran, academic year 2013-2014, who were selected by cluster sampling method. After selecting the sample to collect data from a researcher-made questionnaire, which consists of four sections: knowledge, students' attitude towards information technology, and students' views on the barriers to using information technology, and the type of students' use of information technology. and after collecting the data questionnaire using SPSS software and using descriptive tests such as frequency and correlation coefficient, the hypotheses and research questions have been answered.

In order to construct the above test and to establish its reliability, validity and scoring, a sample of 30 female high school students in Tehran was selected and the initial questionnaire was administered to them.

After transferring the information to the computer, evaluations were made as follows:

To check each question and determine their accuracy, three methods were used: A: Reliability calculations, B: Validity evidence, C: Question analysis.

To analyze the question, two calculations were performed as follows: A: Multiplication, B: Loop method

After examining the question analysis using the above methods, some questions were removed and the final test of academic performance was prepared.

Cronbach's alpha was used to estimate the reliability of the test, and after calculations, the reliability of the attitude section was 8186, the obstacles section was 79.00, and the reliability of the type of information technology use was 0.69.

In order to obtain the validity of the test, two methods of content validity and face validity have been used. To check the validity of the content, the specification table was used, and to check the formal validity according to the experts.

Results

The findings of this research show that 84.2% of students had little familiarity, 9.7% had moderate familiarity, and 6.1% had great familiarity with information technology. The average percentage of familiarity is 17.17 and the standard deviation is 21.04.

The results of the study of students' use of information technology show that the majority of students (81.9%) spend a little, 9.7% moderately and the rest (8.4%) a large percentage of their free time. They used information technology.

The correlation coefficient between the level of student's knowledge and the level of their use of this technology shows that there is a significant relationship.

The correlation coefficient between students' knowledge of information technology and their optimal use of this technology shows that there is a negative relationship between the two variables.

The results of studying students' attitudes towards information technology show that the majority of students (88.3 percent and 57 percent) agreed with the useful role of information technology and its flexible role in spending their free time, respectively. The majority of them showed a positive attitude towards this technology in their leisure time use.

The results of examining the barriers to using information technology from the student's point of view show that with the majority of votes (98%, 100% and 95% respectively), technological limitations, and lack of motivation and high costs of information technology are moderate and very high.

Discussion

This research was conducted with the aim of investigating the knowledge, attitude, performance and barriers to using information technology in the spare time of secondary school female students in Tehran. The results showed that the majority of them (84.2%) had little knowledge of computers and the Internet. The low knowledge of students can be attributed to the following reasons:

1. One reason could be the lack of policymaking at the macro level.
2. Another reason could be that families are still not aware of the role of this technology in the growth and development of their children in terms of education and personality development.
3. Another reason may be that the educational costs of information technology, such as training courses, textbooks, etc., are not proportional to the income level of the families.
4. Another factor is probably due to the fact that students do not see the need to learn computers and the Internet because the environmental, educational and social conditions are such that they do not feel this need.

Another finding of this research shows the low use of computer and the internet by the samples. This result shows that information technology has little importance and place in students' free time. The following reasons can be mentioned for the above situation:

1. One reason can be due to students' poor knowledge of this technology.
2. Children's upbringing and culture are usually influenced by their surrounding environment, including family, school, etc., and because the importance and place of this technology for different groups of society is not yet clear, the knowledge of students is also influenced by these factors are not.
3. Another reason can be due to economic factors.

The next finding of the research is that there is a positive relationship between the two variables of the level of knowledge and the level of use of information technology, which is in line with the results of researchers such as Jafari and Dayani (16). This shows that with increasing knowledge of students, the duration of their use of this technology increases, therefore, the use of information technology index, which is one of the indicators of the progress of countries in the information age, can be increased by increasing students' knowledge of this technology. The negative relationship between the two variables of knowledge and optimal use of this technology indicates that Iranian teenage users do not really know what uses of the Internet are possible. They often do not have a specific purpose. They use entertainment, immoral issues, and conversations. This is the reason why it is useless in chat rooms. Internet chat rooms are one of the busiest internet spaces in Iran (17). Eslami (18) in the research he conducted among students shows that the most students use the Internet to communicate and chat. Babaei's research (19) indicates that Iranians are interested in chatting and except for a few people. Specialists usually do not enter specialized environments.

If many young people use the Internet in this way, the reason should be found in their intellectual structure. They have not seen effective and useful training from the Internet at home and school, no institution guides them to show the wide possibilities of job creation and income generation. , he is not responsible for the continuation of education and even useful and educational entertainment on the Internet (20). On the other hand, we encountered the Internet like satellite and video, unmeasured. Instead of learning how to drive on this highway and learning how to respond to the needs of its services, they constantly talk about the dangers and military accidents that occur in it. We say. The speed of change and progress of cultural industry in our society is faster than the culture of using cultural industries, and people can get computers and the internet in a short period of time, but it takes years to learn the correct culture of using computers and internet. Some media workers think that the solution to the problem is restriction and censorship, but recently experts in the field of communication, teaching computer literacy, especially the Internet, conscious use of Internet products and recognizing deceptive methods to reconstruct reality, are the only way to resist and They know how to protect the audience against the dangers of the Internet (20).

The results of the investigation of the barriers to the use of information technology are consistent with the results of Motamedzadeh (21), Hakimi (22), Jafari and Dayani (16). The following suggestions can be considered:

Officials should provide large-scale programs for the development of telecommunication and internet infrastructure so that users can use computer and internet facilities without software and hardware problems. For low-income families, create programs such as free education and create institutions where poor people can use computer and internet facilities for free in these institutions. Familiarization of parents and officials with the category of internet, training in its correct use, raising and updating information according to the rapid development of information technology and the internet.

Providing the necessary training on how to use, the benefits and harms of the Internet and the subject of information technology to students through books, pamphlets and course units. Equipping educational centers with up-to-date technology and creating the necessary infrastructure for the reasonable and balanced availability of the Internet for students, taking into account the appropriate time, access level, space and place, in order to encourage students to use it usefully, searching for articles, virtual education, exchanging information and other things.

Conclusion

The findings of this research have shown that the situation of the research sample is in an unfavorable situation in terms of the level of familiarity and the amount of use and type of use of information technology. It is worth mentioning that this research is descriptive, so the results and interpretations apply only to the research sample and at the same time.

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