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Original Article

Comparison of Mental Health and Aggression in Two Groups of Student's Using and not Using Internet

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ABSTRACT

The aim of this study was Comparison of mental health and aggression in two groups of student's using and not using internet. The study population 120 academic year of 2010-2011 that have been chosen based on multistage cluster sampling. This study was causal-comparative. For collecting data, the researcher made questionnaire, Ahvaz aggression scale has been used. For data analysis, independent t-test, two-way analysis of variance and Pearson correlation through the SPSS software have been used. The results showed that there is a significant difference between the means of two groups, using internet and not using, and the variables of mental health and aggression ($P<0.05$). Overall, the students using interne have more unfavourable mental health and aggression control than the students not using.
Keywords: Computer Users, Computer Nonusers, Mental Health, Aggression

INTRODUCTION

The study of human interaction with machine is one of the current era concerns, which even has resulted in the emergence of new disciplines. Among the variables explored in the computer-related fields including the computer effects on attention, spatial visual perception, abstract reasoning, reasoning related to form and damage-like topics such as fatigue, seclusion, emergence of aggressive passive personality, and addiction to Internet in computer users are very important. The students as individuals who actively investigate their own environmental are naturally seeking new ways to encounter the environment and use modern tools including the computer-related technologies. Communication and information technology is the result of the combination of the separate sectors of computer, communication and information.

In general, it seems that the amount of using communication and computer-based technology could be among the influential factors on the student's behavior [1]. Computer and its games, which like other human-made devices have almost entered in all aspects of human life, has two dimensions. One of the dimensions is its proper use and help to growth and prosperity of human being, and the other dimension is misusing the computer, for instance using it in the fields except for scientific and occupational purposes [2]. The students' mental health in our research means the health of certain aspects of human being such as intelligence, mind and thought. On the other hand, mental health also influences physical health. Recent studies have proved that a series of physical improvements is related to certain mental circumstances. Mental health is one of the variables, which have recently entered into the field of cognitive psychology, and some researches in this area have been conducted.

Studies have shown that the Internet addiction is one of the major factors influencing mental and physical health. Wishart [3] in his study showed that the dependence on the Internet has created severe gaps and breaks in academic, social, financial and occupational life of contributors. So that fifty-eight percent of schoolchildren and students have experienced a significant reduction in study habits, grades drop, absence in the class, and so forth. Additionally, there is no control over them to spend their time in academic activities.

Due to going to bed later at night because of using the Internet, 43 percent of the students have faced with failure at school. Mitchel et al. [4] in studied the influence of Internet addiction on students; they found that because of excessive use of the Internet on third of these students have suffered from physical and psychological problems, happiness and positive thought reduction and academic problems. Van Gelder [5] in his research on university students found that people who are prone to the Internet addiction, are easily tired and dejected. They

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are alone, bashful and shy, while having low quality of life and suffering from depression and other types of problems. Thamson[6] in a research on the effects of the Internet addiction on the feeling of lack of suitable and actual social relations among the students showed that most students have recorded that their social skills is impaired. Forty-seven percent of respondents have referred to physical disorders such as vision obscurity, insomnia. Thamson [6] in the end concludes that the phenomenon of the Internet addiction is a new one, and in fact most of the people who already are suffering, respond to freshness of this knowledge source. Among the other objectives of the present study is the investigation of computer influence on students' aggression. Aggression is an action with the aim of damaging and hurting the individuals physically or verbally, or destroying the individuals' asset [7]. Eight types of aggression in humans and animals are: 1) Predatory Aggression: The aggression is the attack of animal against a real damage. 2) Interpersonal Aggression: It is a threat, attack or a dominated behavior by a person in response to a powerful individual. 3) Aggression due to fear: behavioral attacks are usually done due to an attempt to get rid of dangers. 4) Aggression on the Territory: Threatened behavior along with the assault when an intruder is found in the soil and territory of the country. 5) Maternal Aggression: is an attack or a threat, which a woman shows against an intruder when her child is present. 6) Irritable aggression: is an attack or threatened behavior, which is shown against failures, pain, deprivation or any other operating stresses. 7) Sexual Aggression: Aggressive behavior is called upon the same stimulus that calls sexual behavior. 8) Instrumental Aggression: Aggression behavior due to some rewards and most human aggression is an instrumental aggression (The same Ref.). Unfortunately, one of the wrong beliefs about computer games is that these games have a devastating influence on aggression, mind and personality [8].

The results of a study by Hobbs and Yan [9] concerning the computer games influence on student's aggression showed that the effects of computer games on the cognitive component of aggression are positive, but its effects on the rest of aggressive component were not significant. Computer and its games help users in learning, teaching social skills and reducing aggression [10, 11]. Some researchers like Mayer and Moreno [10] believed that using computer and its games cause the reduction in the rate of aggression. However, Mohammadi [2] believed that the most important characteristic of computer games was the war condition in them; the person had to fight against the so-called enemy to go to the next stage, the continuation of such aggressive games makes the children aggressive. Anderson and Bushman [12] believed that playing computer games increase aggression levels. Here, the basic question is that is there any difference between the two groups of computer users and non-computer users in terms of aggression and mental health.

MATERIALS AND METHODS

The study method in this research is causal-comparative or after the occurrence. The statistical sample of this research includes 120 students using and not using computers in the academic year of 2010-2011. These students had been selected using multi-stage cluster sampling method. Thus, after specifying statistical population, we selected 60 computer users from among the universities of Ardebil province (10 per university), using a random number table. Then, we selected 60 other students (10 per university) as the other group sample (non-computer users). About the reason for choosing the 60 samples for each group, we should mention that in causal-comparative method each subgroup must be at least 15 people. We considered 60 students for each group, so that the selected sample was the real representative of the society and could have a high validity. We used a researcher-made questionnaire to gather the data. The questionnaire included Name, Surname, Last Term GPA (Grade Point Average), age and education level, using or not using a computer. It also evaluated the level of using a computer by the subjects .

The next scale has been Ahvaz aggression questionnaire (AGQ): This questionnaire has been prepared in 2000 based on the analysis of factors. It has 300 items and the subjects respond to these items as four options (never, rarely, sometimes and always). These options are scored as 0, 1, 2 and 3, respectively and have three components: A) Anger and nervousness (Items 1 to 14) B) Offensive and insulting (Items 15 to 22) C) obstinacy and malice (Item 23 to 30).

Cronbach's alpha reliability coefficients recorded for the total questionnaire was 0.87, the first factor (anger or nervousness) 0.85, the second factor (offensive and insulting) 0.76, and for the third factor (obstinacy and malice) was 0.75. After six weeks the retest obtained reliability coefficient was 0.70 for the entire questionnaire, 0.60 the first factor, 0.74 the second factor and 0.72 for the third factor. Based on EPI (Eysenck Personality Inventory), correlation coefficient of Ahvaz aggression questionnaire including subscales out of extroversion- introversion, neurosis and psychosis, was significant with the coefficient of 0.20, 0.36 and 0.55, respectively ($p<0.01$). Correlation coefficient of Ahvaz aggression questionnaire with the Bass-Duki Aggression scale is 0.56 ($p<0.001$). The correlation coefficient of this questionnaire with depression scale of ($r=0.37$), psychopathic ($r=0.43$), paranoid ($r=0.36$), psychasthenia ($r=0.58$), schizophrenia ($r= 0.46$) and mania (0.27). Mental Health Questionnaire (GHQ-28): This questionnaire includes 28 Article, which has designed by Goldberg and Hiller using the factor analysis method. This questionnaire has four scales. It measures somatic symptoms, anxiety, depression and impaired social interaction. Each scale has seven questions. The studies performed indicate high validity and reliability of this questionnaire. Goldberg and Williams in the analysis of 43 surveys

showed that its sensitivity is 0.84 and its specificity 0.82. In this study the retest and reliability coefficient and Cronbach's alpha was equal to 0.88, in this study the total score of the questionnaire is considered. [13]

RESULTS

In this section, the results of comparison in mean of mental health, hostility, offensiveness, obstinacy and aggression variables in two groups of students who user and non-user of internet have been presented.

As it was shown in table 1, there is a significant difference in mental health, hostility, Offensiveness and aggression variables in the two groups of students (internet user and non-user). This means that mean of mental health scores in internet non-users is more than users. But scores mean of other variables in user computer is lower than non-users. In other words, hostility, Offensiveness, and aggression variables in user computer are lower than in non-users.

As it was shown in table 2, there is difference between male and female students (users and non-user of computer) in mental health variable, and F (F interaction) is significant (0.00). There is difference in non-user's computer. But aggression between groups was no significant.

Table 3 shows relationship between mental health and aggression. There is a negative and significant correlation between variables.

Table 1. Comparison in mean of mental health, hostility, offensiveness, obstinacy and aggression variables in two groups of students who user and non-user of internet

variables Dependent	Groups	MD	Sd	df	t	sig
Mental health	User	15.1919	4.35314	98	2.646	0.00
	Non user	17.0041	1.74862			
Hostility	User	21.3750	7.35317	98	1.962	0.05
	Non user	24.7692	9.68244			
Offensive	User	7.6170	3.68636	96	2.368	0.02
	Non user	10.3529	7.08470			
Obstinacy	User	12.1837	4.03977	99	0.766	0.44
	Non user	11.5000	4.86081			
Aggression	User	41.0000	10.79300	92	2.334	0.02
	Non user	47.2708	14.84923			

Table 2. Tow-way analysis of variance (ANOVA) to compare computer users and non-user of mean scores of with gender role considering in aggression variable and mental health

variables	Source of variable	ss	df	MS	F	sig
Aggression	A(users and non-user)	1.01	1	398870	2.363	0.1
	B(gender type)	0.87	1	120.357	0.713	0.4
	AB(interaction)	1.15	1	120.357	0.713	0.4
	error variance	0.85	91			
	Total variance groups	2.29	96			
Mental heath	A(users and non-user)	3.82	1	143886	17.755	0.00
	B(gender type)	2.53	1	279.211	34.454	0.00
	AB(interaction)	0.78	1	71.963	8880	0.00
	error variance	0.71	96			
	Total variance groups		100			

Table 3. Correlation between variable of mental health with aggression

X Y		Aggression
Mental health	R	-0.0558
	Sig.	0.05

DISCUSSION

The first hypothesis of the study predicted that there was a significant difference between the computer users and non-users in mental health variables. The obtained results showed that there was a significant difference between the groups and this difference was in favor of all the non-users. These results are consistent with the results obtained by Wishart[3]; Mitchell [4]; Van Gelder[5] and Thamson[6]; so that as you spend more time to work with a computer, your mental health would be lower, and consequently depression and anxiety will be higher. In addition to the destructive effects, which computer games have on mood and behavior of children

and adolescents, they can also cause different and notable physical symptoms. Doctors believe that computer games if too much conventional could bring about different complications, which nervous tic, tired eyes, swollen fingers and the nervous system stimulation are the most common. These complications are more severe for children and ignoring the balance can cause the joint cartilage to wear and lead to severe pain. The next hypothesis of the study predicted that there was a significant difference in terms of aggression variable between computer users and non-users. The results showed that there was a significant difference between the groups and this level of difference was far lower in computer users than in non-users. The results obtained was consistent with the findings of the researches performed by Hobbs and Yan [9], Mayer and Moreno [10], and Bosworth et al.[11], showing that computer and its games help the users in social skills learning and learning, as well as in reducing the aggression. Whereas the result was inconsistent with the research performed by Anderson and Bushman [12] who believed that computer games could increase aggression levels. Regarding the obtained results, based on the view of konrad Lorenz Austrian etiologist we can say that aggression is an innate instinct in human that are in common with many other species. If the energy of human psychological system unloads in a desirable and proper manner for example through sports or computer games, it will be influential and the aggression level will decrease. The study also predicted that there was a correlation between the variable of aggression and mental health in computer users and non-users. The results obtained indicated that there was a significant relationship between the variables. We could say that enjoying progress, peace and quiet in life is one of the basic requirements of satisfaction and mental health. Appropriate and optimal use of computers by students, could cause high academic performance. Since it causes the students to feel progress, they will be in a better mental status and the aggression level will decrease. The next hypothesis of the study said that there was a significant difference between computer users and non-users in terms of the interaction with gender in aggression. The results showed that the F rate in five percent level was not significant. The findings were inconsistent with the results obtained by Betty Court [13], Berkwits et al.[14], and Eaglieet al.[15]. They believed that men were significantly aggressive against people more than women were especially when they are motivated by them. We could say that playing a computer game especially group games among male students, causes them to learn the necessary social skills. When the individuals have been equipped with different social skills, the processes that simply are confused due to poor skills prevent from the emotional crises such as anger and aggression. In addition to prevention, social skills increase the power of the individual adaption in school and family, and directly lead to the reduction of behavioral problems such as aggression.

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