

## The Attitude of High School Students in Kuwait towards Internet Addiction and Its Effect on their Health

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### Abstract

The Internet is a new technology that has affected the world; it provided many benefits to its users. At the same time, many people are becoming addicted to Internet and unable to control their use, especially high school students, and this is affecting their health, education and relationships.

The aim of this study is to diagnose the attitude of high school students in Kuwait towards internet, and the effect of Internet addiction on their health.

Results demonstrated that a high percentage of high school students encounter the problem of Internet addiction. Most of them show traumatic stress, and community violence. They admit that health education is very important in teaching strategies that help them to overcome difficulties and learn healthy ways of using the Internet. In addition, a high percentage agreed that Internet addiction affected their health, it caused mental health problems, it resulted severe headaches and vision problems, and have negative effects on their physical, mental, psychological development and overall health.

**Keywords:** Internet addiction; Health education; High school students

### Introduction

Internet is a worldwide system of computer network; a network in which users at any one computer can, if they have permission, to get information from any other computer (and sometimes talk directly to users at others computers) [1].

Internet addiction has become an important issue that affect high school student's performance in their studies, their relationships with others, and health problems they encounter. High school students have been one of the most mentioned target groups as well as adolescents, for internet addiction [2].

The concept of "Internet addiction" has been proposed, as an explanation for uncontrollable, damaging use of technology. The newly behavioral problems manifesting from heavy Internet use have been termed "Internet addiction", or "problematic Internet use," [3], or "pathological Internet use". Internet addiction is the most widely used term to describe this maladaptive Internet use [4].

Internet use has been defined to have six or more symptoms of nine criteria; those include:

Preoccupation, uncontrolled impulse, usage more than intended, tolerance, withdrawal, impairment of control, excessive time and effort spent on the Internet, and impairment of decision-making and ability impaired function based on a diagnostic interview [5].

The Internet is one of the most widely accessible media in the world with characteristics different from previous media. It is necessary to evaluate the effect of Internet on aggressive behavior [6].

Therefore, the main purpose of this study is to investigate the attitude of high school students in Kuwait towards internet addiction and its effect on their health, in an effort to find a solution for this vital problem.

### Review of the Literature

In reviewing the literature on Internet addiction, there will be a particular focus on the work of the psychologist Kimberly Young. Kimberly Young focused in her research on factors related to Internet addiction, she developed a questionnaire of 20 questions, called the Internet Addiction Test, based on the criteria used to diagnose problematic Internet users' characteristics [7]. She described their personalities as bold, outgoing, open-minded, and assertive. Many of the Internet users reported being depressed lonely, having low self-esteem, and anxiety. Young also found that her addicted respondents used the Internet an average of 38 hours a week. Nearly 80% of Internet addicts engaged in two-way communication forums such as chat rooms and interactive games.

Recent studies have found that 19.8% of adolescents have Internet addiction [5], and it is associated with hostility.

It is found that computer-mediated communication weakens social influence as talking in the head set, speaking loudly, staring, touching, and gesturing [8]. Therefore, the disappearance of facial expression, voice inflection, and eye contact makes electronic communication less threatening, this help the depressive to overcome the intimidation in

meeting and speaking with others. As it is defined problematic internet use as uncontrollable; distressing; time consuming; or resulting in social, occupational, or financial. In addition, health problems such as impulse control disorder [3].

Variables	Mean	Std. Deviation
Q12: A high percentage of high school students encounter the problem of internet addiction.	4.45	0.923
Q13: Parents have a high responsibility toward their children in blocking some internet sites.	4.34	0.916
Q33: Health education is important in teaching about healthy ways of using the internet.	4.33	0.957
Q10: Computer and internet plays an important role in the development of educational process in schools.	4.26	0.913
Q34: Educational books and posters help in reducing Internet addiction.	4.24	1.051
Q26: There are different safe ways and rules that should be taken when using the internet.	4.16	0.985
Q11: Internet helps improve thinking, by considering all perspectives of a situation.	4.09	1.057
Q32: I would like to have information about the effects of Internet on health, and psychological development.	4.08	1.1
Q19: Internet addiction is the main cause of isolation from society and family.	3.94	1.021
Q28: Internet invention is considered from the most important and dangerous educational inventions.	3.92	1.106
Q18: Most people reveal untrue information about themselves.	3.8	1.116
Q29: Computers and internet are considered from the best ways for teaching.	3.78	1.058
Q20: It is advisable to do some exercise from time to time while using internet.	3.77	1.185
Q31: Health Education plays an important role in reducing diseases resulting from internet addiction.	3.75	1.283
Q9: The internet contributes in helping discover ourselves and choose our favorite programs.	3.62	1.145
Q25: Internet addiction is considered as a dangerous disease, and should be controlled.	3.4	1.345
Q27: Playing computer games help increasing self-confidence.	3.37	1.269
Q7: Using the internet influences behaviors and attitudes negatively especially youngsters, and may cause community violence.	3.18	1.142
Q4: Internet has negative effects on social life and may decrease social relations.	2.97	1.5

**Table1:** Mean and Standard Deviation of Various Variables Dealing with the Students' Attitude towards Internet.

## Methodology

The purpose of this study was to measure the attitude of high school students towards Internet addiction and its effect on their health. The sample consists of high school students studying in Kuwait. The study concentrated on the following two main research questions:

1. The attitude of high school students in Kuwait towards internet addiction.
2. The effect of internet addiction on their health.

For the purpose of the study, a research questionnaire has been designed. It consists of 34 dependent variables and 4 independent variables. Out of the various dependent variables, 19 variables deals with the "overall attitude of high school students towards internet", 15 variables deal with the "effect of internet on their health". The sample consists of 200 subjects, and 107 (53.5%) are males, and 93 (46.5%) are female. First year high school students are 35 (17.5%), second year students are 26 (13%), third year students are 74 (37%), fourth year students are 65 (32.5%). Students with major as "Arts" are 103 (51.5%), and students with major as "Science" are 97 (48.5%). The high school students in the various years of their studies have been joined together.

Thus, the numbers of students who are either in "first / second year" are 61 (30.5%) and who are in "third / fourth year" are 139 (69.5%).

An extreme care has been taken to create some new research questions (variables) from the various 34 dependent variables. The first research question, represents the "overall attitude of high school students towards internet addiction", and is created by taking the average of the 19 variables dealing with it. The second research question, represents the effect of internet on their health, and is created by taking the average of the 15 variables dealing with it.

Significant differences are discussed on the two main research questions with respect to various demographic variables such as gender (male, female), year of study (first/second high school year), (third/fourth high school year), and major (arts, science) by using t-test. The SPSS (A Statistical Package for Social Sciences) has been used to analyze the various results. All the results have been presented, and discussed through various tables.

## Reliability and Validity

Reliability was measured for the 19 items related with "Overall attitude of high school students towards internet". The value of Cronbach's Alpha, (0.741) shows that there is a high reliability and thus

a high internal consistency among these 19 items. In addition, reliability was measured for the 15 items related with, "the effect of internet on their health". The value of Cronbach's Alpha, (0.778) shows that there is a high reliability and thus a high internal consistency among these 15 items.

In addition, reliability was measured for all these 34 items. The value of Cronbach is Alpha, (0.844), which shows a high reliability and thus a high internal consistency among these 34 items. The validity was measured based on the research hypotheses. Some questions were deleted and some questions were modified based on the research objectives and thus in the final form of the questionnaire there were only 34 items as mentioned above.

## Results

Table 1 shows the Mean and Standard Deviation of all the 19 dependent variables dealing with the "high school students' attitudes

Variables	Mean	Std. Deviation
Q14: Internet addiction causes headaches and mental problems.	4.49	0.919
Q1: Using the computer for four hours or more may cause several health risks, and may cause traumatic stress.	4.06	1.006
Q3: The internet has negative effects on the physical and overall health.	4.06	1.069
Q15: Playing internet games for long hours causes trouble in sleeping and may cause brain damage in the future.	3.99	1.145
Q8: Internet addiction affects the nervous system in the body.	3.89	1.108
Q17: Most common Diseases spread from internet addiction are back and neck ache.	3.84	1.282
Q21: There is a big relation between obesity and internet.	3.78	1.188
Q6: The key board if used long time may cause pain and numbness in hands and fingers.	3.4	1.276
Q24: Internet addiction affects the vision and cause blurry vision and different eye problems.	3.09	1.383
Q22: It is advisable to close the eyes constantly and relax to reduce stress and tension.	3.08	1.396
Q5: The brightness from the computer screen may affect eyesight from common use.	2.93	1.473
Q16: To reduce the effect brightness and rays from the computer, the screen should be 44 - 56 cm away from the eyes.	2.9	1.58
Q23: Laptop may cause harmful effect on the internal organs on female's body if kept too close or directly on the lap.	2.74	1.492
Q2: Drinking a lot of water or fluids while using the internet is healthy and reduces diseases	2.7	1.422
Q30: The screen of the computer should have a layer of protection to reduce the rays on the eyes.	2.64	1.456

**Table 2:** Mean and standard deviation of various variables dealing with the effects of internet on health.

Variables Labels	Mean	Standard Deviation	Reliability Statistics	
			Cronbach's Alpha	Number of Items
Overall attitude of students towards internet	3.86	0.47	0.741	19
Effect of internet on their health	3.44	0.64	0.778	15

**Table 3:** Mean, standard deviation and reliability (Cronbach's Alpha) for the two newly created variables from the group of various dependent variables.

The lowest mean about the attitude towards internet addiction is for "Q4: Internet has negative effects on social life, and may decrease social

towards Internet addiction", and Table 2 shows the Mean and Standard Deviation of all the 15 dependent variables dealing with the "effect of Internet on their health". The variables in both tables have been sorted out in the descending order to see the students' highest mean to the lowest mean.

Table 1, shows that the students' highest attitude towards internet addiction is for "Q12: A high percentage of high school students encounter the problem of internet addiction", the mean is (4.45, and SD is .916), and for "Q13: Parents have a high responsibility toward their children in blocking some internet sites", the mean is (4.34, and SD is .916).

relations", the mean is (2.97, and SD is 1.500) and for "Q7: Using the internet influences behaviors and attitudes negatively especially

youngsters, and may cause community violence", the mean is (3.18, and SD is 1.142).

Table 2, shows that the high school students' highest mean about the effect of internet on health, was in:

"Q14: Internet addiction causes headaches and mental problems ", the mean is (4.49 and SD is .919), then "Q1: Using the computer for four hours or more may cause several health risks, and may cause traumatic stress, the mean is (4.06 and SD is 1.006)." The lowest mean about the effect of internet on health was:

"Q30: The screen of the computer should have a layer of protection, to reduce the rays on the eyes", the mean is (2.64, SD is 1.456) and "Q2: Drinking a lot of water or fluids while using the internet is healthy and reduces diseases", the mean is (2.70, SD is 1.452).

Table 3, shows that the overall mean of high school students and attitude towards Internet is (3.86), which means that it is "high". The overall mean of the effect of internet on their health is also "high" (3.44).

### T-test for Various Dependent Variables by 'Gender'

An independent sample t- test was conducted to evaluate the hypothesis that there is no statistical significant difference between

male and female high school students about their opinion on the "overall attitude of students towards internet". The Levene's test of equality of variance shows that the variances of both groups are equal and consequently the standard t-test is applied.

Number of Cases = 200.

Table 4, shows that the t-test was significant,  $t(198) = -2.11, p < .05$  ( $p = .036$ ). The mean values show that the female high school students ( $M = 3.939, SD = .439$ ) agree more in their opinion about the "overall attitude of students' towards internet" than the male high school students, ( $M = 3.799, SD = .489$ ).

An independent sample t- test was conducted to evaluate the hypothesis that there is no statistical significant difference between male and female high school students, about their opinion on the "effect of internet on their health". The Levene's test of equality of variance shows that the variances of both groups are equal and consequently the standard t-test is applied.

Table 4, shows that the t-test was not significant,  $t(198) = 0.795, p > .05$  ( $p = .428$ ). The mean values show that the male students ( $M = 3.47, SD = .647$ ) agree more in their opinion about the "effect of internet on health" than the female students, ( $M = 3.39, SD = .629$ ) but this difference of opinion is not statistically significant at .05 the results of t-test are presented in the following "Error Bar" Chart.

Variables Names	Gender	N	Mean	S.D.	t	Sig. (2 – tailed)
Overall attitude of high school students towards internet	Male	107	3.799	0.489	-2.11	0.036
	Female	93	3.939	0.439		
Effect of internet on their health	Male	107	3.47	0.647	0.795	0.428
	Female	93	3.398	0.629		

**Table 4:** Overall attitude of students' towards internet.

Variables Names	Year of Study	N	Mean	S.D.	T	Sig. (2–tailed)
Overall attitude of high school students towards internet	First / Second	61	3.886	0.438	0.435	0.664
	Third / Fourth	139	3.855	0.486		
Effect of internet on their health	First / Second	61	3.480	0.583	0.637	0.525
	Third / Fourth	139	3.417	0.662		

**Table 5:** T-test for various dependent variables by year of study (First / Second Year, Third / Fourth year).

Degree of Freedom = 198.

Figure 1 shows the "Overall Attitude towards Internet" and "Overall Effect of Internet on Health" by Gender.

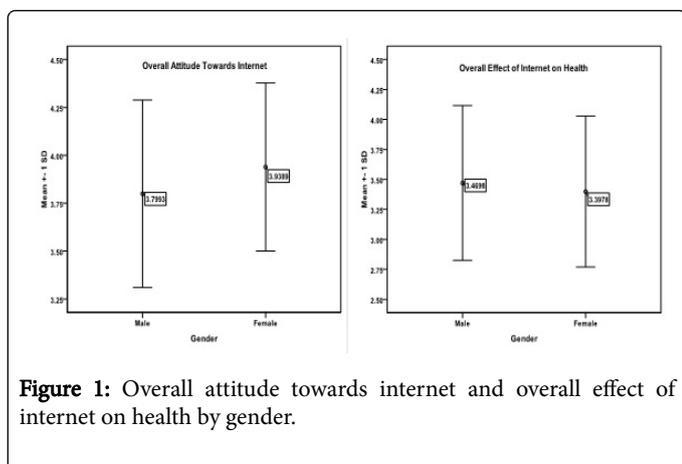


Figure 1: Overall attitude towards internet and overall effect of internet on health by gender.

### T-tEST for Various Dependent Variables by 'Year of Study'

An independent sample t- test was conducted to evaluate the hypothesis that there is no statistical significant difference between the two categories of students in their opinion about the "overall attitude of high school students' towards internet" as per their year of study. The first category of high school students who are studying, either in first or second year of high school, and the second category of students, those students who are studying either in third or fourth year of high school. The Levene's test of equality of variance shows that the variances of both groups are equal and consequently the standard t-test is applied.

Table 5, shows that the t-test was not significant,  $t(198) = 0.435, p > .05 (p = .664)$ . The mean values show that the students of "first / second year" ( $M = 3.886, SD = .438$ ) agree more in their opinion about the "overall attitude of students' towards internet" than the students of "third /fourth year", ( $M = 3.855, SD = .486$ ) agree, but this difference of opinion is not statistically significant at .05

An independent sample t- test was conducted to evaluate the hypothesis that there is no statistical significant difference between the two categories of students as per their year of study, in their opinion about the "effect of internet on health ". The Levene's test of equality of variance shows that the variances of both groups are equal and consequently the standard t-test is applied.

Table 5, shows that the t-test was not significant,  $t(198) = 0.637, p > .05 (p = .525)$ . The mean values show that the students of "first / second year" ( $M = 3.48, SD = .583$ ) agree more in their opinion about the "effect of internet on health" than the students of "third / fourth year", ( $M = 3.417, SD = .662$ ) , but this difference of opinion is not statistically significant at (.05). The results of t-test are also presented in the following "Error Bar" Chart.

Degree of Freedom = 198.

Figure 2 shows the "Overall Attitude towards Internet" and Overall Effect of Internet on Health" by Year of Study.

### T-TEST for Various Dependent Variables by 'Major'

An independent sample t- test was conducted to evaluate the hypothesis that there is no statistical significant difference between

"Arts" and "Science" high school students majors in their opinion about the "overall attitude of students' towards internet". The Levene's test of equality of variance shows that the variances of both groups are equal and consequently the standard t-test is applied.

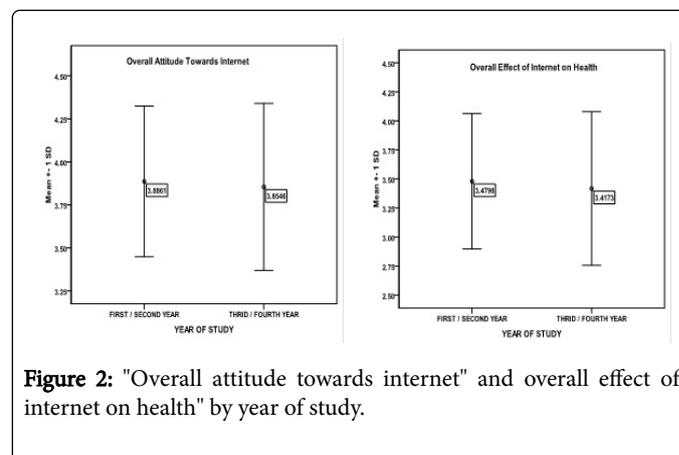


Figure 2: "Overall attitude towards internet" and overall effect of internet on health" by year of study.

Table 6, shows that t-test was significant,  $t(198) = 2.608, p < .05 (p = .01)$ . The mean value shows that "arts" students ( $M = 3.549, SD = .621$ ) agree in their opinion about the "effect of internet on health more than "science" students, ( $M = 3.317, SD = .638$ ). The results of t-test are also presented in the following "Error Bar" Chart.

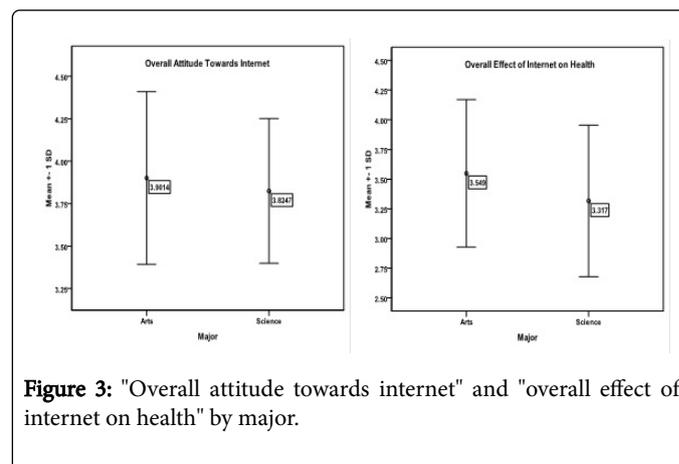


Figure 3: "Overall attitude towards internet" and "overall effect of internet on health" by major.

Table 7, shows that the t-test was not significant,  $t(198) = 1.152, p > .05 (p = .251)$ . The mean values show that "arts" students ( $M = 3.901, SD = .508$ ) agree more in their opinion about the "overall attitude of students' towards internet" than "science" students, ( $M = 3.825, SD = .426$ ), but this difference of opinion is not statistically significant at (.05).

An independent sample t- test was conducted to evaluate the hypothesis that there is no statistical significant difference between "arts" and "science "high school students' majors, in their opinion about the "effect of internet on health". The Levene's test of equality of variance shows that the variances of both groups are equal and consequently the standard t-test is applied.

Figure 3 shows the "Overall Attitude towards Internet" and "Overall Effect of Internet on Health" by Major.

Variables Names	Major	N	Mean	S.D.	t	Sig. (2 – tailed)
Overall attitude of students towards internet	Arts	103	3.901	.508	1.152	.251
	Science	97	3.825	.426		
Effect of internet on their health	Arts	103	3.549	.621	2.608	.010
	Science	97	3.317	.638		

**Table 6:** T-test for various dependent variables by Major (Arts, Science). Degree of Freedom = 198.

## Conclusion

High school students overall attitude towards internet is high; they feel that the effect of internet on their health is also high. They admit that the students, who are addicted towards internet, are harming their health.

Female high school students are not addicted to the internet as much as the males are, and they are more prone to indulge in different activities, which have direct effect on their health.

First and second year high school students, are more addicted to the Internet than the students of third and fourth year are, and they feel this is highly affecting their health.

Regarding the perception of high school students of different majors, it was found that

The “arts” students agree more in their opinion about the overall attitude towards internet, and they spend more time using Internet than the “science” students and the “arts” students admit that the Internet is highly affecting their health causing them different health problems.

Internet use is becoming increasingly significant in the acquisition of information and the sharing of knowledge. Internet use is now considered to form a part of the culture of adolescents, and hence studying Internet use and its negative aspects is important [9] this requires studies on the various psychological characteristics of adolescents related to the negative aspects of and the physiological features causing Internet addiction. There are similarities among substance abuse, computer addiction, compulsion, and pathological Internet use [10].

There is no official psychiatric diagnosis of an Internet addiction. It remains to detect whether this type of addiction will be incorporated into formal diagnosis classification systems. Intervention programs should be developed to prevent Internet addiction among adolescents, especially in high schools where adolescents spend most of their time [11]. As schools are often on the frontline for the identification of potentially life-threatening behaviors, it is important that health care professionals, especially school nurses, be informed of problematic behaviors related to internet overuse [12].

## Future Research

Further exploration into the characteristics of high school students who are currently addicted is needed. Shotton [13], states that those addicted to the computer are a heterogeneous group. As a result, there may be different types of computer dependence. Future research needs

to explore various demographic criteria to enhance the comparative ability of the results.

Future research also needs to focus on what it actually is that high school students are addicted to. Is it the computer? Is it the typing? Is it the information gained? Is it the anonymity? Is it the types of activities in which the individual is engaged? All of these factors may play a role in making the Internet reinforcing [14]. Likewise, there should be an exploration into the various types of defense mechanisms, which foster and perpetuate Internet addictive behaviors, like community violence [15]. This could include exploring how other psychological development disorders such as obsessive-compulsive disorder, depression, traumatic stress, and bipolar disorders play a role in the development of Internet addiction between high school students.

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