

# Evaluation of Destructive and Negative Effects of using Computers, the Internet and Computer Games on Students

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**Abstract:** Information Technology (IT) in present world is developing swiftly, even our daily life is affected, as well and its presence is felt at school, home, and office etc. Children benefit these facilities more than adults. Despite the positive aspects, if IT is not controlled, it can have negative impacts as well as destructive mental and social effects on children. This paper evaluates destructive effects of using computers and the Internet on children so that through controlling these technologies, cause children to improve and develop in IT era.

**Keywords:** Computer; Internet; children; adolescents

## 1. Introduction

Psychologists believe that addiction to Internet games causes serious behavior disorders and could have destructive effects on their social relationships. Many online games addicts due to failure in these games or negative excitement are obsessed by stress, depression or anger and even commit suicide.

One of the reasons for children's bedwetting (nocturnal enuresis) is horrifying computer games. They play the games alone and sometimes for hours unchecked. Childhood experiences will be continued in adult life. Person who plays sentimentally will be sentimental to end of their lives. Some families prevent their children from playing electronic games. In fact when the parents prevent them from playing such games, children get much more enthusiastic play and they use every opportunity, even secretly, to play these games [6].

American psychologists have mentioned addiction to online games as a serious behavior disorder among the users and have warned about its destructive effects on social relationships. Almost 6.5 million people pay monthly average of 15\$ for the online games subscription worldwide. Studies have shown that there is an addiction behavior pattern among the Internet users. Investigations have reported the prevalence of 6% to 80% [4]. The most disturbing aspect of the Internet addiction is the damage to children. They get attached to multiplayer games and even vulgar sites easily [14].

In this paper, I have described Evaluation of destructive and negative effects of using computers in five parts, the Internet and computer games on students in the four parts. In first part, I have presented Physical complications resulting from using computer. I have defined Negative effects of using computer games in the second part. Negative effects of using

the Internet is a third part of paper. Finally I have described conclusion of this paper.

## 2. Physical complications resulting from using computer

### 2.1 Vision problems

Vision problems are the most common problems that are resulted by long hours of working with computer. Restless Legs Syndrome (RLS) include exhaustion, pain, burning, redness, headache, runny eyes, drowsiness, hyperopic, myopia, weakness and blurred vision are some of complains that bring patients to clinics [7, 8]. Also the eye's muscles get tired of light or brightness changes or direction of sight change between the screen and the characters that are being typed. Besides, due to the large displacement of words, the eyes gradually lose their adaptation ability [5].

People with uncorrected refractive disorders are more at risk [8]. These diseases are due to:

- Excessive look to the screen.
- Inappropriate distance between the screen and the person.
- Insufficient light in the room.
- Unsuitable glasses while working with computer.

### 2.2 Joint, muscular and skeletal systems complications

Other most common syndromes due to working with computer are: Muscular pains, carpal tunnel and arm syndrome or tendonitis [9]. Neck and back pain in the long term, hypnosis and positional scoliosis are among other complications [11].

Usually computer users keep their wrists, forearms, hands, arms, back and neck in a fixed mode and this puts great pressure on their muscles in long term and therefore, it can also lead to problems in muscles, joints and skeleton.

In this regard, ergonomic factors such as repetitive motion, way of sitting, view angle, desk and chair position, height of keyboard and monitor, lighting conditions, typing speed, lack of mental composure, etc can be major risk factors.

Children who sit for a long time in front of computer and participate less in physical activities (such as sports) are at risk of obesity [10]. As the time passes, they will have spinal and skeleton problems and rigidity in neck, shoulder and wrist [16, 17].

### 2.3 Skin problems

High voltage of picture tube causes to produce electrostatic field and a positive electric charge in the external surface of the screen. Dust particles move in all directions in the field between the positive charge and operator's face. Although the amounts of dust particles, depending on room ventilation, flooring and other factors changes, they, always exist.

The positive charge current in this field may cause dryness and crack in hands and face skin in people who have skin allergies.

Other studies have also shown that people who complain about skin allergies and are under mental and psychic pressure when working more, the pressure and stress can cause hormonal changes, such as thyroxin (thyroid hormone) and prolactin (pituitary hormone) and also skin loss.

Another research, which was conducted in Sweden, attributes the face skin loss and working with computers to psychosocial factors and workplace issues. Of course, personal factors are effective in the incidence of these losses.

### 2.4 Stress and neurotic-psychic issues

Initially convulsion is created by a special form of epilepsy. Light sensitive epilepsy is formed when children have high sensitivity to flickering lights. In this case, the convulsion begins when they are in front of the screen bright lights and the flash caused by computer games. Symptoms are varies, including headache, change in sight field, vertigo, dizziness, cognizance decrease and convulsion. Symptoms will disappear as soon as they stop using the computer [1, 15].

High workload and remoteness from colleagues at work can lead to psychological problems. It should be noted, however, that working with computer does not necessarily cause depression, but high workload plays a role in creating psychological stress. These diseases are nervous or mental tic such as blinking, shoulder unusual movements, nausea and vertigo [13].

### 2.5 Breathing hazardous gases

Latest research shows PC hardware is full of variety of metals and toxic substances contaminating the environment. "Lead" (used in cathode ray tubes), "Arsenic" (used in older CRTs), "Antimony trioxide" (used as anti-fire), "Polybrominated materials"

(Used as anti-fire in cables, circuits and plastic materials in computers) are some materials that could be mentioned. "Selenium" (as a power supply circuits' rectifier), "Cadmium" (used in computer's circuit boards and semiconductors), "chromium" (to prevent corrosion of metal parts of the computer), "cobalt" (used in metals for plasticity and magnetic) and "Mercury" (in the computer's switch) are other toxic and pollutant substances used in PCs.

Computer framework and screens have a special smell when they get warm. Dioxins gas produced by the computer body (because of heat) and the screen is an example of these odors. These materials are used in the framework of the screens and boards as fireproof. The ozone gas is produced

while laser printer is working which harms nasal mucous tissue, eyes and throat. Therefore, importers or producers of computers have to observe the required standards.

## 3. Negative effects of using computer games

Many of these people play in a fictional universe for a long time. Disadvantages of computer games are:

### 3.1 Physical damages

Because of staring at the screen continuously, the eyes are under strong pressure of light and will undergo complications. Observations have shown that teenagers are so much absorbed by the games that do not notice the amount of visual and mental pressure putt on themselves. Since they sit in a constant fixed position, the skeleton will be afflicted by some abnormalities. Also twinge and stiff neck, shoulders and wrists are the other complications caused by relatively fixed and long-term working with computers. Skin exposes to continuous radiation of monitor. Nausea and vertigo, especially in children and teenagers with epilepsy background, are other computer complications. Stirring computer games result in bone and nerve diseases in hands and arms.

### 3.2 Psychological and nurturing injuries

#### 3.2.1 Strengthen the sense of aggression

The main characteristic of computer games is that most of them are in warlike settings and the gamer must fight with so-called enemy forces to reach the next stage of the game. The continuation of playing such games will make children aggressive and quarrelsome. "Violence" is the most important motivation used extremely in designing the newest and most attractive computer games. Hollywood celebrities, who are immoral and anti-value in our culture, are being shown as an insuperable hero in these games.

#### 3.2.2 Isolationism

Children who continuously involved with these games tend to be introvert and they are recluse in society and have anomalies in social communication [1].

### 3.3 Mental retardation

In these games because children and teenagers play created programs with others, and since they are not able to change them, their confidence of creation and improvement will be instable.

Most families think that the gamer has a continuous mental involvement in the games, but this involvement is not mentally, rather they deceive brain cells and from the physical active point of view there is only some fingers movement. If we continue this manner and develop the games, the society will have frustrated, depressed, non-active and uncreative members. They would be less self reliant and creative, while society needs creative, innovative and contemplative people [12].

Recent researches indicate that computer games lead to chronic brain damage. Games just stimulate parts of the brain that are dedicated to the vision and motion and do not help developing other parts. Frontal lobe does not develop in children who devote long hours to play computer games. Frontal lobe plays an important role in the development of

memory, emotion and learning. People, whose frontal lobes are not evolved, are susceptible being violent and have less ability to control their behavior.

### 3.4 Impact on family relationships

Considering that life in our country, Iran is going towards machinelike life and in some families, parents are employed or some fathers have more than one job, emotional relationships and getting together in families have been decreased automatically. A lot of people are not satisfied with this situation and existence of computer as a magic box which has resulted in cold family relationships [4, 12].

### 3.5 Educational failure

Due to the glamorous attraction of these games, children spend a lot of their time and put their energy to play. Even some children, wake up earlier than usual in the morning to play a little before school and compensate for the wasted time in this way. One parent states that last year her son had had the best scores, but since they had bought a computer for him, he spends 2-3 hours a day to play and has had educational failure [4, 12].

## 4. Negative effects of using the Internet

### 4.1 Internet Addiction

The addicts to the Internet spend long hours during the day using this media, in a way that their job and social performance is influenced. This type of abnormal usage is called internet addiction by experts. The reason for internet addiction in many of these people is to find a way to suppress anxiety and stress in their lives. According to the researchers, dissociable people and those who have problem in their social and interpersonal communications, are more likely to become the Internet addicts.

Known symptoms of this disorder include:

- Using computers for fun, enjoyment or stress relief.
- Extreme depression when they do not use the Internet.
- Spending a lot of time and money for software, hardware and computer-related activities.
- Being carefree towards work, school and family.
- Uncontrollable feeling of irritability while using computer

One of the negative aspects of the Internet is entering anonymously. Teenagers have the opportunity to do whatever they would like to in the Internet.

They get disturbed when they are asked about how they use the Internet by adults because they regard the Internet as a private place for themselves. Internet is replaced with public space for them. In this case they will have more experiences and information about how to control and use this new medium. The only problem is that the relationship between youth and adults vanishes in cyberspace. Puberty is a critical stage that an adolescent discovers and internalizes the values.

Internet with its unlimited volume of information and instant communication tools, introduces other tools to create

identity for teenagers through search. We should know that many interactions in the Internet require no human contacts [14].

### 4.2 Immoral websites

Immoral websites have become a catastrophe on the Internet these days. Through providing immoral and obscene content and images, these sites have jeopardized mental and emotional health of teenagers and therefore societies' health. Most of these sites try to destroy the culture and values of a society.

### 4.3 Chat

Chat rooms are used by a great deal of teenagers on the internet. These rooms are suitable place to meet and converse with other children and teenagers around the world. But a lot of abuse is done by swindlers in these rooms including:

- presenting invalid personal information,
- Abuse of people's information
- Deceiving adolescents by contacting and making appointments.

These matters lead to seducing adolescents and therefore corruption in societies.

### 4.4 Impact of internet games

Today, electronic and computer games development has become a great threat for teenagers and youth. This can lead to mental disorders and depression among youth as well. In the past, games were done through children's communication with each other.

But today, they spend most hours of the day to play computer games since having being aware of such games, while this communication does not make any emotional and human relations. Effect of games in children and teenagers is especially creating violence among them. Researches show that the effect of games on violent behavior in children and teenagers depends on several factors [4, 3]:

- Severity of violence in games.
- Child's ability to discern and differentiate between imaginary world and real life.
- Child's capability to restrain the natural tendency and motivations.
- The value framework in which the child is growing or living now and the values that game content is presenting.

#### 4.4.1 Social impact on person

Relationships between individuals on the Internet is superficial and does not have the depth, this type of communication lacks features such as proximity, regular contact, deep influence, exchanging information about social context [2].

#### 4.4.2 Being cut off

While the Internet can connect human being electronically, but it stops "face to face" communication. So it will reduce human relations and social cohesion.

#### 4.4.3 Mental involvement

One of the problems mentioned by psychiatrists about children and teenagers who spend long hours in chat rooms

is mental involvement which is caused by creating mental images that are produced by the materials exchanged among people in these chat rooms. It causes mental disorders including depression.

#### 4.4.4 Internet effect on social skills

Online games delay appropriate development of child's social skills. When the child becomes addicted to the Internet, his motivation for interacting with others will decrease. This has negative effects on their personal relationship and social interactions [2]. Recent studies show that using the Internet cause to feel misery, loneliness and totally reduced mental health. People who use the Internet more keep the friendships less. They spend less time to talk to family, experience more stress and feel lonely and depressed.

#### 4.4.5 Internet and families

Using the Internet affects family relationships for several reasons:

- Using Internet is a time-consuming activity so it can reduce children's interaction with family. Dedicated time to interact with each other is prerequisite for a high quality relationship. In a study, 50% of families stated when they are online they speak less and 41% admitted they had learned anti-social behavior during this time.
- Internet creates new conflicts within the family. When there is only one computer at home, there will be a competition between children and parents to use the computer which sometimes causes struggle.
- Visiting web pages that have inappropriate contents for child's age causes argument and conflict between parents and children.
- Sometime conflict is because of child's access to parents' private information.
- Parents are concerned that Internet may prevent children from other activities and have isolating effects on them.

## 5. Conclusion

In recent years, computer and internet gradually have been replaced with television to some extent and likely in the near future will play more significant role than television in children and teenagers' lives. If this technology is used correctly, it has positive effects. Yet it is inferred from the content of this paper that the risks of its uncontrolled and incorrect application, threatens all users especially children.

To ensure optimum use and that computer improves children's lives in the present and future considering the following suggestions may help in general:

- Parents should get familiar with computers and take training courses in this field and learn some tips from children, if necessary.
- Talk with children about how to use computers and risks that may threaten them while they are online.
- Putting the computer in a place at home that child's activities could be controllable.

- Limit the time of computer use, if the child has reduced social contacts. Excessive use of computer usually indicates a problem.
- Accompany children when they are in chat room.
- Revise children's e-mail and delete inappropriate messages.
- Using filter software to prevent from visiting inappropriate content. Such software could also log the child's visited site addresses so parents can review them later.
- Of course, no software can be replaced with parents association with children.
- Programs should be suitable with the child's growth and development.
- Encourage child to interact with the family rather than excessive use of computers.
- Computer should be as an educational complement tool; not as the only way of training.
- Choosing appropriate programs with children's age.
- Controlling the access ways to computer.
- Enhancing parents and teachers' computer literacy.
- Providing educational programs for parents, teachers and others who work with children.
- Some researches should be done on the effects of computer on physical, intellectual, rational, social and psychological development of children.

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