

## Epidemiology of Digital Addiction among Adolescent Cohorts, Understanding Contexts

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### Abstract

**Background:** People with addiction do not have control over their behavior, actions or usage. Their addiction may reach to a point that it is harmful. Addiction does not only involve the physical aspects such as drugs or alcohol but also includes abstract things, often described as a behavioral addiction. The causes of addiction differ considerably and are seldom fully understood. They are generally caused by varying degrees of physical, mental, circumstantial and emotional factors.

**Objectives:** To study the electronic device profile among children and adolescent in modern global cities such as Dubai and to study the prevalence and size of the addiction phenomena.

**Methodology:** This study was carried out in Dubai, United Arab Emirates during the Global School Health Survey in 2015. The sample included 7000 students who were randomly selected (multistage stratified random sample) from 10 private schools in Dubai. Data collection was carried out by standard questionnaire developed by the World Health Organization which includes different health domains (addiction, and addiction to electronic devices). Ethical issues were followed up to standards. The questionnaire and consent forms were given to the participants who met the inclusion criteria. An information sheet was attached to the questionnaire explaining the purpose of the study. The students were assured that the confidentiality and privacy of the answers were maintained. No names, phone numbers, and identification are required. Data coding, data entry and data analysis has been conducted by using SPSS 20 software.

**Results:** The present study revealed that 56% of school children aged 13-15 years old spend three hours or more a day using electronic games, and this percentage rises to nearly 63% with the age group 16-17 years. The study showed that children, who excessively use these games might face social, emotional and behavioral problems such as isolation, anxiety and depression. Pointing out that children may complain of psychological pressure, stress or dehydration and burning eye, due to constant staring with bright light across the screens of devices. Most students (68.7%) said they were on social media between one and five hours daily, while 3.3 per cent said they spend less than an hour. 39.8% of students stayed without food or drink for a long time and 50.5 % tried to quit social media last year but failed. 15% of students spend 4-8 hours on social media and 1.6% spend more than 10 hours. When the students were asked about how they feel of the burden on their daily life and social commitments, 60% of them replied that social media decreases their interaction with the outside environment and family time, 55.6% said it interfered with their homework. The study showed that more than one quarter (26.7%) or almost one out of four reach up to more than 6 hours per day and could sometimes reach up to 10 in browsing and interacting with social media. The study reflected that more than 400 children showed the negative symptoms on the use of tablets. It appeared significantly on children who use them for more than two hours a day compared to their counterparts who do not use it at all or use it less than two hours. They have noticed that those who use it less have great language, motor and mental skills. Parents do not seem to be paying attention on how technology is taking their kids away from them. Children between the ages of 11 and 17 found out what really is keeping them so busy on all these addictive devices. Around 70% of them are most vulnerable to gaming addiction. They belong to the under-five age group, because parents are preoccupied with them.

**Conclusion:** Electronic addiction among children and adolescents is a rapidly growing phenomena in the City of Dubai. It has a significant impact on the social and professional life and functions of this group, which necessitate intervention at many levels.

**Keywords:** (Electronic Addiction, Children, Adolescents, Dubai).

## Introduction

There has been an increasing need for people to find ways to be connected with friends, family members, co-workers, classmates and those they have just met with the help of social networking sites [1,2]. Human beings have a fundamental need to belong and relate to interpersonal level which is the key to communication [3,4].

During the last decade, there has been an enormous development and diffusion of new forms of Internet-information and communication technology, such as social media, personal computer, mobile or cellular phone, and other devices [5]. The ubiquitous social media platforms and the easy access to the Internet brought the potential for social media addiction, namely the irrational and excessive use of social media to the extent that it interferes with other aspects of daily life [6, 7]. Adolescents and young adults represent the most users of these different tools [8,9].

People with addiction do not have control over their behavior, actions or usage. Their addiction may reach to a point that it is harmful. Addiction does not only involve the physical aspects such as drugs or alcohol but also includes abstract things, often described as a behavioral addiction. The causes of addiction differ considerably and are seldom fully understood [10]. They are generally caused by varying degrees of physical, mental, circumstantial and emotional factors [11,12]. Person with addiction is unable to control the aspects of the addiction without intervention because of the severity and the various physical and mental factors involved. Habit occurs by choice. The person with the habit can choose to stop, and will subsequently stop if they want to [13].

Understanding the impact of social media on the adolescents' well-being has become a priority due to a simultaneous increase in mental health problems [14]. Studies have shown that the symptoms of social media addiction can be manifested by mood, cognition, physical and emotional reactions and interpersonal and psychological problems [15-18]. Many studies on social media usage and mental health have shown that the prolonged use of social media such as Facebook is positively associated with mental health problems which includes stress, anxiety and depression and negatively associated with long-term well-being [19-22]. For example, the time spent on social media was positively related to depressive symptoms among high school students in Central Serbia and among young adults in the United States [23,24]. Furthermore, certain categories of social media use have been shown to be associated with reduced academic performance [25-27].

## Objectives

To study the electronic device profile among children and adolescent in modern global cities such as Dubai and to study the prevalence and size of the addiction phenomena.

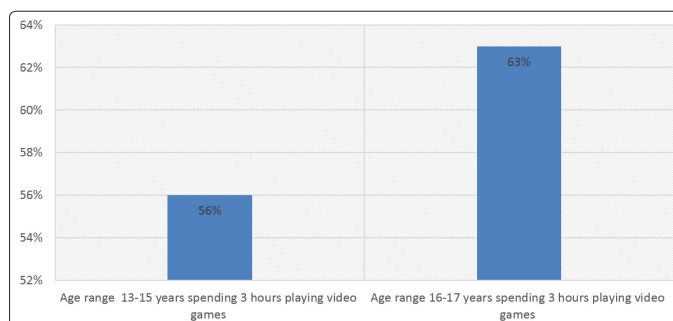
## Methodology

This study was carried out in Dubai, United Arab Emirates during the Global School Health Survey in 2015. The sample included 7000 students who were randomly selected (multistage stratified random sample) from 10 private schools in Dubai. Data collection was carried out by standard questionnaire developed by the World Health Organization which includes different health domains (addiction, and addiction to electronic devices). Ethical issues were followed

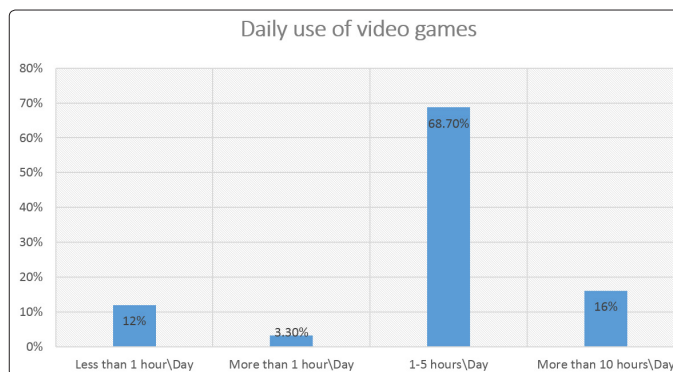
up to standards. The questionnaire and consent forms were given to the participants who met the inclusion criteria. An information sheet was attached to the questionnaire explaining the purpose of the study. The questionnaire was standardized with various questions covered types of electronic devices, duration of utilization, interference with normal life activities and so on. The students were assured that the confidentiality and privacy of the answers were maintained. No names, phone numbers, and identification are required. Data coding, data entry and data analysis has been conducted by using SPSS 20 software.

## Findings

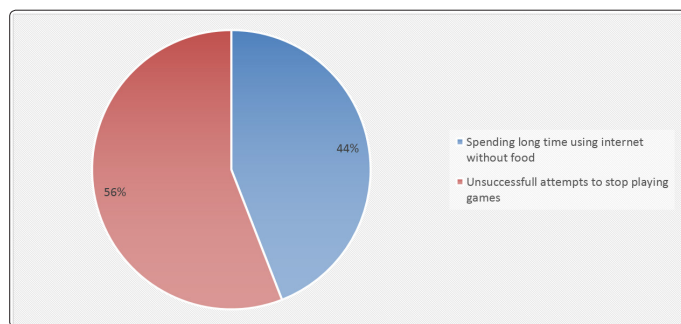
The present study revealed that 56% of school children aged 13-15 years old spend three hours or more a day using electronic games, and this percentage rises to nearly 63% with the age group 16-17 years. The study showed that children, who excessively use these games might face social, emotional and behavioral problems such as isolation, anxiety and depression. Pointing out that children may complain of psychological pressure, stress or dehydration and burning eye, due to constant staring with bright light across the screens of devices. Most students (68.7%) said they were on social media between one and five hours daily, while 3.3 per cent said they spend less than an hour. 39.8% of students stayed without food or drink for a long time and 50.5 % tried to quit social media last year but failed. 15% of students spend 4-8 hours on social media and 1.6% spend more than 10 hours. 44% of students spending long time using the internet without food. While around 56% had Unsuccessful attempts to stop playing games.



**Figure 1:** Frequency distribution according to the age and duration of consumption of electronic devices per day

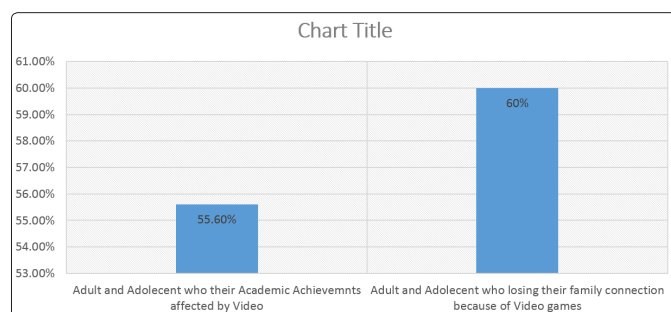


**Figure 2:** Frequency distribution according to number of hours spent on utilizing electronic devices per day



**Figure 3:** distribution according to unusual social behaviors due to addiction on electronic devices

When the students were asked about how they feel of the burden on their daily life and social commitments, 60% of them replied that social media decreases their interaction with the outside environment and family time, 55.6% said it interfered with their homework.



**Figure 4:** Distribution according to personal damages and social due to electronic addiction

## Discussion

The present study showed that more than half of the age group 13-15 years age and almost 63% from the age group of 16-17 are spending more than 3 hours a day in utilizing internet, social media and other electronic devices. This figure reflects the growing electronic addiction phenomena in community of Dubai and UAE among adolescent and children age groups. Other studies showed that the internet addiction varies between 5-10% among Internet users in China and in other Asian countries the rates are higher. China is the country that has the lead in the recognition of internet addiction as well as in incidence of this addiction with over 13.7% of Chinese adolescents (approximately 10 million). Other Asian Countries such as N. Korea and Taiwan are facing this problem (Block, J.J. (2008). In today's world, children can access the Internet and social media applications from many different entry points, including iPads, tablets, desktops, laptops, and smartphones. Social networking has become an integral part of our children's social life. It is now seen as a learning platform that could be utilized to enhance student engagement and performance. Social networking and media tools offer schoolchildren the opportunity to communicate, get in touch, access information, research, and chat (Tsitsika A. Use and Abuse.2011). Adolescents are regarded as the best candidates for being Internet addicts (Mossbarger, 2008; Yen et al., 2007). Therefore; specific issues associated with their usage of Internet must be addressed. Padwa and Cunningham (2010) states that, the most common form of Internet addiction among young people is online gaming addiction. These games offer young people the opportunity

to express themselves in a way that they could never be in real life and the pleasure they obtained from this kind of interaction makes it turn into addictive use. Furthermore, such games provide never-ending goals and tasks to individuals. When they become successful in these games, they perceive an increased sense of power and a higher status. In other words, Internet use may emerge as a way in which individuals make up perceived deficiencies and have a positive evaluation of self for a temporary time. Another result of this study is emergence of social self-esteem and family-home self-(Mossbarger, B. 2008)

## Conclusions

Electronic addiction among children and adolescents is a rapidly growing phenomena in the City of Dubai. It has a significant impact on the social and professional life and functions of this group, which necessitate intervention at many levels.

## Recommendations

Interventions need to be developed and applied at different level, starting from prevention and not ending at treatment. It is beyond therapy, health sustainability, and investment in healthy life and health promotion efforts through a national based program.

## Acknowledgement

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