Children & Video Games: An Investigation of the Psychological and Social Effects of Gaming

الأطفال وألعاب الفيديو: تحقيق في الآثار النفسية والاجتماعية للألعاب

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Abstract

Media, as an essential contemporary field, had its part in the drastic change the world is going through. Combined with the innovation of the internet, it witnessed the emergence of new entertainment. The result was the birth of several electronic devices, including video games that, soon after their first launching, occupied an essential part in people's lives. This paper aims at investigating a set of social and psychological impacts of video games on children's everyday life. Thus, it sheds light on the huge industry of video games and their net worth. Based on qualitative and quantitative data collection methods, this work aims at highlighting the risks that gaming can bring to the lives of children.

الملخص

لقد شهدت التكنولوجيا، مطلع القرن الواحد و العشرين، تطورا ملحوظا شمل مختلف المجالات. ولعل أبرز ما تم الاعتناء به هي وسائل الاتصال . من بين هذه الوسائل، تعتبر العاب الفيديو الأسرع تطورا و الأكثر انتشارا بين الناس عامة، و الأطفال بصفة خاصة. على إثر هذا، يولي هذا البحث اهتماما خاصا بالعلاقة الوطيدة بين العاب الفيديو و التغيرات النفسية والاجتماعية, التي تسببت بها هذه الوسائل اتجاه الفئة الناشئة. لأجل ذلك، تم الاعتماد على مراجع و دراسات سابقة، عالمية ومحلية، لتحديد عمق الضرر الذي يترتب عن هذه الظواهر الالكترونية، كخطوة أولى لايجاد حلول لهذا الخطر الرقمي والاحتراز منه.

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Introduction

The world of entertainment has been growing ever since the emergence of the internet and technology. One of the most popular technologies nowadays is concerned with media among them video games. They are known as electronic tools of entertainment, that are consumed largely by the younger generation; this latter has an immense impact on our everyday lives. In fact, this industry is huge, with the massive amount of money spent by both consumers and companies investing in this mainstream. Studies in this field showed that video games may have an impact on gamers both on the psychological and the social levels.

According to Quwaider et al. (2019), the research done in this area is divided into two views "The first group concludes that video games have effects on the behaviors and emotions of the players either negatively or positively. While the second group denied the impact of the video games on the behaviors or the emotions of the players" (p.576). Due to the large consumption, the availability of this technology, which is widely popular among users, and based on the online newspaper ('How Many People Play Video Games [50+ Video Game Statistics]', 2020) statistics show that 2.5 billion people played video games in 2016. Moreover, in 2019, the gaming industry reached a total revenue of $151.9 billion which proves the successful spread of this phenomenon.

Furthermore, the diversity portrayed within different games also helped in its massive acceptance. Hence, when it comes to its impact on our daily lives, the result is that it has both negative and positive sides. Children are, usually, influenced by gaming especially during teenage hood. Most of them tend to use video games as an outlet for escaping reality, and this factor affects their personalities and even their everyday interactions with people and may increase aggressive attitudes. In this vein, Ouwaider et al argue

Other studies have shown that some video games like first-person shooters games and other violent video games may lead to increase the appearance of external behavior problems of players such as aggressive behavior. These findings were based on the fact that violent video games contain many violent and aggressive scenes which will convert to real life violence. (2019, pp. 578).

Thus, several research have been conducted to explain the potential danger of the excess in playing video games, especially by teenagers and kids. Negative effects, such as the promotion of violence might occur while playing violent video games. Bandura (1986) explains

social learning theory hypothesizes that exposure to video game violence would evoke behavioral mimicry, reinforce already existing aggressive habits, and increase internal arousal. In turn, this internal arousal could be interpreted as anger, which increases the likelihood of aggression" (quoted in Kirsh, 2003, pp. 377).

Hence, alongside violent behavior, other attributions are likely to occur while exceeding the exposure of video games by children such as depression, addiction, social isolation and so on. This paper attempts to investigate some of the outcomes of video games on our societies, focusing on the social and psychological impacts on children.

1. Gaming: An Overview and a General Background

Advances in technology and computer sciences brought a surge of innovations and inventions dominating the world of entertainment. In fact, the very first electronic video game *Tennis for Two* is traced back to the 1950s. it has been developed by William Higinbotham (Kowert & Quandt 2015); afterwards, the industry of video games became massively consumed by gamers and commercial facilities due to the heightened escalation in sciences and technology. On the other hand, video games nowadays are easily reachable especially with the availability of the internet worldwide, and the constant releases of highly competitive gaming programs by talented professionals and developers. As a matter of fact, people, nowadays, are attracted to play video games for several reasons, children find them challenging and exciting while adults use video games as a means of escaping their daily life pressure and release their stress.

Video games have been around for a long period of time, and with-it people developed addiction. Kids at earlier ages are highly affected by this phenomenon. Jabr (2019), argues that the World Health Organization (WHO) decided to include gaming addiction in the list of dangerous disorders under the name "Gaming Disorder". However, this decision has been a topic of debate because the classification of gaming in the category

of social and psychological disorders, was no accepted by all people. Most of those who always support video games are owners of gaming companies and video games technologies. Some suggested that enjoying something like video games should not be put in the list of diseases because it is the same as enjoying fishing or hiking and many other hobbies. Hence, video games still could be harmful, and, in many cases, it was proved that they urge kids to commit suicide. Depression rates, as well, is getting higher because of the excessive video games exposure, let alone social isolation (para 9.10).

Video games started at first from smaller ideas, with traditional means and humble technology, back in the 1950s and 70s, with games such as Nintendo and Atari. The industry, however, continued to grow ever since. In fact, video games nowadays succeeded in claiming the world of entertainment. Children and adults are accustomed on playing games whether online or using special devices, and the industry is expected to grow even more reaching its peak by 2050. In an online magazine, authors argued that in 2020, gaming industry reached 115$ and by 2050 it will generate a rate of 260 $ billion (*How the Video Game Industry Is Changing*, n.d.).

Companies are trying to get involved in this avenue, and even other social media industries are in the run to include video games in their businesses (para. 4) even the film industry became quite interested in the adaptation of video games into series and movies. Therefore, giant companies such as Microsoft are already involved in the industry of gaming throughout Xbox console, which is famously used by gamers. The access of such popular companies, consequently, would increase the availability of video games.

The industry passed through an evolutionary phase to reach its current state. According to the online BBC Archives (*The 8 Generations of Video Game Consoles*, n.d.), the first generation is dated back to the 1970s. It was known as "Dots & Dials". As mentioned before, it started with "Odyssey" games, with very basic elements and traditional methods. The second generation was introduced later on, after 6 years. It was characterized by the microprocessors brining a new era of sounds and colours. After that came the Japanese version, in 1983, as a revolutionary era of video games. The Japanese brought gaming into a whole different level, focusing on colourful graphics and Japanese designs (games such as Super Mario Bros and Zelda). The third generation was followed by the fourth one which is recognised by the famous games Nintendo (para 1.2).

Moreover, the year 2000-2001 marked the emergence of the six generation of video games featured by giant brands such as Sony and Microsoft, with the focus on convergence and reality development in the games unlike the previous generations. In the seventh generation and by the year 2005, there was a notable increase in consumption with games such as "The Kingdom Hearts", including Disney characters and adding a fantastic dimension to the field made video games a fantastical realm for consumers. Then, the next generation (the eighth) is of the current decade from 2013 to 2018. The industry jumped to the next level of gaming, bringing in fictional characters inspired by movies, books, and legends with character development and high quality and smart technology inspired by futuristic themes and science fiction. Games, like the "Witcher" and "Red Dead Redemption", dominated the mainstream with fascination (Electrical, n.d. para 10.11).

The culture of gaming in the current era is widely popular whereby video games became a daily fandom and a source of joy. Hence, the impact of video games on people, especially children, is huge and deep, especially when spending continuous hours playing games. Children, being the first target of gaming production, are recognized for being the most threatened category to develop dangerous habits such as violence and psychological disorders. Algeria, as a developing country, is also noticing an increase in cybercriminal affairs and kids' suicide, violence and depression, and scholarship shows that video games are one of the main reasons.

2.The Psychological and Social Impacts of Gaming over Young Gamers

2.1. Positive Impacts

Although they have always been accused of being perilous and threatening to children's lives, modern video games proved to have several undeniable emotional, motivational, social, and even cognitive benefits. At the emotional level, gaming is considered as a fertile source providing people, children mainly, with positive vibes. Pride, especially after winning several adversaries, is the major feeling that gamers experience and seek for through playing games. In other words, victories in the world of gaming improve children's self-esteem. Consequently, feelings of pleasure, triumph, and enjoyment are produced. Additionally, according to Carmen

V Russo niello, an American professor of psychophysiology, video games are also able to "improve players' moods, promote relaxation, and ward off anxiety" (qtd in Granic et al., 2014, p. 71). Flow, the feeling that comes after being absorbed in a game, not only increases children's attentiveness and ascendancy, but also decreases pressure, stress, and worriment (Csikszentmihalyi, Rathunde and Whalen, 1993).

In terms of motivation, games are great inducing tools that elevate children's willingness to succeed, and assert their conviction that success is only a result of hard work. The alternation of feelings of loss and victory creates a sense of competition and challenge, either to keep thriving or to work harder to achieve success. It, therefore, and furthermore, teaches that success is not something innate that cannot be acquired if the person's initial steps and experiences in life were not successful. Rather, victories are consequent outcomes of gradual perseverance. In a similar manner, games indirectly teach that being rich, happy, or intelligent, need only what being victorious needs, a continuous desire of working hard, and an unstoppable motivation to improvement (Dweck and Moden, 2005).

Socially, video games, nowadays, are characterized by a few features that turned their users from passively isolated, to actively engaged members in society (Lenhart et al., 2008). According to Entertainment Software Association (ESA), "Over 70% of gamers play their games with a friend, either cooperatively or competitively" (Granic et al. 2014, p. 73). As a matter of fact, gaming is now considered as a collective activity. The latter, most of the time, implies making virtual community-based decisions that can be applied on the social environment of the gamer in real life situations. The careful choice of the ones to be allowed to interact with the player and the ones to be ignored or kicked out, for instance, besides striving to lead a number of people faithfully and correctly, are examples of the way gaming can improve the social skills of gamers (Gentile & Gentile, 2008; Gentile et al. 2009).

Gaming also has a number of benefits that serve children's cognitive functions. Attentiveness is, also, one of the major things that playing video games increases. Shooter games, for example, are known to be good sources and motivators when it comes to enhancing attention. According to recent studies, "shooter game players allocate their attentional resources more efficiently and filter out irrelevant information more effectively" (Granic et al., 2014, p.69). Besides this, creativity is an additional advantage that

gamers unintentionally improve, due to the variety of ways through which games are presented. Moreover, video games can also be used as tools to teach problem-solving skills and mental rotation abilities (Granic et al., 2014).

2.2 Negative Impacts

By the end of the twentieth century, video games became widely accessible universally. They were mainly dominated by young adults and children. This means of entertainment replaced Television and other forms of leisure at that time because it is interactive whereas watching TV is passive (Gunter, 1998). Hence, video games are mainly viewed negatively when it comes to their influence on children due to the high risks associated with it such as depression, violence, social isolation, and addiction. Actually, gaming can be a sensitive phenomenon when dealing with children, as it may impact their social and psychological manifestations in the society (p.19).

2.2.1 Depression

Although their usefulness progressed through time, video games are still considered as threats to children's lives, mainly to their psychological well-being (Bediou et al.2018). Depression, for instance, is recognized for being the most prominent psychological disorder that young gamers suffer from (Lancy & Grove, 2017), especially when gaming becomes a shelter that they refuge to, to escape their real-life problems (Kim and Ahn, 2016).

A study that has been conducted in Singapore over thousands of children, says that young gamers are likely to suffer from "social anxiety, depression and other general phobias" (Gentile et al., 2011). Another study on thousands of fifth-grade pupils in few U.S. cities says that there is a strong relationship between the number of hours that young gamers spend on video games, and depression. It also says that depression is associated with the degree of violence needed and displayed in games. The more a game requires violence, the more the child becomes susceptible to depression (Tortolero et al., 2014).

2.2.2 Violence

Another graveside effect of video games is aggression, or violence, that witnessed a rapid propagation among young gamers since many video games are built on themes of death, revenge and killing. While children are playing games, they are living in that imaginary world, which likely results

in their psychological development and likely affects their social behaviors, scholarship in this domain proved that most of violent games are influencing children indirectly by promoting for violence, and kids with ages of 6 to 12 are easily affected by their social surroundings.

According to a CNN article online written by Susan Scutti in 2018, the American Psychological Association noted that in 2015 that scholarship observed that there is a relationship between violent video games and children's aggressive behaviors. Claiming that the violent content of certain video games stands as a negative example for kids. The American Academy of Pediatrics stated that it is advisable not to use human beings as targets in such video games, because it will make them assume that killing and death is a reward and is likely associated with pleasure whenever they hit a target (para. 4).

On the other hand, some sociologists argued differently on the matter suggesting that it is not always linked to video games but still they have a part in affecting social manifestations of kids in the society. Moreover, children are accustomed on playing these aggressive games to release their stress and frustration, most of these kids are socially isolated and tend to spend long hours in front of their computers gaming than being in an active social setting, they also break the bond with their families and their reactions are usually aggressive. Such violent video games include Call of Duty, Mortal Combat, Doom Eternal and the list is long.

Studies in this matter are not static, but is there any relationship between violent video games and kid's social orientations? To answer this question, several research have been made. According to an online article (*Are Your Child's Video Games Too Violent?* n.d.) written by Amy Morin, an explanation is given to the possible link between violence and violent video games. Morin argues that research in this area illustrates the following findings, in 2007 a study done by the Swinburne University of technology proved that the amount of violence and graphic scenes shown in video games could help in developing an aggressive attitude for children, and the opposite likewise. Another study in 2010, argues that not all kids are affected by this phenomenon but the ones with high neuroticism and lack of censoriousness tend to become violent (para. 4).

2.2.3 Social Isolation

From the previously mentioned studies, one can conclude that violence and addiction, resulting from gaming, not only harm children at the

psychological level, but also leads them to be socially isolated (Horvath et al., 2018). This happens due to the fact of spending many hours in front of a television, a laptop, a phone or on any other device with which children get absorbed into the world of games. This virtual world, through time, becomes a vital source of pleasure and relief, the thing that "affects the brain (…) leading to increased need for isolation due to a resultant social anxiety disorder or social phobia" (Bohmann & Schupp, 2016).

Children who are already socially shy, tend to interact with video games as an alternative for interaction with the real social environment. This way, they think, they would be able to hide their communicative problems by totally avoiding communication with their parents and people around them. This also enable them to run away from the problems they may face in the real world. After some years, along their growing up process, when problems become inevitable, these children would face serious problem-solving issues. By the time this happens, young gamers will go through a feeling of paralysis that is likely tothrow them into depression. In this vein, Nakamuru, Inui, Sinoh, and Hiromatsu (2015), found out that "The realization that they (children gamers) are victims of anti-social behaviors creates a sort of depression. This could create further withdrawal and isolation, thus creating tendencies of suicidal thoughts or other self-harming behaviors" (qtd in Landeau and Nguyen, 2019 p.294).

In fact, a number of scholars claimed that social isolation is the least evil that gaming can cause. Others, however, disapproved of such claims. They argued, instead, that belittling such problem is a negligence for a humanistic feature whose absence would lead to further disorders, both psychologically and socially. By the same token, Levine (2015) sees that gaming is the highly responsible for "spawning introverts and removing children from being active members of their real community" (qtd in Landeau and Nguyen, 2019, p.294).

2.2.4.- Suicide

According to the World Health Organization, more than 700,000 people commit suicide every year, and most of the victims are likely at a younger age. This social phenomenon could be linked to several factors such as isolation, depression, low income and bullying. (*Suicide*, n.d.). Addiction to gaming can lead to various issues and it affects children on a large scale, it also contributes to the occurrence of social exclusion, kids tend to live in a bubble and stay isolated, spending more time in front of their screens and

ignoring the real world. Eventually playing video games excessively leads to addiction and suicide.

Nevertheless, scholarship in this field of studies attempted to discuss the link between suicide and gaming. Gauthier et al argue that there is a relationship between violent video games and suicide due to the fearlessness of death. (see for example Mandhare 2010 para.3). Therefore, other studies investigated this matter, a survey has been made by Criminological Research Institute of Lower Saxony (KFN,2007-2008) indicating that video games may be a potential reason in increasing suicidal thoughts among young teenagers (Mandhare, n.d. parag 4). Hence, some studies in the United States made research on the impact of video games on suicide especially in colleges and high schools. Mitchell et al. (2015) argue that excessive video games are one of the main reasons of suicide amongst students "70 percent of U.S college students report being avid VG players" (p.757).

The interpersonal theory of suicide may suggest a model to explain the possible link between video games and suicidal incidents "This theory posits a framework for suicide risk that encompasses three key proximal risk factors: perceived burdensomeness, thwarted belongingness, and the acquired capability for suicide" (Mitchell et al 2015, p.757). However, the direct link between video games and suicide is still unclear and requires more investigation. Other research has been conducted to ensure the correctness of video games and suicide kingship, Vanderweele (2019) claims that studies concerning the influence of media and video games on people's suicidal tendencies, he explains that it is true that the effect could be small, but it can develop into a serious issue. (para5). Thus, even though significant studies have been done to investigate how video games influence kids and cause suicide, it is still open for discussion.

2.2.5 Addiction

Another part in the fresh human body that can be highly damaged by gaming is the brain where metal health resides (Sunderland and Patterson,2016). This important organ can be wrecked through the excessive use of video games, and it usually expresses its illness through some psychological symptoms of addiction that gradually and strikingly appear in the behavior of gamers. This behavior is, in fact, a result of some hormonal changes occurring as a reaction to being totally engaged with the

virtual world. In this vein, some scholars argued that addiction among children happens specifically due to excitatory "neurotransmitters" (Horvath et al. 2018). The latter, according to them, "work collectively with inhibitory neurotransmitters such as gamma aminobutyric acid (GABA) as well as glutamate, serotonin, norepinephrine, and dopamine causing addiction to gaming", the thing that "creates a situation where a child becomes dependent on games" (qtd in Landau and Nguyen, 2019, p.292). In fact, specialists in the fields of sociology and psychology came up with a definite conclusion that gaming is, by no doubt, addictive (Han-Ting et al, 2012), and can be as dangerous as drugs are.

3.The Impact of Video Games on Algerian Kids: Risks and Solutions

During the last few years, the phenomenon of video games and its influence on our society grasped the attention of media and press. The very first reason for considering video games as a dangerous source of entertainment is due to the random usage by consumer and especially children. According to the Algerian Press Service journal under an article entitled Children and Video Games: A Critical Increasement of a Phenomenon (2018), the authors state that the misusage of video games among children is a fatal problem that should be urgently contained. Amine who is young kid of 8 years old suffering from addiction on video games and electronic devices, which resulted in his isolation and aggressive attitude, his mother said, "even if I leave him all day alone, he will always remain watching and playing video games unaware of the world around him" (para. 1).

Furthermore, other video games that had a noticeable impact on our society is "Blue Whale", "Mariam's Game", they affected the mindset of kids and lead kids to addiction and eventually suicide in severe situations, they are about mind manipulation and children are unexperienced and unaware of its outcomes, that they tend to believe everything and become slaves to the program of the game. Such games function on setting challenges for gamers and every time they pass a phase, the game raises the bar higher by including dangerous conditions.

Specialists in psychology investigated these incidents arguing that it is a necessity to monitor what kids are doing behind their screens, and a must to educate children and show them how to use the internet, and video games positively, thus, children under the age of 10 are advised to stay away from

these games (parag.7). Thus, such games are affecting our children and without protection they are at risks of committing suicide and developing severe aggressive behaviors which will cause them mental illnesses in the future. Based on an article written in the Echorouk daily newspaper by Amel Aissaoui entitled Video Games: Bombs between the Hands of Your Kids (2020), she points out that video games affect kids badly; psychologists in this area of studies observed the negative effects of this phenomenon on kids amongst them, illnesses such as autism which is likely developed due to social isolation, it also provokes violent behaviors and affects the brain functions, sleep habits and other symptoms (para.4).

Additionally, children who are used on playing video games regularly are at higher risks of falling in the trap of addiction, and other psychological issues such as electronic autism with depressive attitudes and always finding refuge in gaming. Consequently, specialists suggested some of the possible solutions among them, is raising awareness towards children by their parents and follow their kids by being cautious, monitoring their electronic daily life activities like not allowing them to play for longer hours and encourage them to be included in social activities more with other children, rather than staying home in front of their computer screens all day; another aspect is concerned with violent video games, it is better for parents to prevent their children from playing such games specially kids under the age of 10. It is necessary to maintain a social ground with kids and use communication's techniques and persuasion to keep them away from these dangerous situations. (para.5)

5. Universal Statistics of Video Games Consumption, Risks of Addictions, and the Net worth

Figure N° 1: Global Games Market in 2020

2.9 Billion active players

Source: Gilbert (2022. para.1)

Figure N° 2:The market is growing

$200 Billion Market Worth

Source: Wijman (2020. para.1)

In 2019 the global prevalence of Gaming disorder reached

3.05%

worldwide

Source: Stevens, M.W.,Dorstyn,D., Delfabbro, P.H., & King, D. L. (2021)

Conclusion

This paper identifies the possible connection between video games and children both on the negative and positive levels, focusing on the social and psychological aspects. It also addresses the historical background of video games at the very beginning, tracking their evolution through time, and the way they could interfere with people's everyday lives. Analyses showed that as much as gaming has some advantages, it also has several disadvantages, especially on children in the whole world, including Algerian kids. It could lead to serious disorders such as depression, violence, social isolation, and in some cases, it even reaches addiction and eventually suicide.

To understand this link, a general study has been made collecting universal thoughts and statistics. In Algeria, this phenomenon has been a topic of debate because of its outcomes on children's mental and physical illnesses. Possible solutions have been suggested by specialists, to prevent dangerous phenomenon such as suicide, addiction and so on. In the light of these considerations, it is a must to be cautious, to keep an open eye on children's attitudes, and to set rules and guidelines to minimise the exposure of kids on gaming.

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