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Impact of Digital Gaming Addiction among Adolescents and Mothers Occupation in Bengaluru

Umashankari V[1], Sadiqa Patel[2]

[1]*Asst. Professor, Department of Psychology, Indian Academy Degree College (Autonomous) Bangalore*

[2]*Research Scholar, Department of Psychology, Indira Gandhi Open University (IGNOU) Bangalore.*

Abstract

In the present study the researchers have attempted to assess the impact of digital gaming addiction among adolescents and mothers occupation that are addicted to digital gaming in Bengaluru, which has become a reason of concern for every parent. The sample comprised of both males and females, both college goers and their working mothers individuals of the age group 18 to 45 years. The questionnaire used in the present study was Gaming Addiction scale for adolescents by Jeroens, Pattil, M. Valkenberg & Jochen Peter(2009). The major findings of the study were there was a significant relationship between Levels of Digital Gaming and Gaming Addiction among Adolescents. There was a significant difference in the scores of Gaming Addiction among Males and Females indicating that males had higher Gaming Addiction compared to females. There was a significant difference in the scores of Gaming Addiction among Low Addiction and Borderline Addiction indicating that Borderline Addiction had higher Levels of Gaming Addiction compared to Low Addiction group.

Simple Percentage Analysis and t-test were used from a statistical perspective to analyse the levels of digital gaming addiction among adolescents. The review concludes with a summary of major research findings, as well as a consideration of future directions and implications for practice and policy.

Keywords: Digital Addiction, Gaming and Working Mothers.

Introduction

Digital gaming addiction among adolescents has become a cause for serious concern in today's generation. In earlier times, adolescents used to play on streets and playgrounds along with their family and friends, being engaged in outdoor activities like cricket, basketball, running and catching etc but with the rapid growth of technology, games are seductively available at the click of a button, on the internet or in gaming arcades. So it's easy for a habit

to form and for that habit to quickly escalate to the level of addiction. So it's understandable that a majority of parents are concerned about their children being addicted to digital gaming that would negatively affect their attention span and expose them to aggression, stress and various other negative factors. They are concerned about the time spent by their children playing games on computers, smart phones, iPad, console games, Xbox, PSP etc.

They worry that their children literally can't survive without their digital games and other forms of technology. In the last few years, video games are ruling the world of gaming and entertainment. Over that, the accessibility knows no limit! From a tiny cell phone to the vast portable systems, smart phones, and tablets they are available anywhere and at any time. Parents now worry about their children who are glued to their places with the tiny characters moving all around in the operating screens which are remotely controlled. Parents have reached the tangent point where their children are no more listening to the adults, no more physical games, no good family time and more than anything the children are so much involved in the games where they fail to notice the dawn and dusk.

Digital games play a prominent role in many students' daily lives, not only in India but also across the globe. Excessive digital game playing has been denominated as "computer/video game addiction" and in recent times has received increased attention not only from the media, but also from psychologists, psychiatrists, mental health organizations, and gamers themselves.

Students are becoming more vulnerable to the dependence on the internet, more than other segments of the society. This can be attributed to several factors such as anytime available access to internet, no adult supervision, and easy escape route from the responsibilities in the name of research.

From the last decade it is observed that children are getting hooked to their video games which indeed is a problematic issue and is in need to be addressed. This has taken a curve to even call it an addiction. This paved way to welcome the other strings that got attached with the gamming addiction which are the withdrawal symptoms, major mood modifications, increasing introverts, egocentric point of views and many more.

Due to the growth in technology and internet usage in the last few years, digital gaming disorder has manifested as a rapidly growing mental health problem affecting adolescents in their academic achievement, personal life and social life.

iPad, Xbox, PSP and other gadgets trigger the reward centre in the brain that releases dopamine, opiates, and neurochemicals, which over time will produce a stimulation tolerance and students fail to respond to reinforcements. Students consider mobile phones to be a part of them where they do not fail to carry it everywhere they go. The time people recognized as the 'self-time' or 'relaxation break' is now taken over my these overwhelming gadgets. These obsessive smart phone checking can also interfere with face-to-face relationships and

academic performance. The extent of addiction has reached the stage where anger is triggered if the accessibility is denied also bringing about depression on the plate.

Adolescents are especially susceptible because they have low tolerance and exhibit negative behaviours like arguments, lying, poor achievement, social isolation and fatigue. The games that we previously played on the playgrounds are now replaced by small screens causing inactive, binge playing, and not social behaviours in the youngsters.

This changing culture has brought up a niche concept of "digital game addiction", a stage where things are out of control and the children have become extended self of the internet and its usage. The adolescents are the target group of consumers for the gaming devices paving way for easy addiction.

Game addiction in the psychiatry literature has been described as an impulse control disorder characterized by the symptoms such as "the inability to control the time spent on game-playing", "a loss of interest in other activities", "continuing to play despite the adverse effects" and "feeling psychologically deprived when not being able to play"

Many violent games like "BLUE WHALE" and other fighting and war games have led to destruction and self-harm. It has left a negative impact upon the physical, psychological, social, and occupational functioning of adolescents who are addicted to such games, often leading to severe consequences. The use of excessive digital gaming and obsessive usage of and preoccupation with technology results in undesirable behaviours such as stress, reduced creativity, anxiety, frustration, and disconnection from physical activities .Since technology and online connectivity are important characteristics of our quality of life, their addictive use may result in a less sustainable and connected society.

'Technology' that entered our lives in the name of 'boon' unveiled itself as an 'addiction'. Initially we used it to make things simpler but indeed we didn't realise that it was making things more complicated! The adolescents who are at the age of learning to adapt to the society and gain knowledge from the environment are failing to notice the winding time while they are glued to their gadgets.

Digital Gaming Addiction is a behavioural addiction characterized by excessive or compulsive use of computer or video games, which interferes with a person's everyday life. Video game addiction may present itself as compulsive gaming, social isolation, mood swings, diminished imagination, and hyper-focus on in-game achievements, to the exclusion of other events in life.

Based on Centre for Internet Addiction Recovery, internet addiction is when an individual is having a compulsive behavior involving the internet interferes with normal functioning, and causes stress on the addicts, as well as their family, friends, and loved ones (Padwa& Cunningham, 2010). According to Wolfe (2000), internet addiction is a creation of the media.

While, Bidgoli (2004) stated that, internet addiction is a dysfunctional internet use pattern. This phenomenon occurs when people spend much time online to the detriment of their social and financial well-being

It turns out that there is a "pleasure pathway" in the brain that lights up when we experience pleasure. The body releases a combination of neurochemicals, including dopamine and the opiates, which are picked up by receptors in the brain and elsewhere in the body. These chemicals make us feel good. When we enjoy playing video games we experience a similar euphoria. These highs are not something to be worried about, in moderation.

The addiction begins to take hold, however, when we do it too much. Then the brain is forced to withdraw neuro-receptors in an effort to restore balance. This is what we call tolerance, and we no longer get the high from the same level of activity or drug use. Now, we need more. And if we go without, we go into withdrawal. In the case of behavioral addictions, that withdrawal involves primarily psychological symptoms (irritability, restlessness, poor concentration, increased anxiety and depression, etc).

Once an addiction takes hold, the addict is either chasing another high or trying to avoid withdrawal. This, in turn, leads to obsession and engaging in the behavior in spite of negative consequences. The pleasure pathway, now overused, has become highly sensitive and responsive to cues that trigger a craving for the drug or behavior. So, for instance, if you've become addicted to Farmville or World of War craft, then merely sitting down in front of your computer, or merely opening up the internet on your smart phone, can trigger the release of neurochemicals that make us crave engagement in those games.

These cravings are very strong and tend to override the executive functioning of the brain, that is, the part of the brain that makes rational decisions. Thus, even though you may have recognized that your video game play or other internet use is harming your life in some way, it can be very difficult to resist the urge to engage anyway. Afterwards, the addict feels remorse, shame, regret, etc, because the rational mind is now functioning again.

Digital games includes, the games that are played using software running on PCs, consoles, or portable devices. It not only encompasses a wide range of cultural and media practices, including those designed specifically to be played, but also comprises other practices that provide pleasures derived from playful tinkering with digital technologies. Some of the digital gaming devises are

A smart phone is a handheld personal computer with a mobile operating system and an integrated mobile broadband cellular network connection for voice, SMS, and Internet data communication; most, if not all, smart phones also support Wi-Fi. Smart phones are typically pocket-sized, as opposed to tablet computers, which are much larger. They are able to run a variety of software components, known as “apps”. Most basic apps (e.g. event calendar,

camera, web browser) come pre-installed with the system, while others are available for download from official sources like the Google Play Store or Apple App Store).

A laptop is called a notebook computer that is a small, portable personal computer and easily carried as it is small size and battery support for energy, required to run it. The laptops are generally used for making programs, storing data, entertainment (music, videos), playing games accessing net etc

A tablet computer, commonly shortened to tablet, is a portable personal computer, typically with a mobile operating system and LCD touch screen display processing circuitry, and a rechargeable battery in a single thin, flat package. Tablets, being computers, do what other personal computers

Addiction is a condition in which a person engages in use of a substance or in a behaviour for which the rewarding effects provide a compelling incentive to repeatedly pursue the behaviour despite detrimental consequences. Addiction may involve the use of substances such alcohol, drugs, and others behaviours such as gambling and gaming. Scientific evidence shows that addictive substances and behaviours intensely activate brain pathways of reward and reinforcement, which involve the neurotransmitter dopamine.

The two biological sexes (male and female), especially when considered with reference to social and cultural differences .Both boys and girls have be taken as sample for the digital gaming addiction.

Adolescence begin with the onset of physiologically normal puberty, and ends when an adult identity and behaviour are accepted. A teenager, or teen, is a young person whose age falls within the range from 13-19. They are called teenagers because their age number ends with "teen"

Mother's occupation refers to if the mother is working fulltime/part time or homemaker and how it influences the level of digital gaming addiction among adolescents with/without the supervision of the mother.

Mental health is a level of psychological well-being, or an absence of mental illness. It is the "psychological state of someone who is functioning at a satisfactory level of emotional and behavioral adjustment. It is about how we feel about ourselves and others, and how we are able to manage the stress in our life. According to the WHO (World Health Organization), mental health is:"... a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community. "The WHO stresses that mental health "is not just the absence of mental disorder."

According to Young (1996), addiction to the internet is the same as addiction to gambling, drugs and alcohol. Widyanto&McMurran (2004) have explained that the concept of addiction

is quite hard to define because it depends on a substance or activity. The characteristic of dependence are overindulgence, tolerance, withdrawal, craving and loss of control. Behavioural addictionshavegrown along with the rise of the machines, including machines that allow us to seek amusement and/or information. Behavioural addictions do not rely heavily on physiological mechanisms; instead, they are explained bypsychological explanations of addiction.

Pallanti, Bernardi and Quercioli (2006) showers light on this research as the most adolescents use their social time in using the internet. The research of Van Rooij and Van den Eijinden (2007) report that the leisure time has been replaced by internet time.

Wartella, Lee &Caplovitz (2002) throw light on the gender differences in the usage of internet. Besides that, based on Subrahmanyam et al. (2001); Bickham, Vandewater, Huston, Lee, Caplovitz, & Wright (2003), state that the girls spend more time on the internet over boys in the early teens and it's drastically reversed in the late teens(as cited in Park 2009). Adding to support this Van Schie & Wiegman (1997) (as cited in Park, 2009) has the same reports. But this depends mail on the subjective interests. The games that involve more physical attributions are attracted by men. This perspective is supported by Young (1998) where it's observed that men tend to hook to the things that are dominant while women are more swayed towards the physical gatherings and social involvements.

(Walsh, 2012) It is also said that, if only we know the negative impacts of the services we were receiving; the unwanted applications could have been noticed and stopped at its root development.

According to Erickson, 2012 has a strong statement that the youth being the target consumers are trying to use this medium to make things easy while being social distant. (Cabral, 2011) somewhat says the same quoting the intra-psychic effects due to this addiction. The escape roots lie in the online shopping and gaming among the college student. (Cotton, 2001).

Shapira et al., 2003 states that the addictive internet usage is directly proportional to the mental health issues. There is indeed a wide scope of clinical help needed for these youngsters that might cause distress and disability (Young, 1998).

Kuss& Griffiths, 2012 has a broader perspective that the internet addiction is no different from any other addiction and has to be addressed with the same amount of seriousness.

Griffiths, 2009 has a point where he quotes that the risk is extensive in 'online gaming' over the offline. According to Griffiths, showers light on his point. He specifies that the adolescents who have difficult early childhood experiences are more susceptible for this and it's good to notice the early addictive symptoms. Wölfling & Müller, 2009 has a point where he suggests that the addiction might happen due to the peer pressure as well.

Methods

Objectives

1. To study the significant relationship between Levels of Digital Gaming and Gaming Addiction among Adolescents?
2. To study the significant impact between Mothers Occupation and Gaming Addiction on Levels of Digital Gaming among Adolescents?
3. To study the significant difference in Gaming Addiction among adolescents based on their gender.
4. To study the significant difference in Gaming Addiction among adolescents based on Levels of Digital Gaming.

Hypotheses

$H_0$1: There is no significant relationship between Levels of Digital Gaming and Gaming Addiction among Adolescents.

$H_0$2: There is no significant impact between Mothers Occupation and Gaming Addiction on Levels of Digital Gaming among Adolescents.

$H_0$3: There will be no significant difference in Gaming Addiction among adolescents based on their gender.

$H_0$4: There will be no significant difference in Gaming Addiction among adolescents basedon Levels of Digital Gaming.

Variables

The variables that will be measured in this study are:

- Levels of Digital Gaming
- Gaming Addiction

Demographic Variables

The demographic variables that will be measured in the study are Gender and Mothers Occupation

Sample Distribution

Inclusion Criteria

1. All the participants must be between the age group of 18-25 years.
2. Participants who can read and understand English well only will be encouraged to participate in the study.

Exclusion criteria

1. Young adults with any form of disability will be excluded from the study
2. Mentally retarded individuals and individuals with other psychotic and neuro developmental disorders will not be included.
3. Young adults who are illiterate or uneducated.

Sample and Techniques

A sample of 40 young adolescents will be selected for the study. The sample comprised of both males and females, both college goers and working women individuals of the age group 18 to 45 years. In the present study, the convenient sampling technique will be used for drawing the sample.

Tools for the Study

Gaming Addiction scale for adolescents by Jeroens, Pattil, M.Valkenberg& Jochen Peter (2009).

Analysis of the Data

Descriptive Statistics, Pearson Correlation, Impendent Sample *t* test, Regression analysis using SPSS was incorporated in the Study.

Results and Discussion

***$H_0 1$*: There is no significant relationship between Levels of Digital Gaming and Gaming Addiction among Adolescents.**

Table 1.Descriptive Statistics for Levels of Digital Gaming and Gaming Addiction

Descriptive Statistics			
	N	**Mean**	**Std. Deviation**
Levels of Digital Gaming	40	1.62	.490
Gaming Addiction	40	52.65	14.87

Table 2.Correlation for Levels of Digital Gaming and Gaming Addiction

	Correlation		
N= 40	**Mean (SD)**	**Levels of Digital Gaming**	**Gaming Addiction**
Levels of Digital Gaming	1.62 (.490)	---	.80**
Gaming Addiction	52.65(14.87)	.80**	---

Note: **p<0.01 Levels

The Pearson product moment correlation was calculated for Levels of Digital Gamingand Gaming Addictionfor 40 participants which was found to be statistically significant at (*r*=

.80, p<0.01) levels. As shown in Table 2. The Pearson correlation results showed that there was a significant positive correlation between Levels of Digital Gamingand Gaming Addiction (.80) Therefore, the study rejects the null hypothesis. ***H_01*: There is no significant relationship between Levels of Digital Gaming and Gaming Addiction among Adolescents.** Over all the results shows that all the two variables are positively correlated.

***H_02*: There is no significant impact between Mothers Occupation and Gaming Addiction on Levels of Digital Gaming among Adolescents.**

Table 3.Model summary for Mothers occupation, Gaming Addiction on Levels of Digital Gaming

Model Summary						
Model		**B**	**R^2**	**Adjusted R^2**	**t**	**Sig.**
1.	Mothers occupation	-.141	.65	.63	-1.337	.189
2.	Gaming Addiction	.026			8.033	.001

Note: Dependent Variable: Levels of Digital Gaming

A standard multiple regression analysis was conducted to evaluate how well Mothers occupation and Gaming Addiction impact on Levels of Digital Gaming among adolescents. The correlations of the variables are shown in the table 3. As it can be found that between Mothers occupation and Levels of Digital Gaming the (B=-.141, p>0.05), between Gaming Addiction and Levels of Digital Gaming the (B=.026, p<0.01). The (R^2=.65) and (adjusted R^2=.63). Which adequately fits the predicted model. Therefore, it can be found that, correlation was statistically significant for Gaming Addiction. Therefore, the study rejects the null hypothesis, ***H_02*: There is no significant impact between Mothers Occupation and Gaming Addiction on Levels of Digital Gaming among Adolescents.** Therefore, the results were found to be statistically significant for Gaming Addiction.

Table 4.Anova for Mothers occupation, Gaming Addiction on Levels of Digital Gaming

ANOVA						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1.	Regression	6.16	2	3.08	35.52	.001
	Residual	3.21	37	.087		
	Total	9.37	39			

Note: ***p<0.001 Levels

The prediction model was statistically significant between Mothers occupation, Gaming Addiction on Levels of Digital Gaming (F=35.52, p< 0.01) and accounted for approximately 65% of the variance of Levels of Digital Gaming (R^2 = .10, adjusted R^2 = .10).(R^2 = .65, adjusted R^2 = .63). Therefore, Mothers occupation, Gaming Addiction werestatically significant on Levels of Digital. at 0.001 levels.

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***$H_0$3*: There will be no significant difference in Gaming Addiction among adolescent based on their gender.**

Table 5.Descriptive Statistics for Levels of Digital Gaming and Gaming Addiction

Descriptive Statistics				
	N	**Gender**	**Mean**	**Std. Deviation**
Gaming Addiction	20	Males	60.35	13.29
	20	Females	44.95	12.35

Table 6.Independent t test for Gaming Addiction for Gender

Gaming Addiction	N	Mean	SD	SE	df	t	p-value
Males	20	60.35	13.29	4.05	38	3.79	.001
Females	20	44.95	12.35				

Note: ***p<0.001 Levels

An independent sample *t*-test was conducted to compare the differences between males and females for Gaming Addiction. The results revealed that there was a significant difference in the scores of Gaming Addiction among Males (*M*=60.35, *SD*=13.29) and Females (*M*=44.95, *SD*=12.35) indicating that males had higher Gaming Addiction compared to females. Statistically significant at (*t*=3.79, *p*< 0.01) levels. Therefore, rejecting the null hypothesis. ***$H_0$3*: There will be no significant difference in Gaming Addiction among adolescent based on their gender.** Therefore, the results were found to be statistically significant.

***$H_0$4*: There will be no significant difference in Gaming Addiction among adolescent based on Levels of Digital Gaming.**

Table 7.Descriptive Statistics for Levels of Digital Gaming and Gaming Addiction

Descriptive Statistics					
	Levels of Digital Gaming	**N**	**Mean**	**SD**	**SEM**
Gaming Addiction	Low Addiction	15	37.46	7.20	1.86
	Borderline Addiction	25	61.76	9.93	1.98

Table 8.Independent t test for Levels of Digital Gaming

Levels of Digital Gaming	N	Mean	SD	SE	df	t	p-value
Low Addiction	15	37.46	7.20	2.94	38	8.92	.001
Borderline Addiction	25	61.76	9.93				

Note: ***p<0.001 Levels

An independent sample *t*-test was conducted to compare the differences between Low Addiction and Borderline Addiction for Levels of Gaming Addiction. The results revealed that there was a significant difference in the scores of Gaming Addiction among Low Addiction (*M*=37.46, *SD*=7.20) and Borderline Addiction (*M*=61.76, *SD*=9.93) indicating that Borderline Addiction had higher Levels of Gaming Addiction compared to Low

Addiction group. Statistically significant at (t=8.92, p< 0.01) levels. Therefore, rejecting the null hypothesis. ***$H_0$4***: **There will be no significant difference in Gaming Addiction among adolescent based on Levels of Digital Gaming.** Therefore, the results were found to be statistically significant.

Implication of the Study

The findings of the study has added a new knowledge to the existing understanding of digital gaming addiction and the mothers occupation

The study can be used to find out the level of addiction among different age groups at which the individual is operating and he/she can be helped to have better healthy life style students can be taught

Suggestions for Further Study

1. The study can be further extended by taking into consideration the other age groups
2. The study can be further expanded by taking different socio economic groups
3. The study can also be done by considering cultural group
4. A relationship study can be done on digital addiction on different variables
5. The study can be done on the working population of different age groups

Summary

1. There was a significant relationship between Levels of Digital Gaming and Gaming Addiction among Adolescents.
2. The results revealed that there was a significant difference in the scores of Gaming Addiction among Males (M=60.35, SD=13.29) and Females (M=44.95, SD=12.35) indicating that males had higher Gaming Addiction compared to females.
3. The results revealed that there was a significant difference in the scores of Gaming Addiction among Low Addiction (M=37.46, SD=7.20) and Borderline Addiction (M=61.76, SD=9.93) indicating that Borderline Addiction had higher Levels of Gaming Addiction compared to Low Addiction group.

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