Computer Gaming and the Positive Effects on Mental Health

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ABSTRACT

In 1970 a popular New Zealand student capping show was entitled "1 in 5" based on the then common expression "1 in 5 of us is mad". In 2011 the New Zealand Mental Health reported exactly the same mental health statistics; 41 years on nothing had changed. However, other changes had taken place during that time – the advent of and continued development of the computer game. This poster paper explores the direct correlation between computer gaming and mental health and, in particular, the positive effects of computer gaming on mental health.

Categories and Subject Descriptors

I.6.8 [Simulation and Models]: Types of Simulation - *Gaming*

General Terms

Human Factors.

Keywords

Mental health, computing gaming.

1. INTRODUCTION

Decades worth of research has been conducted on the negative effects of computing gaming and every time there is a school shooting in the USA the newspapers and television channels will eventually report the significant role that the violent computer games found at the young offender's home had on influencing that young person. However, in the past five to seven years, research presenting a more positive outlook has been processed. With a greater access to media, technology and certain world events such as the various school or camp shootings bringing more focus to the area of gaming, the positive effects of computer gaming are slowly beginning to be researched and reported. However, because of the wide diversity of opinion in the matter, and the lack of full-scale scientific approach, much of the positive research is being labelled purely as the opinions of the psychologists who did the reporting.

According to the Mental Health Foundation of New Zealand's Mental Health Survey or 13,000 people conducted in 2003 and 2004 and published in 2006, New Zealand has a high prevalence of anxiety, mood and substance abuse disorders (14.7%) – exceeded only by the USA. Anxiety was the most common disorder (15%) then mood disorders (8%) and then substance abuse (3.5%). The most common age group is 16-24 year olds and declined with age. This is especially the case for substance disorders. Anxiety and depression was most common in women and substance abuse more common in men. The New Zealand lifetime prevalence rate for anxiety, mood and substance abuse disorders are higher than all European countries and similar to the USA – or at least in those countries where similar surveys have been done.

Again, according to the Mental Health Foundation of New Zealand (2006), some experience of a mental disorder is common amongst 20% of our population (or 1 in 5 New Zealanders) and it is also common enough (37%) for people to suffer from more than one disorder – the most common combination being anxiety and mood disorders. Having more than one mental health issue is linked to suicidal tendencies and increased health services use. However, only 39% of people in New Zealand with a mental disorder visit a health service as, according to the Mental Health Survey, most people saw the "problem" as fixing itself in time. Given that people with a mental health issue are more likely to be physically unwell as well, there is a significant unmet need for people with mental health issues.

2. LITERATURE REVIEW

According to Vitelli (2014), in the USA an estimated 99 percent of boys and 94 percent of girls play video games with 97 percent playing at least one hour per day. Vitelli (2014) questions the current thinking about computer games as being harmful and cites Granic et al (2014) at Radboud University in the Netherlands as saying that much research into computer gaming ignores how these games have quite changed to become much more complex, realistic and social in their nature. According to

Vitelli, Granic et al (2014) suggest that these newer computer games provide young people with social, cognitive and emotional experiences and can also boost mental health and well-being.

Recently, researchers examining play fighting in rats found this play fighting releases chemical growth factors in areas of the brain used for social activities. Since there are strong similarities between some forms of animal play and that of humans, Granic et al (2014) as cited in Vitalli (2014) suggest that play can provide this same sort of stimulation in human children as well. They further believe that not only do computer games enable players to interact with gaming systems in a way that would not be possible with more passive forms of entertainment such as television or the cinema, but they can be played alone, with others, or with thousands of online players over the Internet and while doing so learn new skills, work and play in creative environments and form complex relationships.

Missimer (2014) says that computer games can distract players from their existing stress by providing them with a fun and entertainment value. They also enhance the confidence level of young people when they reach a point of beginning to master these games. Good hand-eye coordination is developed over a period of time and computer games teach them skills such as strategic thinking, innovative thinking and co-operation with others. Some games add to their investigative skills.

According to Missimer (2014) computer games are also responsible for making young people familiar with the technology and enhance the visual-spatial ability. Some games can also be responsible for developing mathematical and engineering skills as young people learn calculations quickly and develop an attitude which motivates them to move ahead from level to level and motivates them to move ahead in life in order to achieve something.

3. FINDINGS

Mental illness is an often misunderstood part of life for many people. Media coverage of events such as the Sandy Hook Primary School shooting in December, 2012, and the even more infamous Columbine High School Massacre in April 1995 saw the media put emphasis on the mental state of the shooters and their penchant for certain kinds of computer games. This harks back to similar events where young people had taken their own lives and music bands such as Judas Priest and Ozzy Osbourne were accused of adding subliminal messages to their music and were taken to court in 1986 and 1990 respectively to stand trial does nothing more than add to a climate of fear in the public's mind of people with mental health issues.

Research into the negative aspects of computer gaming is plentiful ranging from gaming addiction, and the belief that aggressive computer games lead to aggressive thoughts and feelings but a lack of research as to whether or not computer gaming caused these issues and events or merely helped to bring them to the public's attention is a question yet to be answered.

Although violent games in the first person shooter genre such as Halo, Call of Duty, Killzone and Borderlands are often the focus for the media when it comes to negative reporting , Vitelli (2014) reports that feelings of aggression and violence are often lessened when these types of games are played in groups as opposed to

individually. Vitelli (2014) also reports that now 70% of such games are now played in the social context of a group making it a far more social experience in comparison to the games of old which were often single-player based.

Granic et al (as cited in Vitelli, 2014) have also found that the cognitive skills developed by players of these first person shooters are superior to those of players of puzzle and role playing type games – and even more developed than those of non-gamers.

According to Vitelli (2014), gaming can allow a player to better understand that their intelligence is incremental, it is not fixed, and that with time and effort it can increase. Positive reinforcement is noted as a major benefit from computer gaming. Even such games as Candy Crush, Angry Birds, and Bejewelled (Jewells and its infinite varieties) have the ability to improve problem solving skills.

Building a sense of achievement, self-esteem and a better understanding of personal intelligence is a great aid to those suffering from mental health issues and it has been found that computer gaming can decrease the levels of stress in gamers and increase creativity in young people (Missimer, 2014). Games such as Microsoft's Minecraft have been found to be a great way of building upon young people's creative ideas where players are encouraged to build items and explore the game's world. The game can be played with friends building aa common project – even as a school class project (Missimer, 2014).

4. RECOMMENDATIONS
Research into the positive effects of gaming should be highlighted and more widely accepted. The stigma of mental health issues is such that young people can feel there is absolutely no hope left for them and this could well be addressed by less "hype" about both mental illnesses and the supposed evils of computer gaming being better reported in the media. While much of the current writing around the positive effects of computer gaming is dismissed as personal opinion, more interest and funding should be made available to enable a more scientific approach to the necessary research in this area.

5. REFERENCES

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