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REDEFINING VIRTUAL GAMING – A POSITIVE PERSPECTIVE

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ABSTRACT

In this present era, where technology and science have taken the front seat, we as humans are losing our importance as an asset to society. According to various researchers, several negative impacts have been explored on virtual gaming, but as we know that with every negative there has to be some positive. Here, this paper is an attempt to understand the possible merits of virtual gaming. Nowadays mobile phones including other gadgets are easily accessible and available to all ages including children, adolescents, and adults. It serves a variety of purposes like academics, communication, social networking sites, gaming, and so on. Virtual gaming is not unsophisticated because it has some positive effects on mental health and well-being. It helps in stimulating the brain in a healthy way, developing problem-solving skills, stress relief, social skills, communication, eye-hand coordination, multitasking, and so on. The main aim of this study is to explore the role of virtual gaming in people's lives and how they are used to improve one's mental health and well-being. Many researchers are focusing on using games in therapeutic intervention for different neurodevelopmental disorders; mental illness and for aged for helping in improving attention, cognition, concentration, self-acceptance, self-esteem, optimism, resilience, etc., This work is the theoretical paper that highlights the positive effects of virtual gaming, gaps in the literature, and future recommendations for research will be considered. For this secondary data from various published journals, articles, books etc., have been used. The analysis indicates that virtual gaming plays important role in happiness, cognitive abilities, mental health and well-being of an individual.

Key Words: Virtual Gaming, Happiness, Positive Mental Health, Well-being.

INTRODUCTION

In this present era, where technology and science have taken the front seat, we as humans are losing our importance as an asset to society. According to various researchers, several negative impacts have been explored on virtual gaming, but as we know that with every negative there has to be some positive. Here this paper is to understand the possible merits of virtual gaming. In this paper, it is not suggested completely ignoring the negative effects like addiction, aggression, depression, and many other health problems, instead it argues that a more balanced perspective is needed. Findings of numerous studies suggest that gaming also has potential benefits like stimulating the brain in a healthy way, improving cognitive functions, problem-solving skills, stress relief, pain relief, eye-hand coordination, etc., Worldwide statistics state that there were nearly 2.69 billion game players in the year 2020 (New Zoo, 2020). It is not the game that decides addiction, it is the time spent by an individual on a particular game that indicates addiction. For instance, we can't deny the traditional proverb "Too much of anything is good for nothing" likewise excess of playing virtual games causes addiction and leads to negative effects and if time is moderated then it leads to positive effects.

Researchers referred that the positive effects of virtual gaming can be broken down into three basic psychological needs Competence, Autonomy, and Relatedness (Art Bamford, 2018). A.) *Competence*: It refers to one's self-esteem, feeling that he/she is capable, feeling of accomplishment, and success. The impressive features of virtual gaming are the cognitive benefits. Studies have shown gaming helps in improving eye-hand coordination, problem-solving, memory, and the ability to pay attention for longer periods of time. Games help

individuals to think and act strategically about the steps to be taken. The study has found that students who engage in playing strategic and role-playing games regularly tend to earn good grades in school. Researchers has suggested that games allow young people to experience the thrill of victory, gain knowledge, and strategies, have fun, etc., which in turn enhances their self-esteem, boosts their confidence and optimism to perform in real-life situations. B.) *Exploring Autonomy*: It refers to having freedom and determination to make their own decisions without depending on parents, teachers, or other elders. Studies suggest that kids or young people facing rejections in school as well as in team sports, they strive for a sense of acceptance. During their free time at home, they play virtual games to enjoy meaningful time with friends. This may give them a sense of autonomy and acceptance. C.) *Fostering Friendship/Relatedness*: It refers to connecting with their friends & others and feeling of wellness. Researchers have found that cooperating together as a team to defeat a common enemy helps in strengthening social bonds among gaming groups and friends. Virtual gaming do have different effects but here our main focus is on potential benefits to individuals that are gained due to playing virtual / online games. There are lots of benefits of virtual gaming like, it helps in improving mental health by allowing us to relieve stress and engage our mind in several creative ways, these games encourage us to learn to cope up with failures and helps to develop emotional resilience to try it again, these games gives us targets and goals to achieve so when these targets are achieved we are praised and rewarded which in turn brings satisfaction and feeling a sense of accomplishment that helps in overall well-being, games can help in coping with mental health issues such as depression / anxiety / attention deficit hyperactivity disorder (ADHD) / (PTSD) post-traumatic stress disorder, games helps us engage almost every part of our brain which helps in achieving higher level thinking, games become more complex as passing lower levels that helps in improving our development and critical thinking skills, games are good for social interactions where we can build strong relationships and learn to support each other / to cooperate with others (Michelle Newbold, 2022). Here in this paper we have compiled and sorted the potential benefits of virtual gaming into four categories they are: happiness, mental health and well-being, cognitive abilities, and gaming interventions.

Happiness

Virtual gaming do act as a contributing factor for reducing stress and increasing enjoyment and happiness of an individual. Virtual gaming is nothing but the application of 3-D (3-dimensional) games in an artificial environment. Here this review paper includes all types of games that are played in the virtual world, like through different gadgets like mobile phones, computers, tablets, play station, etc., Happiness is an emotion that gives a sense of joy, satisfaction, gladness, and a sense of well-being. It is a subjective feeling that is based on individual's perception.

Cognitive Abilities

Cognitive abilities also called cognitive functions, cognitive capacities, cognitive skills, are brain based mental capacities for acquisition of knowledge, manipulation of information, that involves reasoning, problem solving, decision making, processing speed, planning, comprehension of complex idea, abstract thinking, learning from experience (Gottfredson, 1997). It can be better comprehended by Carroll's (1993) three strata model, the first stratum – narrow and specific abilities, the second stratum – group factors and broad abilities, and the third stratum – general intelligence or g (Dan Ispas, Walter C. Borman, 2015).

Mental Health and Well-being

Mental health is not an absence of any mental disorders and it is more than that. It is a complex continuum that is experienced differently by each and every person, with different degrees of difficulty, distress, and different social & clinical outcomes. World Health Organization (WHO) defines Mental Health as a state of mental well-being that enables individuals in coping with the stresses of their life, realize their abilities, learn and work well, and also contribute to society or community. According to the American Psychological Association Well-being is defined as a state of happiness with less level of distress, in total it is overall good mental and physical health and good quality of life.

Interventions

Intervention is any action intended and carefully planned to interfere with or stop or modify process, to deal with the issues of a client (American Psychological Association). In simple words it is an act of interceding with the intent of modifying the outcome. Because of its popularity, accessibility and relevance in individual's lives, gaming remains as a promising treatment intervention for various problems.

METHODOLOGY

Objective of this theoretical review paper was to study the positive effects of virtual gaming in individuals who play games. The researcher reviewed published articles, journals, news articles etc. To locate relevant literature for the review, the search engines like Google Scholar, PubMed, and ScienceDirect PsychINFO were utilized. The search terms include video games, computer games, online games, online gaming, mobile games, virtual gaming, its positive effects, gaming and happiness, cognitive functions, mental health, and well-being. In addition to these the earlier articles cited by the given article (Ancestry), and the articles which cited the given article (Descendary) were also utilized. Through these combinations, we got more than 150 studies out of which the most related ones were analyzed and quoted in this review paper i.e. articles that were consistent with the aim of this review paper were separated and isolated. This consists of articles that contribute to the positive side of the game playing i.e. how games were used by individuals to overcome stress, for happiness, for improving one's cognitive functions, and above all how this gaming is used as an intervention for disorders and illnesses.

Inclusion Criteria:

The following are the requirements for the inclusion of studies in this review paper:

- Indian and International research done on the topic of virtual (online) gaming and its relation with the happiness, well-being, and mental health of individuals regardless of their age.
- Studies that have been published in the English language.
- Studies / articles that are published in a last decade i.e. after 2010.

Exclusion Criteria:

The following are the exclusion criteria for the review paper:

- Journals or articles that are published in other languages.
- Studies that focus on the negative impacts of Virtual gaming.

REVIEWS

The review of literature has been put under the following four categories: namely, relation of virtual gaming with happiness, cognitive abilities, mental health and well-being of gamers and virtual gaming as an intervention for treating different mental health issues.

Virtual Gaming and Happiness:

Research evidence suggests that virtual gaming act as a contributing factor to the happiness of individuals. The survey which was done by the data-red discussion platform has suggested that many gamers that is three out of four reports that the main reason for playing virtual games is for fun and relaxation. In this survey, gamers told their life stories that how gaming had got them to overcome very bad and sad times in their lives (Kevin Anderton, 2018). For instance, we can go through Colleen Steele's story of gaming as a caregiver for her son Cullen who was diagnosed with Pulmonary Arterial Hypertension at the age of 8 and underwent surgery, and received a heart and double-lung transplant when he was 14. From the age of 6, he started having severe symptoms which made him constantly ill. He used to go to school whenever possible and he couldn't enjoy playing offline/physical games, or gym activities during his lunch breaks, at home, and especially when confined to a hospital ward room for days together. He can enjoy video games and no other physical activities or games. Steele was really happy that at least her son Cullen has gaming as a source of entertainment and it also helps in distracting his pain and feeling a state of relief. Steele believes that whenever a rare disease comes and prevent people from engaging in all physical activities at that point in time gaming acts as the healing power for people's mind both for a person with the illness and also for caregivers and family members. A study conducted by Oxford Internet Institute Research reports that people who play games are happier than those who do not play (Zoe Kleinman, 2020). But they have focused on only two games Nintendo's Animal Crossing and EA's Plants vs. Zombies, and not on other games. Przybylski pointed out that games help in satisfying their basic psychological needs when they are playing with their friends, and also players have full control over their virtual characters, which they are losing in their real lives – this sense of efficacy or a sense of control over their environment makes them more satisfied and happier.

Virtual Gaming and its Effects on Improving Cognitive Abilities:

Most evidence suggests that individuals who play shooter video games show accurate and faster attention allocation, good spatial resolution in visual processing, and good mental rotation abilities (Isabela Granic, et.al, 2013). A cross-sectional study conducted by Syed Fawad Mashhadi, [...], and Irfan Iqbal, in the year 2015 suggested that gamers exhibited better cognitive skills in analogy, mathematical intelligence, processing speed, and deductive reasoning. The review done by Charles Reynaldo, Ryan Christian, and Hansel Hosea in the year 2021 suggested that video games help in improving cognitive skills such as attentional control and decision-making. Another research review suggests that only some, but not all games are capable of improving cognitive skills and helping in practical applications like rehabilitation and job training settings (C. Shawn Green, Aaron. R. Seitz, 2015).

Virtual Gaming and Mental Health and Well-being:

Research done by Johannes. N., Vuorre. M., Przybylski. A. K. found that there is a positive relation between gameplay and affective well-being. A review conducted by Jones C.M et.al. in the year 2014 suggests that video game play leads to improving one's mood, reducing emotional disturbance, relaxation improves emotional regulation and stress reduction; they also suggested that moderate play time has better outcomes than excessive or lack of play time; there is no negative impact for the majority of young players and instead, game play is associated with greater self-esteem, computer skills, and mechanical ability; overall they found that the experience of engagement of playing games can have a positive effect on individual's well-being. A literature review was conducted by Kowal. M et.al. (2021) during the period of pandemic indicates that commercial video games play an important role in improving mental health outcomes – helping in reducing the symptoms of two major mental disorders Depression & Anxiety and they suggested that these commercial video games which are easily and readily available and accessible to all people irrespective of status, age, gender, so it should be considered as the potential alternative for improving mental health globally as it is cost-effective and can be done with low or no supervision.

Virtual Gaming as an Intervention in Treatments:

A review done by Atherton. G and Cross. L in the year 2021 suggests that many games are developed as Autism interventions. This gaming intervention has three target areas the first is socio-communication skills, the second is academic skills and the third is physical skills. By their review, it is concluded that the most effective and easily accessible interventions are those that focus on encouraging interactions between players and simpler game designs. A systematic review was conducted by Tlili. A. et.al. in the year 2022 on game-based learning for learners with disabilities in special education – they analyzed the game-based learning system's major components like learners with disabilities (Subjects); game-based learning applications (Technology); target skills or behaviors (Object); implementation procedure and performance measures (Rules); learners with disabilities, special education professionals, and parents (Community); among learners, professionals, parents (Division of Labour); and performance of target skills or behaviors (Outcomes) suggested that the connection between different activity components has created more effective learning with greater benefits for learners with disabilities. The experimental study conducted by Kim. S.C., and Lee. H-s in the year 2021 to check the effect of game-based cognitive training programs on the learning of children who have Intellectual Disabilities (ID) designed two game-based cognitive training programs, the first is Neuro-World Cognitive Training, and the second one is Conventional Cognitive Training they suggested that game-based training programs can be used as an effective tool for improving cognitive abilities of children with ID, in addition, Neuro-World program can be used as an intervention for children with ID as non-face-to-face at homes. A systematic review done by Christopher Townsend, et.al. 2021 concludes that for depression in young people gaming interventions are promising avenue which has the potential of improving treatment engagement and suggested implementation in a health service requires proper and further investigation. A research study by Gandes Nawangsari (2016) found that traditional games were effective as an intervention for alternative way to overcome internet addiction inclination.

RESULTS AND DISCUSSION

The above reviews have suggested that virtual gaming / online gaming has many pros. In this paper, our special focus is on the benefits associated with virtual gaming. The present paper's purpose was to review and synthesize existing research works on the positive effects of virtual gaming. The bulk of literature indicated that virtual gaming do play a role in increasing happiness and well-being of individuals. Here we suggest not to consider virtual gaming 'good' or 'bad', rather it is dependent on various aspects like time spent, their perception, their motivation to play, involvement, gaming in moderation (Yemaya J Halbrook, 2019). Firstly review says that virtual gaming at moderation level helps in sense of happiness. A survey study done by the data-red discussion platform has suggested that main reason for playing virtual games is for fun and relaxation (Kevin Anderton, 2018). Games helps in satisfying their basic psychological needs when playing with friends and have full control over their virtual characters (Przybylski). From the second part evidence suggested that virtual gaming helps in improving cognitive abilities for some extent (C. Shawn Green, Aaron. R. Seitz, 2015). Thirdly literatures suggested a positive relation between individual's gameplay and their well-being. Games helps in improving abilities / skills like social, mechanical, computer, increase their self-esteem levels thereby indicated the positive effect on individual's well-being. Lastly the reviews highlighted the evidences that virtual gaming can be used as an intervention for the treatment of various mental health problems like, in the treatment of depression, improving social communication in children with autism, increasing attention span in children with attention deficit hyperactivity disorder (ADHD), learning complex concepts for children with learning disability and intellectual disability. Many research were found on younger generation and only few were found on old age peoples, reason may be accessibility and usage of gadgets were high among younger populations. We would further recommend to focus on middle and old age groups as they face many mental health issues and implementation is needed.

CONCLUSION

There is a preliminary evidence to suggest that games have many positive effects as it acts as a contributing factor to one's happiness, help in improving self-esteem, cognitive skills like attention, decision-making, spatial reasoning, processing speed, etc. improve mood, reduce stress, used as an intervention for children with developmental disabilities to improve social communication, attention, learning of specific concepts and so on. Future research should attempt to identify causes of gaming, and also interventions to moderate the level of gameplay by working on causes so that it will be beneficial for the individuals to get better positive outcomes.

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