

Effect Of Physical Games And Electronic Games On Health And Growth

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Abstract

Background: College students are a significant human asset in any nation and their wellbeing is connected with the fate of their country. On account of their vitality in the future of the country, need of the hour is to guide them to engage in the activities useful for their health and growth. **Objectives:** This study was conducted with two objectives: 1) to identify effect of physical games (PG) and electronic games (EG) upon health of the college students and 2) and growth of the college students. **Methodology:** The study employed the quantitative approach with cross-sectional research design in which 130 college students took part. Data were collected over a period of one month from male colleges of Abbott Abad city. **Results:** The mean age of the participants was (M=17, SD=0.75), mean height (M=162, SD=1.44), and mean weight (M=53, SD=3.15). There were 19.2% participants who were playing Basketball, 16.9% were playing Volleyball, 16.9% were playing Table Tennis, 8.5% were playing Badminton, and 38.5% were playing electronic game Need for Speed. A significant difference was found between health related variables of those participants who were involved in PG and those who were playing EG including weight, stress reduction, fitness, and well-being ($p = .000 < 0.05$). Similarly, a significant difference was found between growth related variables of those participants who were involved in PG and those who were playing EG including productivity, ambitious, competent, and self-esteem ($p = .000 < 0.05$). **Conclusion:** The study concluded that the students involved in physical activity were healthier and scored higher on growth related variables as compared to those who were playing electronic games. Thus, there is a need to encourage college students to take part in PG and other active physical activities and exercises more frequently to reduce inactivity from life.

Key words: College, Students, Physical, Electronic, Games, Entertainment, Health, Growth

Introduction

College students are a significant human asset in any nation and their actual wellbeing is connected with the fate of their country. Numerous medical issues among youngsters are a reminder to assist them with participating in physical activities and exercises. Alongside the assurance of electronic diversion (computerized/computer games), and dependence brought about by these games in college students is a significant issue in wellbeing and development. The compelling improvement of the actual wellbeing of college students is the objective of the normal endeavors of contemporary games and education system. Actual games have shown that appropriate

physical activity (PA) can reinforce students' wellbeing and furthermore forestall good health (Bella, Timothy, 2019). As one of the least difficult and best, immediate and least expensive ways, the positive role of sport has been widely acknowledged in literature in terms of boosting health of the adolescents (Beerthuisen et al., 2017).

Electronic entertainment (EE) through digital or video games is widely used by the adolescents, who generally have a high level of competence with technology. Thus, these games have become a great resource to support self-care, health and growth of young people. However, few experts have explored adolescents' use of these games as the threat for health status of undergraduate students (Domahidi et al., 2018). There are different patterns of internet used by the various subgroups of this population depending on their development, gender and social characteristics. As children move into early adolescence, overall internet use increases and then decreases, presumably due to either heavier academic work or domestic responsibilities that teens have to deal with. The fast development of electronic media with all its capability to change the total life pattern has carried with it a few negative prospects of utilizing and mishandling the media.

Electronic gaming provides fun and entertainment to the host (Fazelniya et al., 2017). Research has confirmed that electronic gaming enhances brain connectivity and output in terms of thinking and solving the problems, improved memory, muscles control (Greitemeyer, Tobias, 2019). Electronic gaming has positively been co-related with the better health care behavior of the adolescents. In recent years a number of electronic gaming software have been introduced for medically impaired adolescents. "Packy and Marlon" is globally renown electronic game designed for the special people (Nahum et al., 2020). Research has confirmed positive role of the electronic gaming in perspectives of improving the sense of self-efficacy in terms of preventing the HIV/AIDS among the adolescents (Kühn et al., 2019).

Regular participation in playing video games is also associated with the social advantages concerned with the life skills. Literature has confirmed that a number of social benefits of participation in electronic gaming including friendly attitude, positive social skills, better academic output and positive relationship with the fellows (Krause et al., 2020).

As a matter of common observation, electronic gaming mostly relies upon mental and delicate physical activities of the fingers rather than big visible muscular activities of the participants. It has very positive effect upon gentle activities of the fingers and hands. A research study, conducted with the population of the medical surgeons has concluded that, while discharging their professional responsibilities, the surgeons who used to play electronic gaming committed 37 percent less mistakes as compared to the ones who didn't play electronic gaming (Bowman et al., 2015). In addition to the above, electronic gaming has also been introduced in the field of physical therapy for rehabilitating the stroke affected patients in perspectives of recovering the proper control of their fingers and hands (Kracht et al., 2020). Similarly, electronic gaming associated with the brain activity is likely to be very useful for the adolescents suffering from Attention-deficit/hyperactivity disorder (Wright, 2001).

Literature Review

Physical games provide a wide arena to the participants to lively interact with each other representing different socio-cultural and economic and ethical backgrounds. The main feature of this type of gathering in the game setting is that physical interaction takes place among the players and they deal as well as handle the different temperaments of one another. It represents the true story of the happenings of dealing one another. On the other hand, research has concluded that participants of the electronic games affirm the viewpoint that these games have provided them with the chances of establishing understanding and friendship with the fellow gamers (Domahidi et al. 2018; Timm, Jane C. 2019) Video games create a scenario for the gamer who considers themselves as the part of situation in the scene and they remain fully involved in the proceedings that appear on the screen. In addition to the above, O'Loughlin et al., 2019; and Krause et al. (2020) have found that electronic games offer opportunities to the adolescents the way of dealing various emotions, conflicts and making new friends. Since the mindset of the adolescent is on the way to maturity, they often accept the influence of the emotional scenes and show reaction to that in the real life. Endorsing the same stance, Kühn et al. (2019) have confirmed that electronic gaming develops the sense of cooperation, fellowship and social skills among the participants. In addition to the wide confirmation of the literature, one thing is established that the role of video games in terms of entertainment and fun has been globally accepted (Kaye et al., 2017).

Nowadays, as a result of technological advancement, electronic games have been widely used for the entertainment of the children and adolescents. In addition to its effective entertaining role among the healthy ones, it has also shown very positive and promising results among the ailing adolescents suffering from various medical problems. Fazelnia et al (2017) & Kauhanen et al. (2014) have confirmed that during the course of treatment, video games were suggested for the cancer affected children, they responded positively in shape of better quality of life, enhanced physical engagement and low sense of exhaustion as compared to their counterpart who did not play the video games. In another study Gold & Mahrer (2018) have found that video games and electronic entertainment have been quite helpful in minimizing the feelings of discomfort, pain and fear of the under-treatment adolescents of different ailments. On the other hand, outcomes of the physical games in perspectives of maintenance and promotion of health, better output of life and less chances of diseases have also been established in both genders and all ages of life (Kracht et al., 2020).

Negative Effects of Electronic Gaming

So far as the parental approach towards the usefulness or otherwise of the electronic gaming for the youngsters is concerned, majority of them oppose its utility. A massive study was conducted in the United States which concluded that three out of every five parents claim that electronic gaming was the wastage of time for both genders (Duggan & Maeve 2015). In addition to the above the common notion of the masses happens to have been negative with reference to electronic gaming. A number of researchers, politicians and elders claim that electronic gaming is the root cause of many social evils in the society including depression, social isolation, aggression, harassment, negligence and obesity (Markey et al., 2015). With regard to research in perspectives of the electronic gaming is concerned, it has mostly been focused upon the ill effects of electronic gaming and playing video games. Research has confirmed long lasting ill effects of electronic gaming like aggression, violence and obesity (National Center for Biotechnology Information, 2012).

Material and Methods

Objectives

1. To identify effect of physical games and electronic games upon health of the college students.
2. To identify effect of physical games and electronic games upon growth of the college students.

Hypotheses

H¹: There will be significant effect of physical games and electronic games upon health of the college students

H¹: There will be a significant effect of physical games and electronic games upon growth of the college students.

Data Analyses

The study employed the quantitative approach with cross-sectional research design. Physical Games and Electronic Entertainment (Video Games etc.) were taken as the independent variables and Physical Health & Personal Growth were taken as the dependent variables for the study. Respondents comprised of the 130 college students from different colleges of public and private sector from Abbott Abad city (KPK). Data analysis was done using Statistical Package for social sciences (SPSS) version 23.0 for descriptive and inferential analysis. Multivariate Analysis of Variance (MANOVA) was used for hypothesis testing. The significance level was set at 0.05 to lessen the likelihood of Type II Error.

Results

Descriptive Analysis

Table 1: Demographics of the Respondents

	N	Minimum	Maximum	Mean	Std. Deviation
Age	130	17.00	19.00	17.7923	.75428
Height	130	162.00	167.00	164.0923	1.44912
Weight	130	53.00	65.00	56.8923	3.15060

Valid N (List-wise) 130

There were 130 participants with a mean age (M=17, SD=0.75), mean height (M=162, SD=1.44), and mean weight (M=53, SD=3.15) as shown in the above table

Table 2: Games Played

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Basketball	25	19.2	19.2	19.2
	Volleyball	22	16.9	16.9	36.2
	Table Tennis	22	16.9	16.9	53.1
	Badminton	11	8.5	8.5	61.5
	Need for Speed	50	38.5	38.5	100.0
	Total	130	100.0	100.0	

The above table is showing that there were 19.2% participants who were playing Basketball, 16.9% were playing Volleyball, 16.9% were playing Table Tennis, 8.5% were playing Badminton, and 38.5% were playing Need for Speed (PC Game).

Table 3: Experience of Playing Games

Group	Mean	N	Std. Deviation
Physical Games	1.3375	80	.47584
Electronic Games	1.3600	50	.48487
Total	1.3462	130	.47758

The experience of playing physical games in years (M=1.33, SD=0.47) and for electronic games (M=1.36, SD=0.48) as shown in above table

Hypotheses Testing

Table 4: Effect of Physical Games and Electronic Games on Health of the Participants

		Sum of Squares	Df	Mean Square	F	Sig.
Weight	Between Groups	46.173	1	46.173	28.753	.000
	Within Groups	205.550	128	1.606		
	Total	251.723	129			
Stress Reduction	Between Groups	28.951	1	28.951	18.530	.000
	Within Groups	199.980	128	1.562		
	Total	228.931	129			
Fitness	Between Groups	44.308	1	44.308	27.910	.000
	Within Groups	203.200	128	1.588		
	Total	247.508	129			
Well Being	Between Groups	40.692	1	40.692	24.317	.000
	Within Groups	214.200	128	1.673		
	Total	254.892	129			

The above table is showing a significant difference between health related variables of those participants who were involved in PG and those who were playing EG including weight, stress reduction, fitness, and well-being ($p = .000 < 0.05$).

Table 5: Effect of Physical Games and Electronic Games on Growth of the Participants

		Sum of Squares	Df	Mean Square	F	Sig.
Productive	Between Groups	38.769	1	38.769	26.736	.000
	Within Groups	185.608	128	1.450		
	Total	224.377	129			
Ambitious	Between Groups	45.422	1	45.422	27.756	.000

	Within Groups	209.470	128	1.636		
	Total	254.892	129			
Competent	Between Groups	40.516	1	40.516	28.794	.000
	Within Groups	180.108	128	1.407		
	Total	220.623	129			
Self-Esteem	Between Groups	30.769	1	30.769	19.231	.000
	Within Groups	204.800	128	1.600		
	Total	235.569	129			

The above table is showing a significant difference between growth related variables of those participants who were involved in PG and those who were playing EG including productivity, ambitious, competent, and self-esteem ($p = .000 < 0.05$).

Discussion

A significant difference was found between health related variables of those participants who were involved in PG and those who were playing EG including weight, stress reduction, fitness, and well-being ($p = .000 < 0.05$). Similarly, a significant difference was found between growth related variables of those participants who were involved in PG and those who were playing EG including productivity, ambitious, competence and self-esteem ($p = .000 < 0.05$). Research has confirmed that electronic gaming enhances brain connectivity and output in terms of thinking and solving the problems, improved memory, muscles control (Greitemeyer, Tobias, 2019). Electronic gaming has positively been co-related with the better health care behavior of the adolescents. In recent years a number of electronic gaming software have been introduced for medically impaired adolescents. “Packy and Marlon” is globally renown electronic game designed for the special people (Nahum et al., 2020). Research has confirmed positive role of the electronic gaming in perspectives of improving the sense of self-efficacy in terms of preventing the HIV/AIDS among the adolescents (Maras et al., 2015). But in contrast, the present study has affirmed the role of PG in perspective of the respondents. A significant difference was found between the health related variables of those participants who were involved in PG and those who were playing EG including weight, stress reduction, fitness, and well-being ($p = .000 < 0.05$). Similarly, with reference to effect of PG and EG on the growth of the respondents, significant differences were noted between growth related variables of those participants who were involved in PG and those who were playing EG including productivity, ambitious, competent, and self-esteem

Conclusion

At last, the objective of this study, which comprised in distinguishing the degree of wellbeing and development of youths energetic about playing PC games and contrasting them and actually dynamic youngsters, was accomplished by affirming three speculations four assumed. Affirmed theories are about confidence, which is lower for juvenile gamers who play a bigger number of hours than the people who are engaged with PG. The second affirmed speculation is connected with the friendliness of young adult players, being more modest in the people who play PC games seriously than the people who are associated with PG. The third speculation contends that young people energetic about PC games have a higher nervousness than the people who are engaged with PG, however this thought is being denied, gamers playing more have lower tension than the individuals who play less. The last affirmed speculation shows that there is a connection between confidence and friendliness of juvenile gamers. The review asserts that the three character attributes examined are impacted by the steady play of PC games. This isn't shocking on the grounds that the young period is much of the time impacted by the very sort of friendly exercises and settings that could conceivably be useful to the teen. This work exhibits that PC games can bring benefits yet in addition weaknesses to the teen's character. It is also essential to keep some balance in the movement of PC games.

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