

THE EFFECTS OF COMPUTER GAMES ON ADOLESCENT PERSONALITY

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Abstract: *In recent decades, computer games have become a form of popular entertainment in modern society. As a result, many people, including parents and researchers, have asked questions about how these computer games affect their users. Most psychologists who have begun research on this subject have mainly studied the negative effects of video games, but this trend has begun to change in recent years, with researchers also turning to their positive effects. This research explores the role that video games play in young people's lives and how they can be used to improve mental health and well-being. But our research is based on the effects on adolescents, especially those related to self-esteem, sociability and anxiety. A lot of studies in this area are made on variables such as violence and aggression, but we wanted to look beyond them and try to analyze some features and concepts of personality that do not appear so often in research.*

Key words: *effects, games, computer, personality, teenagers*

1. The particularities of adolescent personality development

Puberty and adolescence, presented as a transition from childhood to adulthood, is characterized by the transition to adult life, where the adolescent must respond to family, political, professional demands, etc., often described as the most disturbed, the most stressful and more difficult of all stages of development. The adolescent period is also seen as tumultuous, contradictory, being described as a storm, also called "the age of crises". Here there is a major psychological development and stabilization of personality structures. G. Standley Hall, in his work in 1904, launches for the first time the opinion of the crisis character of this age, a feature that is shared by most field specialists. Specifically, there is a "storm and stress" stage that, in the opinion of the renowned American psychologist, suggests a perpetual oscillation between extremes, between exuberance and apathy, cruelty and sensitivity, diligence and laziness" (Munteanu, A., 2003: 234).

During this period we can notice and recognize the spectacular transformations that the individual traverses in all aspects on several levels. Of these, some authors suggest that two of the most important plans are related to the profession, the process of professionalization, and the area of adolescent relationships while other psychologists claim that exploitation of the social environment and clarification of vocational choices are the most important development directions of the period adolescence (Sion, G, 2007: 190). Drama and the crisis arise because the teenager fails to change from childhood to adulthood at once, oscillating between childhood and maturity. There are also a number of opinions that “in the future, adolescence will have a more dramatic configuration, with the increasing tensions of existence” (Munteanu, A., 2003: 235).

Emilia Albu formulates a definition of this period, the stage of adolescence “being dominated by the adaptation to adulthood, by the process of gaining identity, by the intense intellectual intent of the conduct” (Albu, E., 2007: 66). She argues that after the end of puberty, and during adolescence, there is an intense exodus from a tutelary, family and school society and a wider cultural and social life.

In Sillamy’s view, adolescence is defined as “the period of life that lies between childhood, which continues, and adulthood. It is an “ingrained period”, marked by body and psychological transformations that begin at 12 or 13 years old and end between 18 and 20 years old. These limits are vague because adolescence’s appearance and duration vary by gender, race, geographical conditions and the socioeconomic environment. Psychologically, adolescence is marked by the activation and flourishing of the sexual instinct, the shaping of professional and social interests, the desire for freedom and autonomy, and the amplification of the affective life. Intelligence is diversified, the power of abstraction of thought grows, particular abilities are specified. The function of adolescence is to recognize, in all the existing virtual virtues, the possibilities of each, which will allow individuals to choose a way and engage in an adult life. But it is also to discover more closely the human beings, oneself and others, and to establish new relationships with the entourage: distance from parents, closeness (fellowship, friendship, love) to those of peers. Adolescents constitute a social ensemble particularly rich in virtues and dynamics” (Sillamy, N., 2009: 15).

From a physical point of view, the adolescence period is bounded by puberty and maturity, sometimes described from puberty and ending in adulthood. During this period, rapid changes and significant increases in height and weight are noticed. “Due to the explosive and unequal growth, the teenager’s appearance is not always harmonious. This is why most teenagers are deeply concerned about how they look. Problems such as pimples, irregular teeth, greasy skin, glasses, all these things that may seem minor become real existential problems during this period, and girls and boys are also worried about it. Explosive growth is a challenge for the adolescent’s psyche, they must learn to adapt to the new appearance at a rate often too fast” (Sion, G., 2007: 191).

Once the adolescent stage appears, there are changes in vital activities, for example, appetite is generally good, even if some food whims appear. Sleep is easy to install and is comforting, but its rhythm is often disturbed due to the habit of learning at night. Healthiness oscillates, from 14 to 18 years old, except for the appearance of dermatoses, acne, and between 18-24 years old, the teenager becomes fragile, exposing it to a range of illnesses, such as asthenia, neurosis, etc.. Attitude to bath fluctuates in boys, in the sense of an obvious disinterest until 12 years old, which stops gradually after this interval. Also during this period, "the teenager has an interest in setting up his own room, the taste of the clothing being refined. Sexual maturity is complete and sexual conduct is usually organized" (Munteanu, 2003: 238)

The main issues that arise during the adolescence are related to personal identification (self-identification) or self-consciousness development, involving the identity of the ego and the placement of the subject in reality. (Schiopu, U., Verza, E., 1997: 219). These complicated difficulties arise due to changes in the system of requirements to which the teenager is subjected, but also due to changes in which the personality goes with its structures and substructures. Here many authors speak of an intensification of self-perception, which develops in several aspects: the body image, identification and consciousness of the ego, identification of meaning, role and sexual status, and especially of the social one. In general, perception and body image become critical, due to changes in silhouette, physiognomy and attitude.

Body image is at the center of the teenager's self-consciousness, without which identification can not be organized. "It's the time they stay in the bathroom, they look in the mirror (narcissism), identify ignored details of the forehead, neck, eyes, smile, etc. The mirror gains new functions. The wishes of retouching or masking various skin impurities or other types of issues become apparent, first of all in girls. These touches express the desire to adjust the body's self, the desire to appear agreeable and presentable, etc. At the same time, these adjustments are the shaping of the social and spiritual self. Often pubes in front of the mirror make grimaces, smiling, looking for the most different expressions they can reproduce. Pubertal narcissism is alternately critical and lenient, with sometimes devastating moments" (Schiopu, U., Verza, E., 1997: 219).

Affiliation to a particular family and group drives the adolescent to adapt and overcome infantile, frustrating, insecure and addictive situations. Vocational identity is also formed during this period, and together they establish the personality traits in which the requirements of aptitude and attitude expression become conditions of self-assertion. "Identity development is less spectacular in terms of dependence or in situations where infantile forms of independence are maintained. Forms of addiction, material, emotional (of comfort and belonging) and mentality (values) can cause frustrations and conflicts between the teenager and parents, diminishing the expression of the young's availability. This leads to rigid or lean behaviors that seal their way of how personality evolves" (Verza, E., 1993: 106).

Sensitively, the individual is subject to a decrease in all sensory thresholds, resulting in an increased sensitivity. During this period the visual and chromatic field is stabilized, the teenager acquires additional capacity to name the colors. For girls, a more developed odoriferous acuity is noticed, especially for perfumes. Also during this period there is a better ability to verbalise the inner feelings. (Munteanu, A., 2003: 238) Adolescents are able to organize and direct their own observations without need of help, and post-decay individuals use these observations in research. Representations are also made with greater ease in adolescents. They can have very rich representations in detail but also others with a very high degree of generality. It emphasizes the organization of representations around central ideas or concepts in a cognitive field.

Adolescents can easily represent structural and functional relationships between different kinds of elements. They touch very easily the high level of the generalizations in representation, the one of the figurative concepts. Those interested in the technique and who will specialize in post-adolescence in this field will acquire even greater skills of representation. Likewise, they can represent, in detail, significant aspects of as many structures and capture new features and functionalities. These imaging capacities are demonstrated both in solving practical tasks and at dream times that occur relatively frequently at this age.” (Crețu, T., 2005: 34)

The emotional life is tinted in adolescence, the individual emotions become more balanced. With openness to beauty, superior feelings (intellectual, aesthetic, moral) also appear. In contrast to the opposite sex, a particular opening occurs, the adolescence being considered the age of the most agitated love. The choice of the partner is often based on the parental model, and if this model is not acceptable to the teenager, the choice will work according to antinomic or random criteria. (Munteanu, A., 2003: 245) There is a wide and deep emotional resonance in relation to all the events that the adolescent goes through, from family (health, difficulties, quarrels, etc.), from school (notes, winnings in competitions and Olympics, teachers' opinions) and society, social, cultural, local, national, etc.). The emotional-expressive behaviors setting is more effective both in diminishing and amplifying them. The moral concepts develop, deepen and become the benchmarks for evaluating their own affective responses as well as others in the most diverse situations.

In specialized literature, researchers believe video games have a significant influence on adolescent self-esteem. On the other hand, opinions are divided. Some authors argue that video games help increase self-esteem because adolescents can embody a character similar to them in the context in which these games are stimulating without being too difficult (Lieberman, D.A., 1998: 87). The aforementioned author studied within the same research and the effectiveness of video games in informing sick children about how to take care of themselves. The study showed that informative play about diabetes encouraged self-esteem and

social support behavior, correctly and actively informed patients, and subsequently seen healthy behaviors and better outcomes.

Furthermore, it has been suggested that some of the most intense positive emotional experiences are triggered in the context of video games (McGonigal, J., 2011: 32). Gamers have called one of these positive “flow” experiences, which has been described as an emotional experience in which they are immersed in a rewarding intrinsic activity that offers a high degree of control and simultaneously evoking a loss of self-consciousness (Sherry, JL, 2004: 328–347). In psychology, “flow” experience has often been correlated with a series of positive outcomes for adolescents, such as commitment to high school and achievements, high self-esteem, and lower anxiety (Csikszentmihalyi, M., et al., 1993: 53).

However, if there is indeed a subgroup of players who have problems with self-esteem and establishing meaningful relationships with others, and therefore develops a problematic, addictive video game by which they manage to cope or escape these difficulties, then the lack of social skills may be at the root of this social problem. Consequently, a measurement of social skills and self-esteem could effectively predict problems arising from video games. Moreover, by investigating the relationship between social skills and the problematic interest in computer games, we can achieve a complete and concrete understanding of the social characteristics of passionate gamers (Loton, D., 2007: 54).

In his study Loton suggests that people who play video games and get high scores have a little lower self-esteem, are less verbally expressive, less comfortable in various social situations, and are better listeners and are more sensitive to social norms [...] (Loton, D., 2007: 55).

2. Computer games and their influence on the teenager’s personality

Since 1996, in the United States, researchers’ concerns have been noticed about the effects of computer use and pathological behaviors related to the use of the Internet. It is essential, however, to understand the term computer game or video game and how it differs from other types of media (eg books, television, movies). The distinctive feature is that video games are interactive: players can not afford a story. Instead, video games are designed for players to be trained by the game system and, in turn, games react to user behaviors. There are millions of video games that encompass a multitude of themes and objectives. These video games can be played cooperatively, in a team, or require only one player; may require other players physically present, or thousands of other players online and are played on various devices, consoles (eg PlayStation, Nintendo Wii etc.), computers or mobile phones. Because of their diversity in the many genres and the wide range of sizes they offer, it is very difficult to make a classification of them.

Over the past 10 years there has been an explosion in the number of research on the subject. This research has helped to better understand how video

and computer games affect players. Several researchers have made clear that “video games are influential teachers that have significant effects in several areas, some of which may be considered beneficial and others may be harmful.” (Prot, S., et al., 2012: 647)

Gentile and other researchers have proposed at least 5 dimensions for video game players to be affected. The games are multidimensional and the effects they have on the players are complex, different sizes are likely to appear for each size. The 5 dimensions are related to: the amount of hours played, the content of the game, the context of the game, the structure of the game and the mechanics of the game. (Gentile, D.A., 2011: 75-81).

Effects on the amount of hours played are related to lower academic performance and increased risk of obesity (Berkey, C.S., et al., 2000: 105). The violent content of video games is a significant risk factor for aggressive behavior, while the content of prosocial games can increase empathy and aiding behavior, educational games being able to form specific skills (Greitemeyer, T., et al. 2010: 211–221). The context in which video games are played can change or create new effects. For example, virtual team game can encourage collaborative behavior (Hamalainen, R., 2008: 98–109).

Research on the effects of the game structure shows that fast games within the “action” category can increase visual and spatial skills (Green, C.S., 2006: 1465–78). Today’s innovative video game mechanisms, such as the Wii controller, successfully promote physical activity and have even been used for physiotherapy.

The largest and best-understood field of research on the effects of computer games refers to their violent effects on aggression. The results of multiple experimental, correlative and longitudinal studies confirm that violence in video games can significantly increase aggressive thoughts, emotions and behaviors, both in the short and long term (Anderson, C.A., et al., 2007).

Studies suggest that computer games with violent content increase aggression, expressed by aggressive thoughts and emotions, even when stimuli physiological properties have been controlled. Video games can increase aggressive thoughts, offer positive attitudes towards violence, and help to set up a hostile awarding bias: the tendency to perceive the behavior of others as malicious (Anderson, C.A., 2000: 772–90). In the short term, exposure to violence in video games produces feelings of hostility and anger (Carnagey, N.L., et al., 2005). Even critics who investigate violent games support the findings about aggressive thoughts, the stimulation of aggressive behavior, and the decline in pro-social behaviors (Ferguson, C.J., 2007). For longer periods of time, such changes can lead to the development of an aggressive personality (Bartholow, B.D., et al., 2005).

These effects of violent games on aggressive behavior can be seen in a number of studies:

- To demonstrate the causal effects of computer game violence on the immediate increase of aggression, several experimental studies have been conducted. For example, in a laboratory experiment, the children and adolescents involved playing a violent game were more likely to destroy a virtual opponent using a loud noise by earning compared to those who played a nonviolent game. (Anderson, C.A., et al., 2007)
- Correlative studies have enabled researchers to explore the link between violent video games and real-life aggression. For example, adolescents who played violent games to a greater extent were more likely to be involved in physical battles. (Gentile, D.A., et al., 2007)
- Longitudinal studies have shown that the relationship between computer game violence and aggressiveness is taking place over time. For example, children who played violent games at the beginning of the school year showed more aggressive, physical and verbal behaviors 5 months later. (Anderson, C.A., et al., 2007)
- Meta analyzes combine the results of several studies and provide the strongest evidence that violence in video games increases the risk of aggression. An analytical meta-analysis in this field has concluded that there is significant impact of computer game violence on behavior, for any type of research or experimental plan. (Anderson, C.A., et al., 2010: 41)

Researchers have concluded that violence in video games leads to a desensitization of it, a decrease in empathy and aiding behavior. Desensitization in this case can be defined as a physiological and emotional reduction in the reaction to violence. Short-term exposure to media violence has been shown to produce a physiological desensitization in just 20 minutes, while exposure to video games has consistently led to chronic desensitization in the longer run. (Carnagey, N.L., et al., 2007: 489–96)

Another dimension of research about the effects of computer games on youth is the relationship between them and school performance. Several studies have found a significant negative relationship between the amount of time given to the screen (including television programs) and the school performance of children, adolescents and students (Sharif, I., et al., 2006: 1061–1070). In other words, large amounts of time spent in front of the screen are associated with lower school performance. An explanation of this situation refers to the substitution hypothesis, which states that video games and TVs replace the time that should be given for reading, themes, or other knowledge enrichment activities (Bushman, BJ, et al. 2001: 223–254). Some evidence has been found to prove the substitution hypothesis. In a nationwide study on a large sample of young people between the ages of 10 and 19, computer games players had 30% less reading than those who do not play video games (Cummings, H.M.M., et al., 2007: 684–689).

3. Research methodology

3.1. *The objective of the research*

The objective we have been pursuing was to identify the level of personality (self-esteem, anxiety, sociability) of adolescents passionate about computer games, and compare them to less playful teenagers.

To accomplish this goal, we followed a series of steps that helped us in our research: identifying valid psychological tools to assess self-esteem, anxiety, and sociability, administering them to a group of adolescents aged 14 and 25 years, the quoting of answers according to the instructions of the established questionnaires, the creation of a database and the statistical analysis of the data obtained, in order to identify some significant differences between the players who play very much and those who play less.

The objective outlined above is generalized by allowing an objective study and the formulation of concrete conclusions, from which research can be expanded and continued on several objectives. Because personalised research on computer games is numerous, more complex objectives and hypotheses have not been addressed in this bachelor thesis, serving as a starting point for other research based on the same subject.

3.2. Research hypotheses

As regards the relationship between the objective and the hypothesis, it was attempted to maintain in the same sphere of study. Starting from the observations in the literature and the framework objective of the paper, we assumed that:

- *Adolescents who are passionate about computer games and practice them for more hours are less self-esteem than adolescents who do not practice them.*
- *Adolescents who play computer games in an intense manner are more anxious than adolescents playing less or do not play at all.*
- *Adolescents who play computer games in an intense manner are less sociable than teenagers playing less or do not play at all.*
- *There is a correlation between self-esteem and sociability in adolescents playing computer games.*

3.3. Presentation of research methodology: research tools and sample

To collect data on anxiety, self-esteem and sociability, we applied 3 questionnaires:

- a) Spielberger's Anxiety Status-Trait Inventory, X1 Form. This inventory was carried out by Spielberger et al. (1970) and it is one of the most used tools for anxiety assessing.
- b) Rosenberg's self-esteem scale, originally developed to measure the global sense of personal value and self-acceptance.
- c) The cosi questionnaire, a sociability questionnaire we developed ourselves.

3.4. Participants sample

The group of subjects for this research includes a total of 736 participants, divided by age, sex, and hours spent on computer games. Thus, there were 674 boys and 62 girls, of which under 10 years old there were 3, between 10-14 years old there were 61 persons, between 14 and 20 years there were 521 people, aged 20-25 responded to 130 people and over 25 there were 21 people. According to the hours of playing, 136 people play under 7 hours a week, 201 people with 7-14 hours per week, 153 people with 14-21 hours and 246 people over 21 hours a week.

3.5. Analysis and data processing

Hypothesis 1: Adolescents who are passionate about computer games and practice them in a number of hours have a lower self-esteem than adolescents who do not practice them.

To confirm this hypothesis, we have compared computer game players according to the number of hours they play. Firstly, the study participants were divided into two groups: the number 1 in the table below represents adolescents in the sample who play less than 14 hours per week and number 2 represents adolescents playing more than 14 hours per week. The following table presents the results of the t-Student test for comparing the averages of two samples. We noticed that the scores on two questions are significant. Question 4 and 7 of the first questionnaire sounds like, "I'm capable of doing things just as well as others" and "I think I'm a valued man, at least like other people." For these questions, category 1 of players, those who play less, had a higher average than category 2, those who play for several hours. This means that gamers playing a limited number of hours have a higher self-esteem than those who play in excess.

Hypothesis 2: Adolescents playing computer games in an intense way are more anxious than adolescents playing less or who do not play at all.

Like the above hypothesis, in this case the sample of players was divided into two groups, the number 1 signifying the players with a limited number of playing hours and the number 2 representing the players who play excessively, very much. First, we used the t-Student test to compare the averages of the two samples to identify whether and where there is a significant difference between the two groups compared.

A significant difference was noticed for item 11 of the questionnaire. This question is addressed as follows: "I trust my powers" and it can be answered with a response scale ranging from "Never" to "Always". In the figure below we can see how the participants answered this question.

Although the difference between the two groups is not very large, it has to be taken as such. In this case, the hypothesis from which we started is invalid, adolescents who do not play computer games are more anxious than those who play for many hours. This idea is also supported by the theoretical part of this study, as there are studies and hypotheses that have confirmed that anxiety is greater in adolescents playing computer games, although many research also support the hypothesis to the contrary. In this study, computer games represent a distraction from the stressful situations the teenager encounters daily. During this period the adolescent has to cope with family, political, professional demands, etc., often go through disturbing, stressful and difficult situations. Among the innumerable activities and hobbies that adolescents can practice, a large number of them prefer to play computer games, compared to other teenagers who focus their attention on the real world, full of problems and negativity.

Computer games can also simulate stressful situations that the teenager feels challenging for anxiety. Many of these situations represent a new environment for teenagers, and by practicing these situations through a character, anxiety over the specific situation can decrease when it happens in real life. And this idea is another interesting hypothesis that could be studied later.

Hypothesis 3: Adolescents who play computer games in an intense way have less sociability than adolescents playing less or do not play at all.

Using the same method applied to previous hypotheses, to demonstrate that there is a significant difference between category 1, adolescents playing video games less than 14 hours a week and category 2, adolescents playing more than 14 hours per week. Firstly, we used the t-Student test for independent samples to see at what items it appears a significant difference. We found this difference in items 3, 14 and 15 that sound like, "I like to spend my free time alone", "I prefer to talk on the phone than to write messages / emails", "I like to invite a lot of people at my birthday". We continued with the table that shows the descriptive indices to conclude if the hypothesis is confirmed or not.

Below there are the graphs showing how teenagers responded to those questions where significant differences were recorded. The item in the next figure, for question 14, is reversed, and it is noticed how gamers who play computer games very much prefer to avoid any social contact offline, even by phone. Excited players prefer quiet birthdays with few people. Birthday parties often bring a lot of attention from the guests to the celebration. This suggests that players in the category that play more than 14 hours a week prefer to circumvent situations in which they have to socialize with a large number of people.

Statistical calculations have concluded that gamers who play computer games for more than 14 hours a week, sometimes more than 21 hours, have a lower sociability than players who play less. This is due to many factors. First, Simmel

defines sociability as “the ability to form offline social connections” (Simmel, 1949: 255). If players spend so much time in front of the computer, they lose out of the normal time they should have been given to other types of activities, especially those involving socialization. Many times, adolescents replace the time that should have been spent in the company of others with the online one. This idea is also supported by the theoretical part of this paper, especially the idea of “replacement theory” which claims that if a teenager plays a computer game, he can not be more careful about others, so he can not socialize anymore. Unfortunately, these two activities can not be practiced at the same time. One of the options must be chosen: video game or socialization. The repercussions of choosing video games can affect the interpersonal relationships of passionate players. These relationships are often neglected and sometimes disappear altogether. Not only neglect is the only consequence of choosing video games; many players only deal with topics related to their passion for video games when they have discussions with friends or people they socialize with. These discussion subjects are often taken to the extreme, the conversation partners wanting to interrupt the conversation and even get rid of the gamers. Finally, when the entourage approaches other topics, gamers tend to feel ignored and become irritated or even offended. But they do not realize that choosing them to play video games for a large number of hours leads to this unpleasant situation.

Hypothesis 4. There is a correlation between self-esteem and sociability in adolescents playing computer games.

The last hypothesis of this research examines whether there is a correlation between self-esteem and sociability of gamers. As can be seen in the table above, at the thresholds of significance $p < 0.01$ and $p < 0.05$, there is a correlation between self-esteem and sociability to a confidence of 95% and 99%, respectively. In the figures below we can overcome the histograms made on the total scores of the participants in the self-esteem questionnaire and what measures the sociability.

Everyone had the experience of trusting their own powers, basically, to appreciate oneself and find out their own worth. This means we have a positive attitude towards our own qualities, which we evaluate at a high level. We are affected by a feeling that shows us our own capacity, competence, and the power to do what we want. We compare favorably with others and can organize in our everyday life activities that are consistent with these feelings of self-worth. Also, every person knows what it means to go through a diminution of self-esteem. It is characterized by the opposite of all these positive elements described above, and results in self-disapproval, impotence, lack of power, and even depression.

If the self-esteem of a person is low, there is a tendency to withdraw from activity, reaching passivity. Such people try to find ways to normalize, to find a level of self-esteem ideal to be able to participate in daily activities and not only. But many

of these people are failing and looking for those moments that make them feel good about themselves. These types of moments and behaviors are truly anti-social: from drinking to drugs, from giving up school or working to depression and hostility to others. This retraction is self-destructive, and deviant behavior is social problems because it involves getting out of normal, responsible behaviors and going into exactly the opposite of them. When these types of behavior are aggregated, they become a social issue.

Self-esteem and sociability are two closely related concepts, people with high self-esteem are sensitive to the feelings and needs of others, accept social norms and do not want to trample others to succeed. Instead, a person with low self-esteem is dissatisfied when it comes to specific social relationships (Johnson, J., et al., 2011: 563-591). For gamers playing a large number of hours of study, self-esteem and sociability is lower than that of lesser-playing players. The study shows that these two variables analyzed positively correlate, which is also shown by the results of the previous hypotheses.

This information and calculations suggest that teenagers in this study who have a low sociability have a lower self-esteem. From personal observations supported by the theoretical part of the paper, we found that adolescents who prefer to spend their free time playing video games do not have time for activities that would increase them and positively influence self-esteem or sociability. If a teenager does not interact with different people or age-specific situations, he/she will not have the necessary experience later in life to cope with such situations. In general, sociability is a preference for being in the company of others, in opposition to loneliness (Cheek, J.M., et al., 1981: 330–339) and is based on the extent to which a teenager prefers to have more social relationships (Mounts, N.S., et al., 2009: 71–80). Especially in a social context, if the adolescent gamer is not sociable, he will never have the experience of a social group, so he will not have a high self-esteem in such situations.

Conclusions

Finally, the goal of our article, which consisted in identifying the level of personality characteristics (self-esteem, anxiety, sociability) of adolescents passionate about playing computer games and comparing them with less playful teenagers, was achieved by confirming three hypotheses four supposed. Confirmed hypotheses are about self-esteem, which is lower for adolescent gamers who play more hours than those who play less. The second confirmed hypothesis is related to the sociability of adolescent players, being smaller in those who play computer games intensely than those who play less. The third hypothesis argues that adolescents passionate about computer games have a higher anxiety than those who do not play, but this idea is being denied, gamers playing more have lower anxiety

than those who play less. The last confirmed hypothesis shows that there is a correlation between self-esteem and sociability of adolescent gamers.

The article claims that the three personality traits studied are affected by the constant play of computer games. This is not surprising because the teenage period is often influenced by the same kind of social activities and contexts that may or may not be beneficial to the teenager. This work demonstrates that computer games can bring benefits but also disadvantages to the teenager's personality. In general, it is important to keep some moderation in the activity of video games and not only. Finally, computer games are designed to recreate the user, to feel relaxed.

In our article, objectives and hypotheses are presented in a general, systematized way. This is due to their own desire to make a computer game study based on the Romanian population that will serve as a starting point for other research in the same field. We have tried to a concise and useful support for such future research. From personal observations on literature, we can say that this theme can be enriched on both theoretical and research side. The latter part can be restored to other age groups, such as adulthood, or you can focus on the different effects that computer games have on boys or girls.

An interesting topic of study would be to identify the level of personality characteristics of adolescents passionate about computer games based on the types of games they practice. We believe that each specific game genre would bring other effects and influences on adolescents.

Finally, we hope this paper will open new horizons and become the basis of other similar studies, or will solidify the understanding of the effects that computer games have on its users, regardless of age or gender. Deepening this article can bring significant benefits to the field of psychology and professions that are linked to this theme.

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