

The Influence Of Computer Games On High School Students (Adolescents)

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Abstract. Nowadays, computer games have become the most common form of entertainment. Computer games have become commonplace in the lives of high school students (adolescents) and the way they often spend their free time. Playing computer games can have its advantages, but also disadvantages, that can have a bad effect on the development of adolescents. Gaming doesn't always have to be a problem when it comes to playing in moderate duration. One of the dangers that arise when playing computer games, is the creation of dependence on them, and it arises from intense excessive gaming and neglect of all other obligations. The aim of this paper is to investigate whether high school students are addicted to computer games, for what reasons they play computer games, and whether in their opinion they could do without them. The research will be conducted among high school students (N=150) aged 13 to 18 years.

Keywords: Addiction, Computer Games, Gaming, High School Children, Playing

1 Introduction

The discussion about computer games is very often focused on the question of whether they can be addictive or whether high school students can become addicted to computer games after a while and thus neglect all other obligations they have. Most surveys use a questionnaire-based approach. Using this type of technology and methodology, it has been proven that some people have problems related to playing computer games, and some researchers argue that such people must be considered as addicted to computer games. There is a big debate about whether this group of people is large or they are just a minority. Previous research conducted among high school students, where 15,0% of respondents state that they play computer games to avoid external pressures, while the rest have other reasons to play computer games (McClure & Mears, 1984) [1]. A few years later, Griffiths (1991) adapted a set of specific criteria from manuals that had been shown to allow the recognition of pathological gambling and reshaped them to investigate computer game addiction. His scale consisted of eight dimensions of addiction or nine questions, and the end result of four or more criteria was considered as an indicator of addiction to computer games. [2]. Subsequent research using this method of research, ie such a research instrument, showed that one in five high school students (adolescents) was addicted at the time of the study and that one in four adolescents was addicted to playing computer games in the past or at some point. life. Also, in later research, it was found that there are certain symptoms of addiction that

are closely related to a high commitment to computer games (withdrawal, preoccupation, family / school disorder, etc.) [3].

Playing computer games has become a common way of spending free time with high school students and especially with men. A survey conducted by Bilic V. in 2010, states that as many as 81,0% of children and youth play computer games, that can affect them differently. Playing computer games can have both positive and negative effects, where one of the possible dangers (for those who play computer games - excessive gaming) is the danger that can lead to the level of addiction when playing computer games causes difficulties in functioning in the family, society and school and difficulties in psychological functioning. It is also mentioned in some cases that psychiatric treatment was required for certain persons, although so far addiction to computer games has not been a separate treatment. By playing computer games and creating an addiction to them, the symptoms of addiction appear, which can be different, but a clear indication that someone is addicted to playing computer games. One of the most important symptoms is the uncontrolled desire to play, spending more and more hours playing computer games, irritability (when not playing computer games), neglect of homework, neglect of school obligations and the inability to stop playing computer games regardless of the problems, occur by prolonged playing of computer games. Of course, there is a difference that should be noted in people who play often and people who are addicted to playing computer games and thus harm themselves in different areas of life. It is important to understand when playing computer games has grown from frequent gaming to addiction that can have serious consequences [4]. According to research from 2009 (Gentile 2009 et al.), Addiction to computer games is closely related to school success, absenteeism and possible attention problems [5]. Computer game addicts, compared to non-computer game addicts, have more physical confrontations with friends or teachers, which can be closely related to the problem of adjustment in certain people who are therefore weaker in school achievement and grades and have an aggressive attitude and aggressive behavior toward others (Hauge and Gentile, 2003-2004). It may be noted that people who are addicted to computer games use gaming as a specific strategy to improve mood. According to most previous research, males play more computer games than females and are therefore more exposed to the risk of addiction [6], [7], [11]. One of the most common reasons for this is computer games that are more adapted to the interests of men, ie games are more of a competitive and fighting genre. Consequently, most addicts are male with significantly lower school achievement (Wölfing et al., 2008) [8]. Playing computer games serves as compensation, ie when certain people are not successful in school activities or out of school activities (eg sports), which is very important in their age, then they are more inclined to play computer games to create a better image of themselves in front of others. Vesna Bilić's research (2010) shows that high school students in Croatia also play computer games a lot, ie that they follow the trend in the world related to the increase in playing computer games. In accordance with the above, it can be concluded that the Croatian market fully follows the development of computer games in the world and high school students accept them and apply or play them every day. Computer games are very popular, but also available to everyone, and everyone is very happy to accept them [4]. Such research has been applied in the last few years, ie there are many researches that have been conducted on this or similar topics. Most research relates to whether playing computer games affects aggression, while very little research has been

conducted on how playing computer games affects children's social behavior and whether playing computer games on a daily basis is addictive in adolescents. Many studies were conducted a few years ago when online computer games with a multitude of players collaborating, communicating and spending time together in the virtual world were not so current. In the last few years, online computer games have advanced considerably, and they are played around the world on a daily basis. Following the above, research will be conducted on whether playing computer games is addictive and to investigate and determine for what reason high school students play computer games or what is their motive for playing computer games and whether high school students pay too much attention to playing computer games. One of the more important conclusions at the end of the research is whether high school students could do without playing computer games. For the purpose of this research, a survey questionnaire will be conducted among adolescents (high school students) aged 13 to 18 years. The survey questionnaire will be available online over a period of one week. The first part of the survey questionnaire will be general (age, gender, etc.), while the second part of the questionnaire will refer to playing computer games and their personal attitudes and opinions about it, on the basis of which we will eventually draw conclusions. One of the basic assumptions is that a lot of high school students are addicted to computer games and apply them daily in their lives on different platforms. In the following chapters, attention will be drawn to the positive and negative sides of playing computer games, problems with research into the impact of computer games and their dependence on them. Computer games are all interactive games that take place on personal and laptop computers, game consoles, tablets, mobile phones and the like.

2 Impact of Computer Games

One of the biggest problems in researching the impact of computer games on adolescents, but also other age groups, is how to research this problem. It is important to note that most surveys or research are done incorrectly from the very beginning, and therefore the behavior of adolescents cannot be exclusively attributed to playing computer games because playing them is influenced by many factors. Although it can be researched in different ways, if more people are researching a problem around playing computer games, each of the researchers can come to a different opinion about the problem even though they have moved in the same direction with the same guidelines and goals. The results of research can often be subjective, ie researchers make them solely on the basis of the obtained results and on the basis of them make their conclusions that can be very different from other researchers. If respondents show aggressive behavior after playing computer games, some of the researchers led by this believe that this behavior occurred solely due to playing aggressive games (Anderson and Bushman., 2001) [9]. The second group of researchers draws completely different conclusions, ie they believe that such research cannot prove aggression that is exclusively related to playing computer games. They believe that respondents would behave completely differently in some other conditions or premises, regardless of whether they played aggressive games or not (Ferguson et al. 2008). It is important to note that the same research can give the same answers that can be interpreted differently [10].

According to all of the above, researchers believe with certainty that playing computer games greatly influences gamers' behavior although this may not always be the case. All research conducted on this topic should be viewed from several angles, ie all research should be carefully considered and then conclusions drawn. It is important to note that such research must not be ignored but taken seriously, although each of us may interpret it differently and, led by it, draw completely different conclusions. If we look a little through history until today, the development of computer games is growing from year to year as well as their popularity.

3 Research

This research will gather the thoughts and attitudes of high school students about playing computer games. The research will be conducted for a period of one week and will be completely anonymous. This research will be based on a minimum of 150 high school students (adolescents) aged 13 to 18 years. To conduct this research, a questionnaire will be used that will be available to all high school students who have access to the Internet. It will take a maximum of 10 minutes to complete the questionnaire.

3.1 Defining the problem

One of the more important problems is the frequent discussion of whether playing computer games can be addictive or why. It is important to note here that one should know how to distinguish between obsession with computer games and addiction to computer games. There are often discussions about why addiction occurs and whether adolescents should be restricted from playing computer games in order to be able to fulfill other obligations to school and / or family and not to give up at school and thus collect bad grades. Due to the large selection of computer games on the market, each person can find a game for themselves and thus create a path to addiction. Today, computer games are available at every turn and on various devices that are always available to us. It is important to note how to find the ratio between playing and other obligations. Today, computer games are played for many reasons, ie problems that can occur due to uncontrolled playing of computer games are different and they can affect an individual but also a group of people.

Computer games are very often mentioned as a negative aspect in the development of adolescents because they take up a lot of their time without them even being aware of it. Each player must figure out on their own how much time they can spend playing without creating problems or becoming addicted to them. Because of all of the above, it will be investigated whether high school students are addicted to playing computer games. If positive answers are received, we will also get an answer as to why the individual became addicted or for what reason. There are many reasons for playing computer games, and accordingly it will be investigated why adolescents play games or what attracts them to play. Accordingly, the answer will be given to whether adolescents pay too much attention to gaming, or whether they could do without playing computer games, regardless of the platform on which the game is performed.

3.2 Research goals and Hypothesis

The aim of this research is to investigate whether adolescents are addicted to computer games and, if so, to investigate the reasons for playing computer games or the reason for their dependence on them (preoccupation, withdrawal, escape, lying, etc.). Also, their personal thoughts on playing computer games and whether they think they have problems with excessive gaming (self-assessment of playing computer games) will be investigated with the help of 6 questions with two offered answers (yes and no). The important goals are to explore what high school students (adolescents) think about:

- a) playing computer games
- b) reasons for playing computer games
- c) frequency of play
- d) motive for playing
- e) self-assessment of playing computer games

Couple of questions comes to mind while this subject was researched such as: Are respondents addicted to playing computer games? Why do respondents play computer games? Do respondents pay too much attention to computer games? Can respondents do without playing computer games? Does respondents neglect their duties because of playing computer games? So the research hypothesis would be as follows:

- H1** Respondents are addicted to playing computer games.
- H2** Respondents play computer games mostly for friends and fun.
- H3** Respondents pay too much attention to computer games.
- H4** Respondents can without playing computer games.
- H5** Respondents do not neglect their obligations due to playing computer games.

3.3 Type of research, sources, and method of data collection

This research is based on the identification of all variables that are previously given and closely related to the research topic "The impact of computer games on high school age." This type of research is based on questions that are planned in advance so that adolescents can be better researched. This type of research uses only numerical data (statistics) with an emphasis on the objectives of the research and research between the set variables. Quantitative research requires a large sample of respondents to obtain quality results. It should also be noted that the questions should be clearly asked, also that we have well defined the problem for which we are conducting research. This survey will benefit a survey to be conducted among a minimum of 150 respondents. The survey will contain 36 questions that will be closed and where it will be possible to choose one or more pre-offered answers. This survey will be anonymous and will be conducted as part of the thesis with the Internet portal Google forms (forms) through which a survey with questions will be made.

3.4 Survey and variables

The survey will consist of 36 questions that will be divided into 3 categories. The first category will include general questions (gender, age, playing computer games). The second category will contain questions where respondents will express their personal opinions about playing computer games or self-assessment related to playing computer games. The third category of questions would consist of questions related to the dependence of playing computer games on the basis of which the answer will be given whether the respondents are addicted to computer games or not. Accordingly, if they are addicted to games we will get the reasons why they are addicted to them. When processing the data, the last category of questions will be divided into eight subcategories that will give us an answer why is someone addicted to computer games:

- 1) preoccupation
- 2) tolerance
- 3) loss of control
- 4) withdrawal
- 5) escape
- 6) lying and deception
- 7) neglect of physical or psychological consequences
- 8) disorder in the family or school

According to Griffiths (1991) who adapted the questions of this category for research into addiction to playing computer games, if the respondent answers positively to four or more categories of questions, he is considered addicted to computer games [2]. In accordance with the above, the survey will be conducted exclusively online. To conduct this survey, we need Google Forms services that will allow us to create the survey itself. The survey will be available to all high school students (adolescents) for a period of one week. The survey will explore the current state of addiction to playing computer games and attitudes and thinking about playing computer games.

3.5 Expected applicability of results

The results of this research can be used in later research on the same or similar topic or to compare the results. This research can prove whether respondents are addicted to playing computer games and find out how many of them are addicted at the time of the survey. The obtained results can later be compared with more recent research data and based on them to conclude whether the addiction to games has increased or decreased. It should also be noted that addiction to computer games increases with age, so it should be expected that the increase in addiction to them in the future will increase due to the constant development of computer games. Ultimately, respondents decide how much time they will spend playing computer games and for what reasons they will start playing them. In the future, respondents may play computer games for completely different reasons as opposed to the results obtained from this survey. Computer games are advancing significantly every day, so over time we can expect an increase in playing computer games, ie the reasons for playing them can remain the same or change significantly.

4 Research Results

A total of 158 subjects participated in this study. Of the total number, 120 male respondents (75,9%) and 38 female respondents (24,1%). The research was aimed exclusively at high school students. Consequently, the age group was limited. 134 respondents aged 16 to 18 years (84,8%) and 24 respondents aged 13 to 15 years (15,2%) participated in the study.

For this research, it was important that the respondents play computer games. The term computer games includes all interactive games that take place on personal and laptop computers, tablets, mobile phones, game consoles and the like. When asked if they play computer games, 142 respondents stated that they play computer games (89,9%), while 16 respondents (10,1%) doesn't play computer games.

One of the important factors is the frequency of playing computer games on a weekly basis. It can be seen that 59 respondents (41,5%) play computer games every day, 27 respondents (19,0%) regularly (four to five times a week), 28 respondents often (three times a week) (19,7%), while rarely (less than three times a week) also play 28 respondents (19,7%).

Consequently, it is important to note that most respondents play computer games on a daily basis, while the rest of the respondents remained divided. Accordingly, it is important to investigate how many hours a day respondents play computer games. According, 14 respondents (9,9%) play computer games less than an hour a day, 36 respondents (25,4%) play games from 1 to 2 hours a day, 41 respondents (28,9%) games from 2 to 3 hours a day, 30 respondents (21,1%) play games from 4 to 5 hours a day, while only 21 respondents (14,8%) play games longer than 6 hours a day.

In this research, their personal opinions about playing computer games were also examined, ie self-assessment of playing computer games with the help of 6 questions that they could answer with yes or no. Consequently, the first question of gaming self-assessment was "I think I play computer games too much" where 98 respondents (69,0%) think they do not play too many computer games, while 44 (31,0%) think they play games too much (Figure 1).

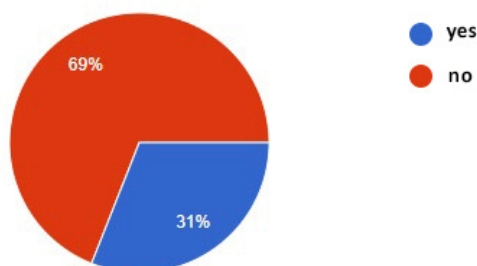


Fig. 1. Graphic representation of the answer to the question

Furthermore, "I think I have some kind of problem related to playing computer games", 125 out of 142 respondents (88,0%) think that they do not have some kind of problem related to playing computer games, while 17 of them (12,0%) considers that he has some kind of problem related to playing computer games (Figure 2).

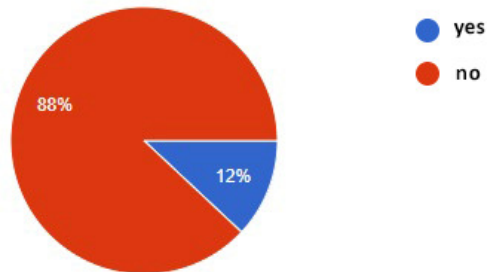


Fig. 2. Graphic representation of the answer to the question

As part of the self-assessment, respondents were asked “My parents are worried because they think I play computer games too much?” Where 98 (69,0%) respondents out of a total of 142 answered that they do not think their parents are worried about playing computer games too much. , while 44 of them (31,0%) think that their parents are worried (Figure 3).

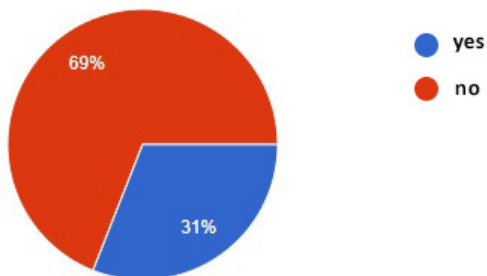


Fig. 3. Graphic representation of the answer to the question

Furthermore, respondents were asked the question "I think I can do without computer games" where 116 (81,7%) respondents said they can do without playing computer games, while only 26 (18,3%) answered that they cannot do without computer games (Figure 4).

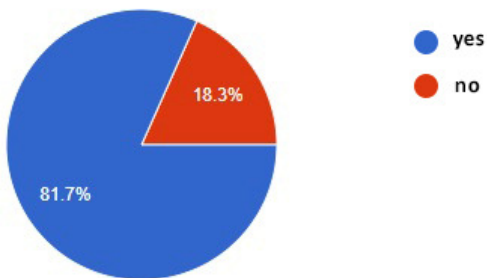


Fig. 4. Graphic representation of the answer to the question

Furthermore, respondents expressed whether they found playing computer games useful for them. 108 (76,1%) respondents think that playing computer games is useful for them, while only 34 (23,9%) respondents think that playing computer games is not useful for them.

As the last self-assessment question, respondents were asked the question "Do I think I pay too much attention to computer games?" Where 107 (75,4%) of the 142 respondents who participated in this study stated that they do not think they pay too much attention to playing computer games. while 35 respondents (24,6%) believe that they pay too much attention to playing computer games (Figure 5).

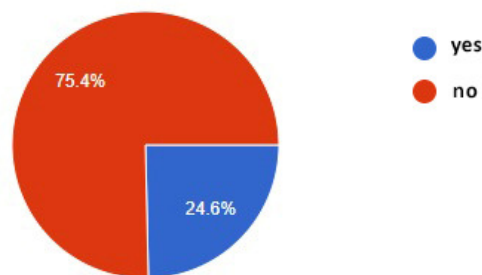


Fig. 5. Graphic representation of the answer to the question

With the help of the above self-assessment results, it can be concluded that the respondents believe that they do not play too many computer games and that they do not have problems that are closely related to playing computer games.

The self-assessment questionnaire brings the results of how the respondents think that they play computer games in moderation and that they do not harm themselves or others when playing them. They think that their parents are not worried because they play computer games too much, and they state that if they had to do without computer games, it would not be a problem for them. As mentioned, as many as 81,7% of respondents who participated in this study stated that they could do without computer games, although they believe that playing computer games is very useful for them and that they do not dedicate too much to them even though they play every day.

As the most common reason (motive) for playing computer games, respondents cite fun and friends while in the last place a sense of control. Of the 142 respondents who participated in the survey, 133 (93,7%) stated that they played computer games for fun, 103 (72,5%) stated that they played games for friends, 86 (60,6%) for relaxation, 41 (28,9%) because it gives them an escape from reality, 35 (24,6%) due to communication with other players, while in the last place is the feeling of control with 6,3% and 9 respondents, respectively (Figure 6).

It should be noted here that at least three answers had to be chosen on this question out of the seven offered. Although computer games are very available today, it doesn't seem to matter as much to respondents as friends and entertainment.

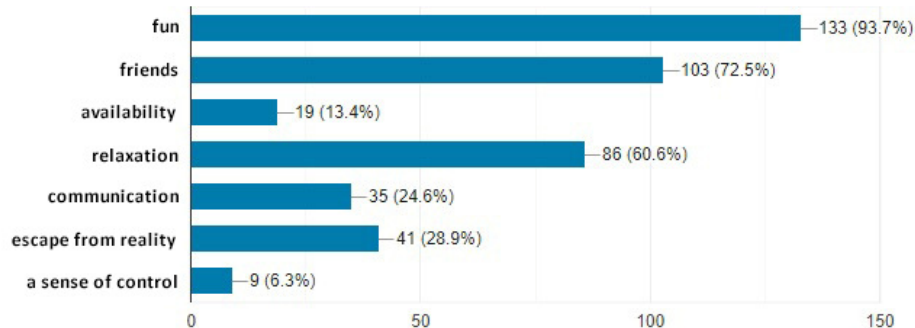


Fig. 6. Graphic representation of the answer to the question

Computer games are evolving and improving every day. Considering that computer games are very easily accessible to everyone today, respondents play computer games to an equal and / or lesser extent.

To the question "I spend more and more time playing computer games?", 105 (73,9%) respondents answered that they do not spend more and more time playing games, while 37 (26,1%) respondents answered that they spend more and more time playing various computer games (Figure 7).

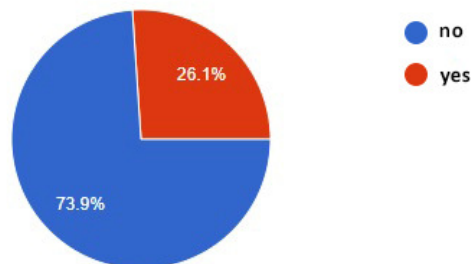


Fig. 7. Graphic representation of the answer to the question

It is evident that computer game respondents cannot easily get bored. 88 (62,0%) respondents answered that they cannot easily get bored of computer games, while only 54 (38,0%) respondents answered that they can easily get bored of computer games. Following the above, it can be concluded that the respondents are attached to computer games that play for several hours every day.

Although the respondents state that they play computer games every day and for several hours a day, it can be seen that the respondents have a divided opinion about the duration of playing computer games, ie trying to play them as short as possible. 77 (54,2%) respondents answered that they do not try to play computer games as short as possible, while 65 (45,8%) respondents are ready to play computer games as short as possible.

Here it is important to note that there is very little difference between these two offered answers (8,4% = 12 respondents).

Out of a total of 142 respondents (those who play computer games) and who participated in this research, 73,9% (105) did not try to stop playing computer games, while 26,1% (37) tried to stop playing computer games. (Figure 8).

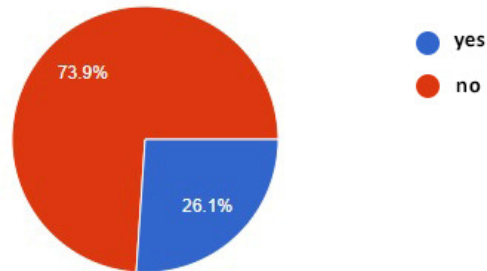


Fig. 8. Graphic representation of the answer to the question

Computer games are played every day for several hours. Therefore, it is questionable how many respondents manage to perform other obligations they have and whether they get enough sleep due to daily play and obligations. By playing computer games, we can often forget about time. Consequently, 113 (79,6%) respondents stated that they often went to bed late because of playing computer games, while only 29 (20,4%) respondents stated that they did not go to bed late because of playing computer games. We can conclude that respondents quickly pass the time when they play computer games, that is, they forget how long they have been playing. Thus, we can conclude that most respondents often go to bed late because of playing games.

Computer games take a lot of time for the respondents, so it is questionable whether they manage to hang out with friends and family. Computer games are very important to the respondents and they play them every day for several hours and they cannot easily get bored of the games.

Consequently, respondents were asked whether they spend less time with friends and family due to playing computer games, where 88 (62,0%) respondents stated that they do not spend less time with him while 54 (38,0%) respondents stated to spend less time with friends and family (Figure 9). Although respondents like to play computer games, we can conclude that they always find time for friends and family to spend time with them.

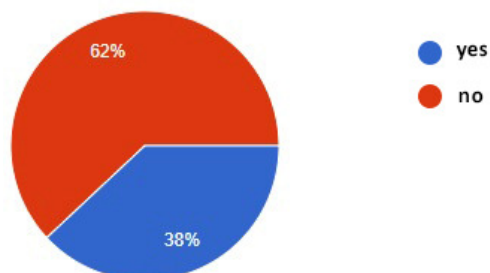


Fig. 9. Graphic representation of the answer to the question

According to Griffiths (1991), addiction to computer games can be seen from nine claims (questions). If the answer is positive to four or more statements, respondents can then be considered addicted to playing computer games. Consequently, these nine questions were divided into several sub-questions in order to better investigate whether respondents are addicted to computer games. [2].

A total of 24 questions were composed. Two answers (yes and no) were offered to the questions. The questions were systematized with the help of original questions from a survey conducted by Griffiths, but in order to better examine the respondents, the questions were broken down so that they could explore all the sub-categories found in the original questions. All questions are later divided into eight categories so that they can find out whether the respondents are addicted to computer games, and if so, we will find out why they are addicted to them or for what reason. Also, it should be noted here that the opposite questions were asked within these questions in order to be able to see in as much detail as possible why and why the addiction occurred (if the addiction exists). Unlike Griffiths, who in his questions exclusively expected positive answers (answer yes), in order to prove addiction, in this research, the answer "no" can lead to the results of addiction precisely because of the opposite questions.

By a detailed analysis of the obtained research results, we can find out whether the respondents are addicted to computer games. As stated, if the respondent positively satisfies a minimum of four or more of the eight groups listed in the table (dependency dimension) then the same is considered addicted to computer games. By reviewing the obtained results, we can conclude that the respondents are not dependent on computer games. Consequently, 142 respondents (those who play computer games) participated in the study, where 8 of them (5,6%) confirmed the preoccupation group, 69 (48,6%) tolerance group, 66 (46,5%) loss control group., 17 (12,0%) group withdrawal, 60 (42,3%) group escape, 35 (24,6%) group lying and deception, 16 (11,3%) group neglect of physical or psychological consequences and 39 (27,5%) group disorder in family or schooling. Each respondent was able to confirm several groups of addictions, also this is the sum of all respondents who participated in the survey and confirmed some of these groups. According to the analysis of each individual respondent who participated in this research, the respondent who confirmed four or more groups, 22 (15,5%) respondents out of a total of 142, depended on computer games. Following the above, we can conclude that the respondents are not addicted to computer games at the time of conducting this research. Depending on computer games, there are 19 (86,4%) males and 3 (13,6%) females.

Out of a total of 22 computer game addicts, 4 (18,2%) confirmed the preoccupation group, 18 (81,8%) the tolerance group, 10 (45,5%) the loss of control group, 13 (59,1%) withdrawal group, 19 (86,4%) escape group, 16 (72,7%) lying and deception group, 7 (31,8%) neglecting physical or psychological consequences group and 16 (72,7%) disorder group in family or schooling. Here again, it should be noted, that respondents had to satisfy a minimum of four groups of questions in order to be addicted to computer games. As can be seen from the above data, most respondents play computer games because of running away from something or running away from problems, boredom or playing computer games because they feel bad (sad, angry, etc.). The next category for which the respondents play computer games the most is tolerance or not tolerance to the time spent playing.

Although they do not spend more and more time playing, respondents do not try to play computer games as short as possible and they cannot get bored of computer games so easily. 18 respondents out of 22 addicted to computer games confirmed the tolerance category. As a third category, respondents confirmed lying and deception. 16 respondents confirmed this category, also they confirmed that they sometimes hide from playing computer games from friends, family or teachers. It is important to note here, although they are addicted to computer games, when they are busy with school or when they are in society, they very easily forget about computer games. Only 4 respondents who are addicted to computer games, confirmed the category of preoccupation, based on all those who participated in the study, only 8 of them confirmed this category.

5 Interpretation of Results

158 respondents participated in the research, of which 75,9% were male and 24,1% were female. In this study, only respondents aged 13 to 18 years participated. Most respondents were aged 16 to 18, or 84,8% (134 respondents). Of all surveyed respondents, 89,9% of them play computer games, while only 10,1% of respondents do not play computer games, regardless of which platform it is. According to the survey, most respondents play computer games on a daily basis (41,5%), while other respondents play computer games infrequently (19,7%), often (19,7%) or regularly (19,0%). It is important to note that only 9,9% of respondents play computer games for less than one hour a day, while 14,8% of respondents play longer than 6 hours.

H1 When testing the first hypothesis, the obtained results show that the respondents are not addicted to computer games. By a detailed analysis of each individual respondent, the result was obtained, that only 22 (15,5%) respondents are dependent on computer games. Although most respondents play games every day (41,5%), they very easily forget about them if they do homework (81,7%) or if they are in the company of friends or family (95,1%). Respondents state that they do not spend more and more time playing computer games (73,9%), but that they cannot easily get bored of them (62,0%).

A certain group of respondents tried to reduce or control the daily playing of computer games (45,8%) and 73,9% of them stated that they did not try to stop playing computer games. According to the research, the respondents are not addicted to computer games at the time of the research, 59,9% of them very often play computer games longer than they intended. Many of respondents state 77,5%, that they play computer games when they have some kind of problem or when they are bored (88,7%), a detailed analysis found that respondents have their limits in playing computer games or that they are not dependent on them.

It is also important to note here that although respondents play computer games, they do not work less at home or school (79,6%) and regularly eat according to their parents' rules (78,2%). According to the above results, the respondents play computer games, but they have in mind the time spent on it and prove that socializing in reality is more important to them than socializing in the virtual world. Consistent with the above, we can conclude that this hypothesis has been rejected.

H2 By testing the second hypothesis, the obtained results show how the respondents play computer games mostly for the sake of friends and fun. When asked "For what reasons do you play computer games (motive)?", where exactly three answers had to be chosen from the seven offered, 133 (93,7%) respondents mentioned entertainment as one of the motives for playing, while 103 (72,5%) respondents cite friends as the second motive for playing. Third on the scale as a motive, mention is made of relaxation by playing computer games (86 respondents – 60,6%). Lastly, the feeling of control is mentioned as a motive for playing (9 respondents – 6,3%), where it can be concluded that control is not an important factor for them to play computer games. 117 (82,4%) respondents state that they did not fight with someone so that they could play computer games, which means that we can conclude that their friends or family are very important to them, or that playing computer games is not more important to them than friends or family.

Respondents also state that they do not hide from friends or family in order to play computer games (75,4%), which means that their opinion is very important to them. 88 (62,0%) respondents state that they do not spend less time with friends and / or family to play computer games, which leads to the conclusion that they are more important to them than playing games. According to the above results, we can conclude that this hypothesis is accepted, that is, that the most important things for respondents to play computer games are friends and fun.

H3 By testing the third hypothesis, the obtained results show that the respondents (69,0%) think that they do not play too many computer games, while only 31,0% of the respondents think that they play too many computer games. They also state that they do not consider (88,0%) to have some kind of problem related to playing computer games. They state that their parents are not worried, ie that their parents do not think that they play computer games too much (69,0%). 107 (75,4%) respondents think that they do not pay too much attention to computer games, while 35 (24,6%) think that they pay too much attention to games. It is important to note here that 86,6% of respondents state that they do not think about computer games all the time if they do not play them, ie that they do not plan the next game or remember them regularly. Accordingly, they state that they easily forget about computer games if they do homework (81,7%) or if they are in the company of friends or family (95,1%).

According to the above and analyzed data, we can conclude that respondents don't pay too much attention to computer games and that they easily forget about them when doing some homework or when in the company of friends and / or family. Following the above, we can conclude that this hypothesis has been rejected.

H4 By testing the fourth hypothesis and in accordance with the questions on self-assessment of playing computer games, respondents state that they do not think they play too many computer games, 98 out of 142 confirmed this statement, while only 44 respondents think that they play too many computer games. 116 (81,7%) respondents think that they can do without computer games, while 26 (18,3%) think that they could not do without computer games. Following the above, we can conclude that the respondents are determined to do without them. Furthermore, 107 respondents state that they do not pay too much attention to computer games, which also supports the testing of this hypothesis.

It is important to note here that respondents feel that they do not spend more and more time playing computer games (73,9%) and state that they tried to reduce playing computer games.

Following the above, we can conclude with certainty that the respondents can do without playing computer games and that they are not their priority, that is, that tasks for school or some other obligations can very easily separate them from them. Also, here it is in favor, that we have proved with this research that the respondents are not addicted to computer games and that they do not pay too much attention to them. According to the obtained results, we can conclude that this hypothesis is accepted.

H5 By testing the last hypothesis, respondents state that they very easily forget about playing computer games when solving school assignments (81,7%). The testing of this hypothesis is supported by the claims of the respondents that they did not skip school hours or some work in order to play computer games (90,8%). 111 (78,2%) respondents state that they eat regularly, in accordance with their parents' rules, and that they do not eat less (83,8%) due to playing computer games. Respondents were also asked whether they work less at home or school due to playing computer games, where 113 (79,6%) stated that they do not work less at home or school due to playing them, while only 29 (20,4%) respondents state that because of playing them, they work less at home or for school. Also, regarding the testing of this hypothesis, respondents state that they do not spend less time with friends or family due to playing the game (62,0%).

Following all the above, we can conclude that the respondents do not neglect their obligations due to playing computer games and that despite playing them, they are very happy to spend their free time with friends or family. It is important to point out that despite playing, they perform their school duties and are accessible in class. They also state that they do their housework and eat regularly. Following the presented results, we can conclude that this hypothesis is accepted.

6 Conclusion

According to all the above, playing the game has its advantages and disadvantages. Each respondent decides how much time they will spend playing computer games and how this will ultimately affect their life. Although we have proven with this research that respondents are not addicted to computer games, it should be noted that there are many respondents who are very close to addiction, because they met three categories of questions, while addiction required four or more confirmed categories. Computer games are improving every day, so there is a great possibility that new computer games on the market will find their way to the respondents, or the path to possible dependence on them. It should be noted here that respondents can do without computer games, but they still devote a lot of time to them. Although they play games for the sake of friends and entertainment, computer games cannot easily bore them. According to the results of the research, respondents like to play computer games and do not want to try to stop playing them. Respondents regularly fulfill their obligations and computer games do not prevent them from continuing with all their obligations at school or at home. It should be noted that although respondents play games on a daily basis, they respect their parents rules and eat regularly.

Addicted respondents, 15,5% of them, mostly play computer games due to intolerance, ie the time spent playing them passes very quickly and therefore they are not aware of how long they actually play. It is important to note that playing online games creates a great possibility of addiction due to uncontrolled gaming, or in this case, due to intolerance. Also, escape is a common reason why some respondents have become addicted to playing computer games. Respondents who play games on their own, look for a certain support in games because they cannot find it in real life and thus have a great opportunity to isolate themselves from others and play computer games frequently.

In playing computer games, we must find a balance, that is, private and virtual life should be harmonized so that they do not become antisocial, if we play computer games independently or offline. Everyday advances in technology, also the development of various computer games and gaming platforms, can have their major shortcomings, but playing them can lead us to the development of logical reasoning, precision, communication, critical thinking, problem solving and similar things that can greatly help us in real life.

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