



Fiona Neumann
Diaconia University of Applied Sciences
Social Services
Thesis, 2018

THE IMPACT OF MULTIPLAYER ONLINE GAMES ON SOCIAL LIFE

**Risks and benefits of incorporating multiplayer online games in
social work**

ABSTRACT

Fiona Neumann

The impact of multiplayer online games on social life – Risks and benefits of incorporating multiplayer online games in social work

44 pages, 2 attachments

December 2018

Diaconia University of Applied Sciences

Degree programme in Social Services

This thesis explores the world of multiplayer online games in relation to social work, focusing on the benefits and risks of incorporating video games as a method in social work. Due to globalization and digitalization, video games have become increasingly successful and are used a lot by youth and young adults but have only occasionally been used in social work. To understand this in a more detailed way, an online survey has been conducted with 1377 participants in order to understand their personal view on their own gaming behaviour and the influence that games do have in their life.

The participants were found through social media, more specifically Facebook gaming groups. This thesis tries to give an overview about a lot of different aspects surrounding games such as communication methods, E-Sports, gaming disorder and addiction, violence in video games and social interaction. Furthermore I tried to understand how gaming could possibly be incorporated in social work and which preconditions need to be met to be able to do this, including the knowledge a social worker should have about games in general to make such a project a successful and beneficial work method. Implementing video games in social work as a work method does require a certain level of knowledge about how these games are designed and used by gamers to make it a successful project.

Keywords: video games, multiplayer online games, social life, social work methods

CONTENTS

1 INTRODUCTION	1
2 DEFINITIONS OF ONLINE GAMES.....	3
2.1 Forms of communication in online games	5
2.2 Benefits and risks of online games	6
2.2.1 Social Interaction in online games	6
2.2.2 Gaming disorder and addiction	8
2.2.3 Virtual violence and aggression	11
3 PURPOSE OF THE RESEARCH	13
4 METHODOLOGY.....	15
4.1.1 Target group and study area	15
4.1.2 Data Collection	16
4.1.3 Data Analysis	17
4.1.4 Ethical considerations	17
5 RESEARCH RESULTS	19
5.1 Influence of games on social life.....	22
5.2 Gaming events.....	24
5.3 Let's Plays, Streams and E-Sports	26
5.4 Knowledge about games from the people surrounding the individual .	27
5.5 Importance of gaming in their life.....	28
6 DISCUSSION.....	30
6.1 Benefits	31
6.2 Risks & Limitations.....	32
7 PROFESSIONAL DEVELOPMENT	33
8 CONCLUSION	34
SOURCES	35
APPENDIX 1. Questionnaire	39
APPENDIX 2 DATA ANALYSIS.....	43

1 INTRODUCTION

Digitalization of social work services has been an ongoing discussion during the past decades, ranging from service providers shifting parts of their services to an online environment, online counselling to technology being present in all kind of service centers and general guidance on how to use those new technologies. At the same time as social media started evolving in the early 21st century with services such as MySpace and Facebook and instant messaging services, the first Massively Multiplayer Online Games started to reach wide audiences and success especially with the launch of games such as World of Warcraft and Final Fantasy.

Massively Multiplayer Online games are played by a large amount of people, reaching from young people to adults. According to a study by the Entertainment Software Association 60% of all Americans play video games of some sort daily and 41% of them do mainly play on their personal computer. The majority of the best-selling video games of 2017 are multiplayer online games, not including those who are free to play. (ESA 2018)

eSports is a term that evolved due to the competitive nature of multiplayer online games. eSport events have been carried out in various forms, ranging from small local events, to large events such as the Assembly which is held twice a year in Helsinki with up to 5000 visitors. (Assembly 2017) Those events can either be for people just playing together - but another field are World Tournaments, meaning that the world's best players play against each other while other people are able to watch the games live that are held in an arena and furthermore may be streamed at smaller local premises. The Gamescom for example is an event held annually in Cologne, Germany and is all about video gaming – from mobile, to personal computer and consoles and has attracted up to 355.000 visitors in 2017 from 54 countries. (Gamescom 2017)

Social work services have often been developed around trying to get hold of people by implementing methods to promote social inclusion that have already previously existed in their lives, such as through different group activities

like sports, board games, outdoor games and more. However, digitalization poses a new challenge in prospect of globalization and future generations will be even more impacted by it, leading to the result that social work services are also shifting towards a more digital time than ever before. Involving Multiplayer online games in social work is a relatively new idea and as Miia Lyyra from the City of Jyväskylä's Youth Services states:

“New things can be unnerving, and people may have a tendency to avoid them. Some adults perceive video games as threatening and corrupting. Using electronic devices can be tricky, and there are all kinds of cables here and there. Nevertheless (youth) culture is now at the stage where pool tables are becoming a thing of the past and digitalization is becoming an increasingly significant aspect of (youth) work.” (Lyyra, 2017, 83)

In this thesis I will explore the basic concepts surrounding multiplayer online games, define what these are and have a look into possible benefits and risks that are surrounding them. We will furthermore try to understand if there are concepts that could be developed in the future by social workers to use online games in their work environment by trying to understand the way these games are used and analyzing the interest of adults in public gaming events. Furthermore, it is important to look at the risks, such as social exclusion due to the mere online experience, gaming addiction or virtual violence and see how social work can minimize them and be aware of them.

Therefore, this thesis will be aimed at all social workers who are interested in the topic and trying to make a change, in other words: “(...) it would be beneficial for youth work practitioners to have a broader grasp of the subject. It would make it easier for them to understand what young people do and how things such as games influence their lives.” (Lyyra, 2017)

My personal interest in this topic is resulting from my own experiences. Since my youth I have been playing some video games myself, even though mainly single player games and only a few multiplayer online games every now and then. Therefore, I was aware of the communities that are existing in this field and got interested in exploring the whole topic more in detail and linking it to my professional work field.

2 DEFINITIONS OF ONLINE GAMES

This thesis will refer to all games that are played with multiple players simultaneously. Other than single player games, which are often story based or strategic, these games do require an active internet connection and offer different tools for communication within the game. The player or the team work towards a similar goal together such as finding solutions for strategic challenges or fighting the enemy team. In the following, the most common and most actively used ones will be described for further understanding. As a next step I will look into theory on gaming and research that has been done previously about the benefits and risks of online gaming.

2.1 Different forms of online games

There are various different types of online games that have been taken into consideration while working on this thesis. In the following chapter these will be described and defined for further understanding.

The first kind of games are so called Massively Multiplayer Online Battle Arena (M.O.B.A) games. Traditionally, in this kind of game, two teams with a varying number of members battle each other. They try to make their way to the enemy's main structure and may on their way need to fight the enemy members, destroy their structures and there are different objectives available that may give the team benefits for fighting the opponents. There may be different maps, but these do not change, thus the game always happens on a similar looking space. The communication within the team (and sometimes with the enemy team) may happen through in-game chats, voice chats and pings being used. Pings can contain different information, such as a warning sign to be careful in a particular area of the map. The typical length of one game is anywhere between 10 and 60 minutes, highly depending on how the game processes.

Currently popular games of this type include League of Legends by Riot Games, Dota 2 by Valve Cooperation, Smite by Hi-Rez Studios and Heroes of the Storm by Blizzard Entertainment. All of these example games are free to play, meaning that there is no need to pay for installing and playing the game.

They do however offer in-game purchases for the characters in the game and other benefits for the game, but these do usually not give an advantage when fighting the enemy team.

In Massively Multiplayer Online Role-Playing Games (M.M.O.R.P.G) the player's character takes a specific role that is persistent during the game. In the example of World of Warcraft the player needs to first choose what kind of character they want to play which will determine the abilities they will have during the game play. Throughout the game, different quests (tasks that need to be accomplished) will be available and for fulfilling them one will get a reward. Objects are paid for with a virtual currency and different items can be purchased throughout the game while visiting a virtual store, auction houses or by trading with another person playing the game. For some of these quests it is required to do them in a group. Groups can also be persistent in which case they are called "Guilds" which means that they exist permanently, and the players have a shared bank. (World of Warcraft 2018) In those kinds of games voice chats or regular chats are usually also available. Other examples of these games include Tera by Bluehole Studio, Final Fantasy by Square Enix and Guild Wars by ArenaNet.

The main difference between most of the games of this type and others is that the virtual world keeps on existing and developing while the individual player is offline.

Survival horror video games are often having a limited time every individual game lasts, but they do happen asymmetrically, meaning that they are not played in a 5 vs 5 match for example but instead there may for example be one person against numerous others.

To explain these kinds of games further the example of Friday the 13th, published by Gun Media will be used. The game was developed using the inspiration from the movie series of Friday the 13th. In this example 8 people play together in real-time, whereas one is the "Jason Vorhees" (main character of the movies) and the others are "Counsellors". The aim of the game for Jason is to execute as many counsellors as possible by using different senses and searching for them on the map, whereas the counsellors try to survive by escaping through different methods. For all these methods different parts need

to be found on the map in order to escape by car, call the police or escape by boat. It is also possible to fight Jason and end the game this way. If there are still survivors after 20 minutes the game does automatically end. The game features an in-game voice chat. At the beginning of each match this one can only be used if the other persons in the game are close to you, but one may obtain a walkie-talkie with which communication with everyone will be possible. Another example of this kind of game which works somewhat similarly is *Dead by Daylight* by Behaviour Interactive.

The subgenre of shooter games combines all games in which the player himself has a weapon and is often playing in an ego-perspective or a third-person perspective. Most of these games include a lot of aspects of the above-mentioned games. There might be missions to be accomplished with a team or alone. One subgenre, such as in *Playerunknown's Battlegrounds* by PUBG Corporation are battle royale games in which the player "outwits your (their) opponents to become the last person standing". (Steam 2018) In this game up to 100 players are playing on a map and the last person (of a group) that survived will win the game.

Further examples of shooter games are *Counterstrike* by Valve and *Fortnite* by Epic Games.

2.1 Forms of communication in online games

Online games can include in-game chats and in-game voice chats. Often use is made of third-party programs. The most common ones used for online gaming are *Teamspeak3* and *Discord*. In these programs a large amount of people can use the same voice chat at the same time and join with their own username.

In a so called *Let's Play* someone does record the screen of his computer and his voice (sometimes also face with a camera) and upload it to a platform, for example *YouTube*. A stream has the same main idea but is instead available live and allowing communication with the viewers at the same time. The main platform used is called *Twitch*. These videos can be used for pure

entertainment but also to learn and understand different strategies to improve one's own gameplay.

It is also worth mentioning that some people are actually able to make gaming their full-time job by posting their videos on different platforms and receiving ad-revenue or donations.

2.2 Benefits and risks of online games

In this chapter previously conducted research will be discussed with the main focus being on the social benefits, risks of addiction and the occurrence of violence within games will be discussed. As an introduction to this chapter, I chose the following quote by Muriel & Crawford:

“Playing video games is (...) a place to visit, a location to escape to, a space to inhabit, it is also (typically) a pleasant experience: enjoyable, safe and fun. The experience of video gaming is defined by the elaboration of an alternative reality, detached from the one players normally live in; a reality that is construed as a better version of its mundane counterpart, which is usually riddled with routine and boredom” (Muriel & Crawford 2018, 117)

It does show the importance of understanding the video game phenomena as a whole: it can be viewed as an interesting and nice experience, that comes with a lot of different components: social interactions within a game, fun in achieving a common goal within multiplayer online games and another reality. At the same time, exactly these aspects can be a risk of the games as escaping regularly into a virtual reality to avoid conflicts that occur in the real world can be a challenge and lead to risks such as loneliness, addiction and neglecting everyday tasks such as work, school or university.

2.2.1 Social Interaction in online games

As previously described in Chapter 2, all multiplayer online games give the option for social interaction through differently implemented communication

systems. In most of the games teamwork is a significant factor to achieve a common goal and win the whole or parts of a game. The dynamics within the group are an important factor for the gameplay. As for example in World of Warcraft, groups work together in so called guilds and as Frey & Monteolone (2011, 13) state “social competencies can be practiced through online gaming and may be used also in real life”.

Throughout time, social networks have been established such as forums and groups on social media. These are used by a large number of users with some Facebook Groups having several thousands of members.

In the words of Marko Siitonen: “the importance of the social and communication aspects should not be underestimated when trying to understand why and how people engage in activities in multiplayer games and game-like virtual worlds. The motives behind social activity in multiplayer games are as varied as those guiding human behavior in other contexts as well.” (Siitonen 2007, 78)

A research on first person shooting games played in non-cooperative and cooperative conditions came to the conclusion that playing with others greatly increases enjoyment and immersion in a game. (Daggubati 2016) Furthermore it has been found in a large-scale study with 30000 participants that 39,4% of male and 53.3% of female players do think that friendships they made in multiplayer online role-playing games are equal or better than their real-life friendships and 5.1% of male and 15.7% of females said that they did date someone they met through a game. (Yee 2006, 321)

2.3.2 Improvement of cognitive abilities

Grünbichler draws special attention to the improvement of cognitive abilities due to the fast reactions to sudden changes within the game and the ability needed by the player to evaluate situations in advance in correlation with their teammates. Different tasks need to be coordinated and the personal behavior needs to be adapted and changed during the game depending on the developments and game dynamics to achieve the goals. (Grünblichler 2008)

This phenomenon cannot only be seen in Online Role-Playing games but also other Online Games such as M.O.B.A games in which it is common for the player's character to increase their abilities depending on how the game proceeds. Therefore, the players in the enemy team need to be evaluated to adjust the behavior and dynamics in the games accordingly.

Furthermore, attention has been given to the correlation between games and leadership skills. Especially MMORPG games do often require a leader of a group to accomplish their aims. Due to games the players to experience more possibilities for using leadership skills that may "enhance offline leadership". (Jang & Ryu 2011)

2.2.2 Gaming disorder and addiction

Only since 2013 gaming addiction has been added to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) and the International Statistical Classification of Diseases and Related Health Problems (ICD-10). The diagnostic criteria according to ICD-10 (WHO) is as follows:

"Gaming disorder is characterized by a pattern of persistent or re-current gaming behaviour ('digital gaming' or 'video-gaming'), which may be online (i.e., over the internet) or offline, manifested by: 1) impaired control over gaming (e.g., onset, frequency, intensity, duration, termination, context); 2) increasing priority given to gaming to the extent that gaming takes precedence over other life interests and daily activities; and 3) continuation or escalation of gaming despite the occurrence of negative consequences. The behaviour pattern is of sufficient severity to result in significant impairment in personal, family, social, educational, occupational or other important areas of functioning. The pattern of gaming behaviour may be continuous or episodic and recurrent. The gaming behaviour and other features are normally evident over a period of at least 12 months in order for a diagnosis to be assigned, although the required duration may be shortened if all diagnostic requirements are met and symptoms are severe." (ICD-11 by the World Health Organization, 2018)

Furthermore, there is a distinction made between predominantly online, predominantly offline and an unspecified gaming disorder. (World Health Organization, 2018)

A study by Carras, Michelle Colder et al (2016) in adolescents which evaluated multiple data sets on the usage of online media has shown that approximately 1,3% of male participants showed a risk for problematic media use and 11,6% are at risk. In comparison to that, females included 5.8% of at-risk gamers. Other studies have shown though that youth and adolescence are at a significantly higher risk of addiction (Smahel et al, 2008)

Figure 1: Estimated probabilities of high use^a by latent class^b, males

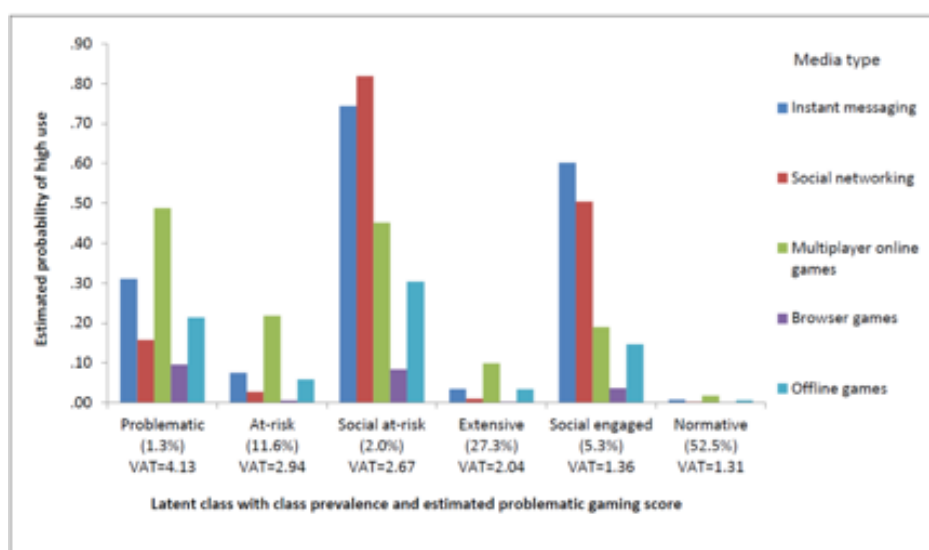


Figure 1 Estimated probabilities of high use by latent class, males (Carras et al 2016)

Figure 2. : Estimated probabilities of high use^a by latent class^b, females

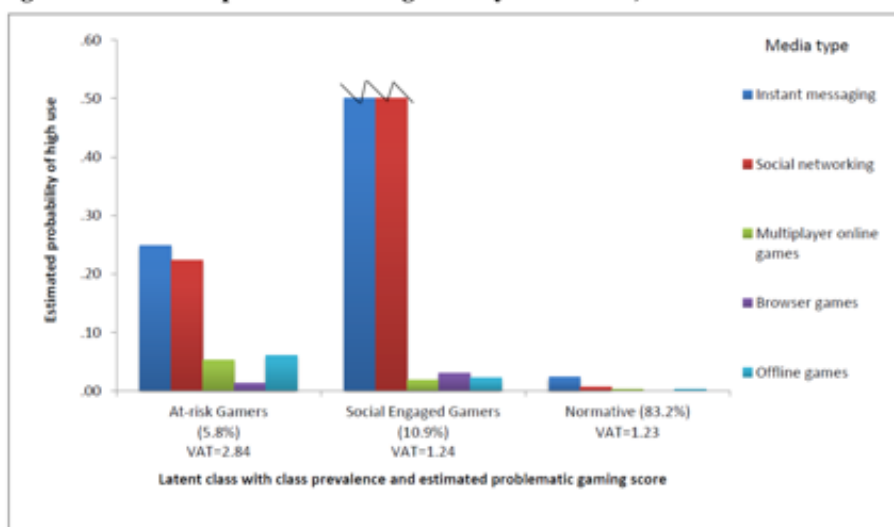


Figure 2 Estimated probabilities of high use by latent class, female (Carras et al 2016)

As shown in these figures, the problematic use of multiplayer online games seems to be more prevalent in males than females, who are instead at a higher risk for problematic instant messaging and social networking. Furthermore, the risk in Multiplayer Online Games appears to be significantly higher than for Browser Games or offline games. This can be partly explained by looking back at how these games are build up as for example in M.M.O.R.P.Gs like Word of Warcraft where the virtual world keeps on existing and developing while the player is offline. There might also be social pressure from the peers who are waiting for a player of the group to come back to continue the game together.

Büchlinger (2008) looked further into this issue by looking into diagnostic criteria that is fulfilled by M.M.O.R.P.G games before the diagnostical criteria by the WHO was adapted to include gaming disorders. He mentions the loss of control in the virtual world, backed up by the amount of time spend gaming which we will look into during the research, the expectation of withdrawal like symptoms if not playing the game and the risk of prioritizing games over school, studies or work. (Büchlinger, 2008, 785-804)

Another critical aspect in online games could be the loss of money, which has indirectly been included in the criteria. Most games are free-to-play or to be paid for once. However, there are also subscription-based games such as World of Warcraft, with the current prizing being up to 12.99€ per month. (Word of Warcraft 2018) This may lead to an indirect justification for playing because of the amount being paid monthly and being unused if staying away from the game, especially if a longer billing period of a couple of months is chosen.

Wolfe suggests that the player's motivation for playing games has an impact on the risks. In a study, she concluded that people who are playing competitive video games or for immersion are more likely to develop a problematic use than those who are playing mainly for social reasons. Immersion can be understood as "discovery, role-play, customization, escapism" and is more likely to lead to loneliness and/ or depression. (Wolfe 2012, 66)

2.2.3 Virtual violence and aggression

Several researchers have tried to look into the correlation between violent video games and their influence on aggressive behavior. Andre Collinsin Dowsett concluded from his study that violence itself in a game, which includes factors such as killing, shooting or otherwise explicit material, does not on its own increase aggression. He assumes “that competition rather than violence caused an increase in aggression” and “people with aggressive tendencies will be drawn to competitive video games, which will in turn make them more aggressive and thus even more likely to play competitive video games”. (Dowsett, 2017, 209, 213)

From a neurological perspective a small-scale study concluded that there is no direct link between violent games and aggression by looking at brain activity. (Pan et al, 2018) Another study by Drummond with the hypothesis that games may lead to aggressive cognition came to the conclusion that this is not the case and that in fact playing in a social environment reduces the aggressive cognition regardless of the game content. However, he found that playing the games themselves may provoke aggressive behaviour but it is highly depending on the social context. (Drummond 2014, 52-54)

Another aspect that is linked to this topic is aggressive behavior within the social network of a game. Kwak et al (2014 & 2015) found that “toxic playing is a serious issue that degrade user experience” and “Toxic behavior is a part of life in the world of modern multiplayer games, but does it have to be? Do gamers need to be subjected to beratement for every little mistake? (...)” Most games do however offer methods for reporting players being toxic and insulting others or otherwise degrading the game experience.

Ella Alin (2018) has looked further into this issue and came to the result by a study that the most common factors of toxic behavior include: mocking someone because of their skills, insulting, racism, homophobic comments, hate-speech and only 3% of the participants never experienced disturbing behavior.

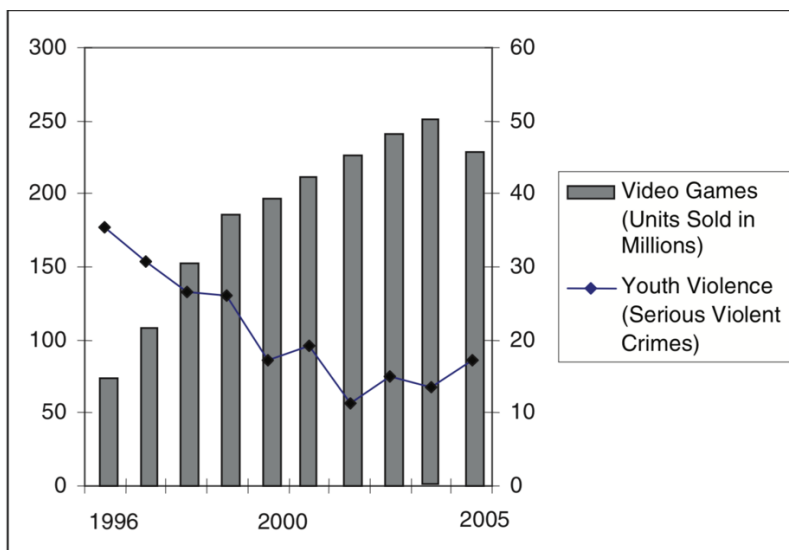


Figure 3 Youth violence and video sales data (Ferguson 2008)

According to Christopher J. Ferguson no link between video games and youth violence can be found. He links the “moral panic” about video games to the fact that media often portrayed video games as part of a cause in mass shootings such as school shootings, which made them appear in a very negative way, whereas positive research is often left out. (Ferguson 2008)

3 PURPOSE OF THE RESEARCH

This research is aiming to gain understanding of the use of Multiplayer Online Games by young adults and will try to make the connection to social work by exploring methods to use them in social work activities. Multiplayer Online games have gained a lot of popularity, especially during the past two decades with some games having more than a million daily players. (Steam, 2018) The online world has been vastly explored by researchers, including but not limited to: social media, internet gaming disorders, the psychological effects of gaming and virtual violence.

This study will be aiming to understand the impact of Multiplayer Online Games, the usage of these and general information that can be used by social workers for possibly trying to develop concepts of actively using those in social work-related activities. Special emphasis is given on the question how online gaming will need to be acknowledged by social workers and what are the most important aspects in evaluating online gamers and understanding how it impacts their life positively or negatively. In the future, games will most likely be even more widespread and known and there might be a way in which social workers can implement and make use of these games when working with their target groups. Offline games have been and are up to date used a lot in social work, but as our society is switching to being more and more online, digitalization and gamification need to be taken into consideration.

The vast majority of social work organizations have already switched parts of their services to the online world by reaching out and enabling persons to be socially interactive by using social media or their own social platforms to reach out to people and also make social interaction happen in real life.

A lot of significant research has been done about the negative aspects and influences of gaming and this thesis will be trying to develop possible intervention methods by also making use of negative aspects and see how these could possibly be developed into positive ones by using social work methods.

The following hypotheses were made:

1. Multiplayer Online games do influence the adults' social life positively.
2. Social work should adjust their services by incorporating multiplayer online games as a useful working method.

The overall aim of the study is to give a general overview about who uses multiplayer online games, why are these used and how does it impact the individual's social life. Using this information, we will look into possible methods of implementing multiplayer online games in social work.

4 METHODOLOGY

For this particular research the quantitative research method was used. Quantitative research is used to explain a phenomena by collecting numerical data and analyzing it by using mathematically based methods, more specifically statistics. It is used to test the hypotheses that were established. At first, research objectives need to be defined, a hypothesis needs to be formulated and the target group has to be defined. The next step is to design a survey a collect the data, in my research, through an online survey. Muijs (2004) also describes certain factors that can increase the response rates, including keeping the questionnaire rather short, giving feedback on the research project and credibility. Open ended as well as closed ended questions may be used. Rating scales and yes/no answers are further options to consider. (Muijs 2004)

Data analysis can be done with certain programs such as SPSS, Webropol or Google Forms. The alternative to this are calculation programs such as Excel. This means that the data is exported to an Excel sheet and analyzed using various formulas, reaching from looking at the amount of people answering with which number on the scale and well as using Excels' countifs formula for crosstabulation and comparing various variables. (Gharani 2017)

4.1.1 Target group and study area

The chosen target group were adults over the age of 18 from Germany, Austria, Switzerland or elsewhere if capable of writing and understanding the German language. When searching for participants it was important that they do at least play one or more multiplayer online games on a regular basis. The results will however be applied to European developed countries. This choice was made to ensure that the geographic area that is referred to in this research has approximately the same preconditions when it comes to the profession of social work and the state budgets being available in the social field.

4.1.2 Data Collection

The participants were gathered online by asking for people to take part if they want and are of legal age in various online platforms, specifically German-speaking Facebook groups about that were related to different specific Multi-player online games. All together 1377 participants were accepted for the study. They were asked to fill in a questionnaire containing of 22 questions. Additionally, there were five questions answered by 605 of the overall number of participants. Four of the questions were open ended questions. When posting the questionnaire, it was stated that the participants need to be of legal age – in European countries- over the age of 18.

Some of the questions used an approach allowing the participants to choose between 1 (strongly disagree) to 10 (strongly agree).

Figure 4 Structure of the Questionnaire

Questions	
1-2	Age and Gender of Participants
3-9	Personal gaming behavior, evaluated by others and the individual, effects on their working life and daily habits
10-13	Tools used for social interaction in games and information about who they are playing with
14-16	Interest in gaming events and suggestions
17-21	Further questions on the influence on their social life
22-23	Let's Plays and streams
24	Knowledge about games by people surrounding the participants
25-26	Importance of gaming in their life and the reasons behind it
27	Other hobbies

The questionnaire was structured in a way by starting to gather general information about the target group, such as their age and gender and going more into detail afterwards.

4.1.3 Data Analysis

The Data was collected using Google Forms and afterwards exported to Excel 2016 to be analyzed and from there transcribed to Word 2016 as statistics and individual answers. The overall transcript consists of 109 Pages in Word with charts being straightly connected to Excel and including all individual answers. Crosstabulation was processed in Excel to compare several variables with each other. The open-ended questions were grouped and analyzed in a way to show tendencies without looking at the exact amount of answers in order to compare how commonly some answers occurred, excluding individual answers that came up rarely to map out the most important ones.

With questions using the scale from 1 (strongly disagree) to 10 (strongly agree) the numbers of 1-3 may be described as rather disagree and 7-10 as rather agree, whereas 4-6 are understood as a rather neutral answer. (Appendix 1)

4.1.4 Ethical considerations

When conducting the research and writing the thesis, attention was given to several ethical guidelines and requirements. According to Gothoni, the main ethical principles in thesis work include: “mutual respect, equality and inclusion, democratic participation and reciprocation, active learning” and the aim of positive change. (Gothoni 2018)

When publishing the questionnaire, some principal facts and aspects were made clear. This included giving information about myself as a student, the institution I am studying in and my e-mail address for any questions regarding the research. It was furthermore made clear to the participants that the study is only meant to be answered by people who are of legal age and that all data is processed anonymously, and I do not have any way of following who answered when and how. As participants were recruited through Facebook groups I was also available for any questions and answered actively in the comment section to a variety of questions. When talking about mutual respect

some interesting discussions about the topic came up and I was open to listening also to criticism or things that the participants themselves think are important to consider. For this reason, in discussion with many of the participants who voluntarily gave me their input, five additional questions were added to the questionnaire to represent also their ideas that did at first not come into my mind. Even though the German language was used for the questionnaire, it was made clear to the participants that the results will only be available in the English language.

5 RESEARCH RESULTS

Out of 1377 participants of the study, 76% were male and 24% female. The majority of them was 18-24 years old (73%), followed by 25-30 years (18%) and 30 or older (9%). As to be expected, the majority of players are under 25 which can be explained by the generation gap and that this generation did grow up with those technologies around them. For social worker this means that the main target group for implementing games are young people, including underaged persons.



Figure 5 Gender Distribution

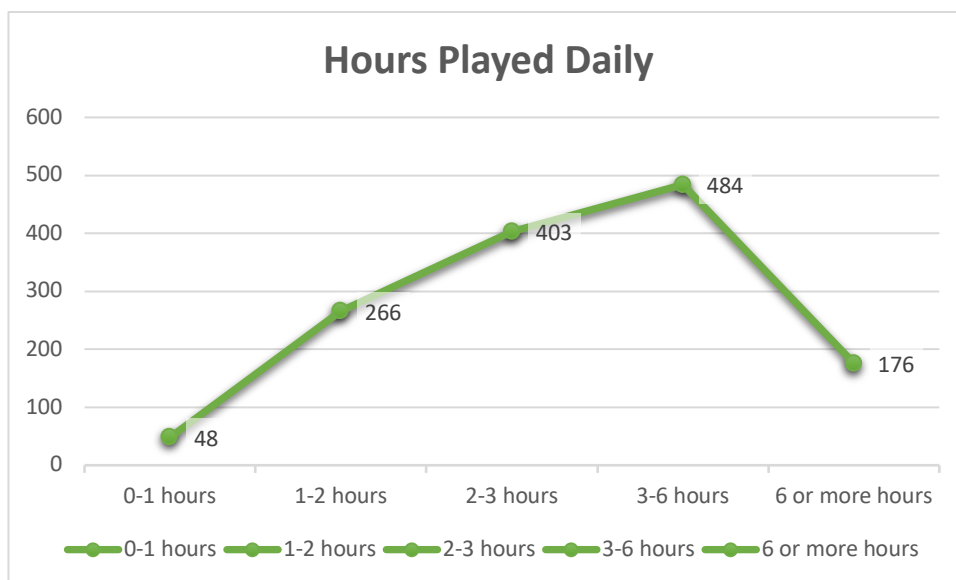


Figure 6 Hours played daily

About 52% of the participants spend 0-3 hours playing games, 35% of them play 3-6 hours and 13% spend 6 or more hours every day. As can be seen in the figure below, there are some significant differences in the amount of time that is spend playing games daily on average depending on the age of the participants. The most obvious difference is that young people aged 18-24 do more likely spend 6 or more hours daily playing games in comparison to older people, whereas the age group of people over the age of 30 are more likely to

play 1-2 or 2-3 hours in comparison to the other age groups. Excessive playing daily is not an only criteria for drawing links to unhealthy gaming behavior, but it can be understood as a first warning sign. However, if some further criteria applies such as “increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities, and continuation or escalation of gaming despite the occurrence of negative consequences.”, it should be reassured by professionals to make sure that the gaming behavior is still of a healthy nature. (WHO 2018)

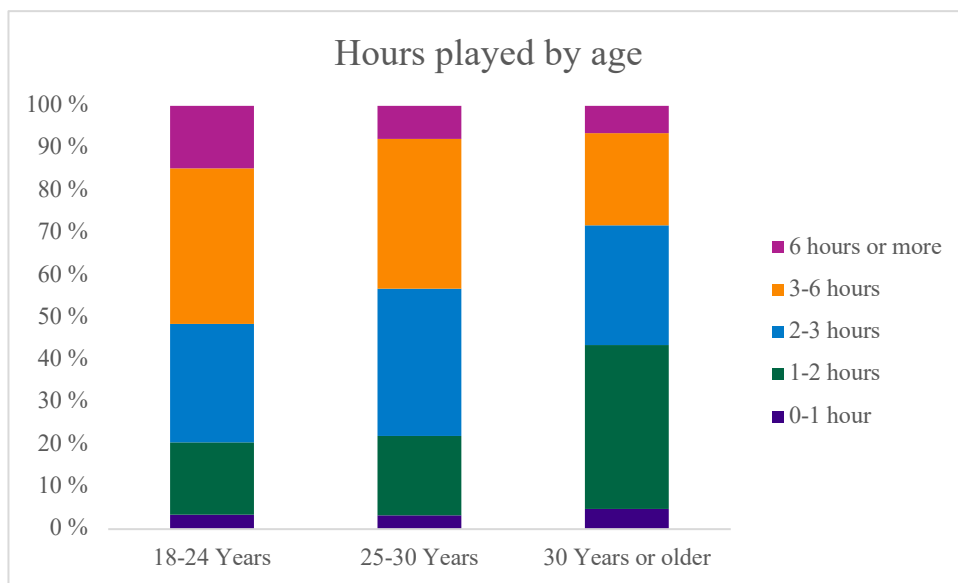


Figure 7 Hours played daily

As can be seen in Figure 5 in the form of a crosstabulation, the gender of the participants does not have a significant impact on the hours that are spend playing daily.

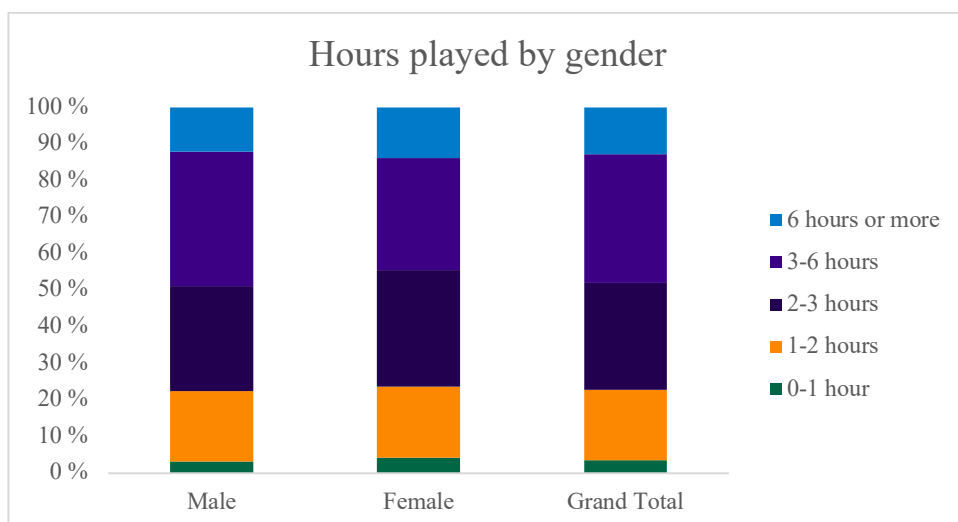


Figure 8 Hours played by gender

On the other hand, 34,2% were saying that their family or friends think that they are playing too much to a certain degree, whereas 44,5% rather disagreed with that idea. However, when putting this into relation of the self-analysis of the participants a clear difference can be seen. Even though a lot of family members or friends seem to perceive their gaming behavior as too much. 61,4% of the participants do rather disagree that playing less often could improve their school/ work performance and 56,4% do not think that they do procrastinate or postpone their other tasks. From these statistics it does appear like the majority of the participants do not experience a negative impact of gaming on their life relating to work, school and other important daily tasks. It needs to be noted though that there is a small amount of 13,5% when it comes to procrastinating and 14,4% when talking about being better at school, university or work that strongly agrees on these statements on a scale between 8-10. In other words this means that for the majority of people playing games their everyday life is not negatively impacted, but there is a significant amount of people that do in one way or another experience negative outcomes that are partly caused by spending too much time online and playing video games. (See Appendix 2)

By most of the participants, social media is used less often than online games. However, social media such as Facebook groups or online forms are somewhat or regularly used by 66% of the participants to find people to play games with. There are a lot of Facebook groups for specific games to discuss, ask questions but also to form teams and find other members to play with.



Figure 9 Online games vs social activities

The fact that some people do spend more time playing online than meeting their friends needs to be seen in relation (See Figure 9) . In our current times, it is more normal to be online than it was a few decades ago. Also, people do have different personalities: whereas some persons are more outgoing, others do enjoy do have more time on their own. It also needs to be mentioned that there is the option that they are still in contact with their friends at the same time.

5.1 Influence of games on social life

A lot of multiplayer online games do have a competitive nature, meaning that different teams compete against each other with a definite winner. 66% of the participants rather strongly agree that the success of the whole team is important to them and 16,6% somewhat agree with the statement.

A study with 912 participants in 2007 came to the conclusion that about one quarter of people playing MMORPG games do also play with their real-life friends. It was a little more common for female players in comparison to male players. Just under half of the participants believed that their friendships that they made online are comparable in their quality to their real-life friendships. (Cole & Griffiths 2007)

When looking at the figures it becomes obvious that even though the majority of people do know some of the people they are playing with in person, they do not equally as often meet them and play together by meeting. There is also a small amount of people that do hardly know anyone else that they are playing with and an even bigger amount seems to never, or very rarely meet other persons to play video games together.



Figure 11 My close friends and me use video games and play together and meet face-to-face

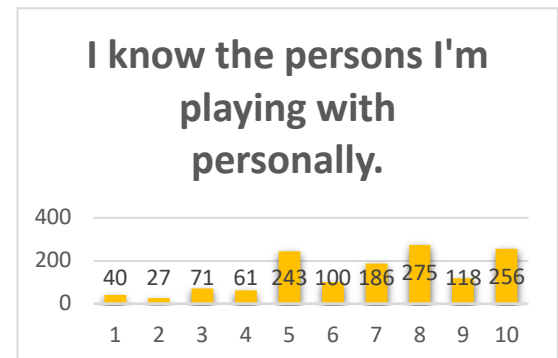


Figure 10 I know the persons I'm playing with personally

This is an important finding for social work purposes as the conclusion can be drawn that even though for some people video games are an important part of socializing with others, a lot of the people do still spend most of the time on their own. At the same time 83,4% somewhat agree or strongly agree that playing games is an interactive process that makes them socialize more with others, whereas only 16,6% rather or fully disagree. On the contrary, 64,3% strongly agree that they made a lot of social contacts through video games, 17% somewhat agree and 7,4% rather disagree. Therefore, it seems like playing video games with rarely having face-to-face interaction can still be a satisfying process for the individual. If these results are however linked to the fact that the peak of hours played daily is between 2-6 hours (see Figure 4) it can be assumed that the time for other activities is limited.

However, there is a shift in society due to the availability of modern technologies and social media. Almost all of the participants do use programs such as Discord, Skype or TeamSpeak for communication during games. Most of them (79%) use them with their Online-Friends and real-life Friends, only a minority uses it only with real friends (15%) or only with Online-Friends (6%). Therefore, the majority of the participants are still in touch with their friends online. This is important to acknowledge as it means that even though the majority of time is spend at home, the risk of social exclusion is not as significant as might be predicted at first.

Studies on social media have shown that “it showed that the individuals who use more social networking sites are lonely. There is less face to face

interaction (...) when using social networking sites so after some time they start to feel lonely". They furthermore conclude that this can lead to increased feelings of isolation and reduce the well-being. (Rai & Gill 2016) It is arguable if multiplayer online games can be considered or compared to social media, but there are some variables in the way the services are build up that are similar as explained in chapter 2.

5.2 Gaming events

About 75,7% said it is somewhat likely or very likely that they would participate in gaming events whereas 24,3% think it is rather unlikely for them. 56% of them have already participated in some sort of public gaming event and 44% never did.

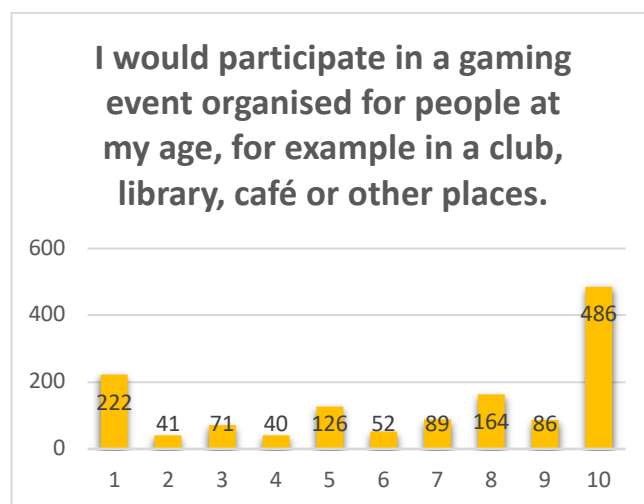


Figure 12 I would participate in a gaming event organized for people at my age, for example in a club, library, café or other places

This result clearly shows that there is a possibility and need to increase gaming related activities in the social work field. There clearly is an interest in such event not by all but a lot of the participants.

The next step was asking them for their ideas and input on what kind of gaming-related event this could be and where it may happen. The open-ended questions about possible events were grouped as follows:

Possible Implementations

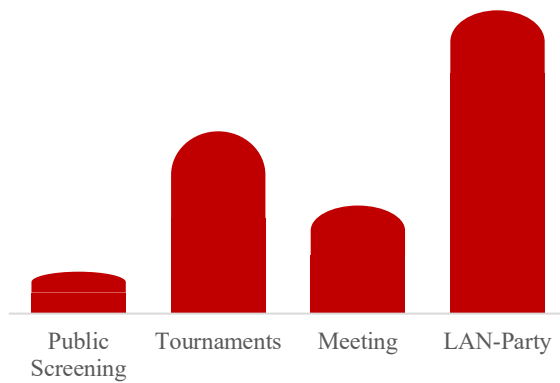


Figure 13 Possible Implementations

The most common idea was a classical LAN-Party, followed by Tournaments, meetings and public screening. For further understanding, this will be defined. A LAN-Party refers to any gathering of people with their own or a public computer at any place. The word is coming from the past times, when LAN-cables for internet connections were still more common than Wi-fi. Tournaments could be any kind of established game method that makes use of the competitive nature of the games. An option for this could be to establish groups that compete against each other within the game. Normal meetings for gamers also came up fairly often, mainly as a suggestion that could establish a group that meets regularly having the same hobby of gaming in common, but do not actively play games during these meetings. Public screenings do refer to watching other people play. This could for example be the case when certain games carry out their World-Championships.

As the next step I looked into the different kind of places that were mentioned where such an event could possibly take place. By far the most common answer were dedicated gaming places, such as gaming bars, cafés or clubs, at the same time the lack thereof was mentioned frequently. This was followed by renting a venue or sports hall and schools or universities.

Possible Places

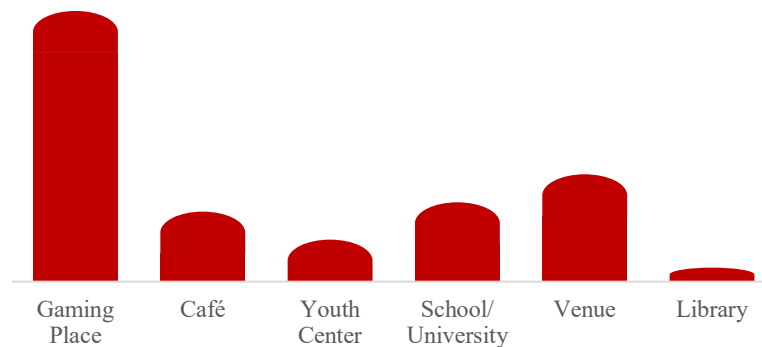


Figure 14 Possible Places

Other options that came up were normal cafés, youth centers or libraries. Thus, the majority of participants preferred public places, but also their already existing surroundings such as schools, universities or youth centers were taken into consideration by a significant amount of them.

The main reasons that were mentioned as an explanation why they would not be interested in such an event were being shy, not liking large amounts of people, not wanting to meet strangers and distinguishing the online-world from the real world.

The data analysis shows that there are different ways in which young adults could be interested in participating in such an event. Even their existing surroundings could potentially be used to established new services, for example as a group in school or university that meets on a regular basis, either using the public space of the school or by going elsewhere. Such a group cannot exist without it being established by someone, which would in this case be the task of persons working in the social field. Further ideas for the implementation will be discussed in the discussion chapter.

5.3 Let's Plays, Streams and E-Sports

Only some of the people do prefer to watch Let's Plays instead of playing themselves. 28% of them do produce and upload them also by themselves. The amount of people producing Let's Plays was surprising. It needs to be considered that a small amount of these people may earn money by doing so. This

can be done in various ways but usually the money is earned by ad-revenue. Furthermore, if the videos reach a larger potential audience, the individual may be allowed to test new games free of charge and might also be paid for it in the form of a product placement. If Let's Plays are streamed via certain platforms such as Twitch, donations by viewers are another option to earn money.

5.4 Knowledge about games from the people surrounding the individual

82% of the people said that the people surrounding them somewhat or totally know what Multiplayer Online Games are and 18% think that they rather do not or not at all.

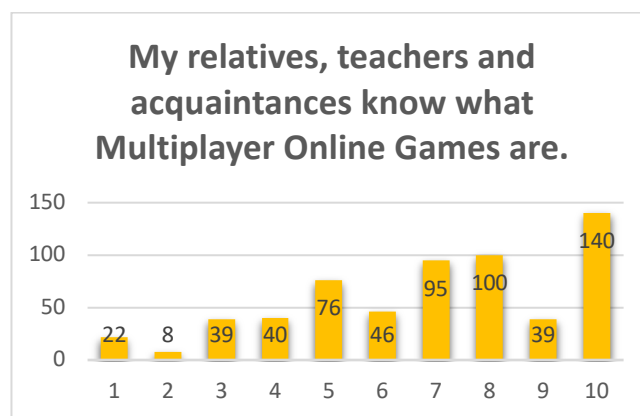


Figure 15 My relatives, teachers and acquaintances know what Multiplayer Online Games are

A study with parents of adolescents further looked into the perception of video games by their parents. The main concerns were related to shifting priorities by spending too much time playing online, decrease in school performance. Another reoccurring worry was the existence of violence within the games, especially if showing real people and sexual content. (Kutner et al 2008)

When understanding that a certain part only partly or totally knows what video games are, it might be somewhat equally applicable also for persons working in the social work field. A lack of knowledge about games can lead to a fear of implementing aspects of it, either due to a lack of technical knowledge or due to worries about negative impacts. Since video games are still a rather new occurrence, they do only rarely appear in education as for example in social work studies in Finland. It is therefore advisable for parents, teachers and

social workers to acquire some basic knowledge about this in their self-study, similarly as with social media.

5.5 Importance of gaming in their life

Most of the people think that gaming is very important to them. (See Appendix 2). When asking to describe why they play games and what it means to them the following things were mentioned:

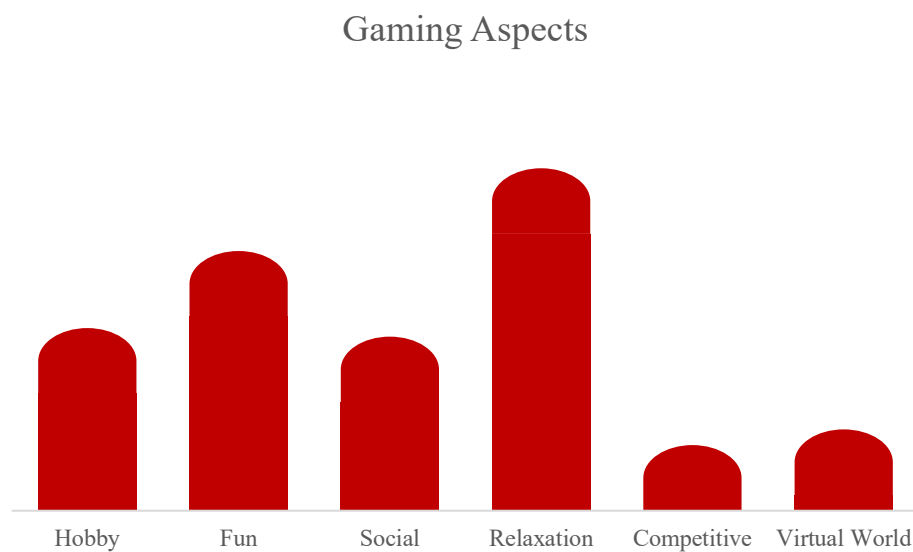


Figure 16 Gaming Aspects

The most reoccurring themes were relaxation, fun, it is a hobby to them and the social aspects of gaming. Furthermore, some participants referred to the competitive nature of games and the possibility to escape into a virtual world. Most of the participants pointed out that playing games for them is a way to do something they like that is different from their everyday life and it helps them to calm down and relax after their daily duties have been fulfilled. It was very regularly pointed out that they see gaming as their hobby and comparisons to other free-time activities were made. The social interaction that occurs within online games has been seen as an important aspect: for some of the participants it is a method to stay in contact with their friends and to make new friends through the video games. It was regularly pointed out that it is great fun and a lot of participants mentioned that they did grow up with games since their childhood. On the contrary, some participants saw video games as a form of escape

to a virtual world in which they can be who they want, when they want and be anonymous.

The answers of the participants show another view that is important for social work environments. Games are seen as a normal free-time activity that is great fun. It is advisable to be acknowledged that this phenomenon exists and impacts the lives of a large amount of people. Lives are shifting to being more and more existing only in the virtual world with video games being one aspect of this development due to globalization.

6 DISCUSSION

After having understood the impact of multiplayer online games on adults it can be concluded that our hypotheses were met. There is a positive impact of multiplayer online games on young adults and there is a possibility for using games as a useful working method. The results have also shown that there is an interest by the target group in such events. The biggest challenge of incorporating games are that the knowledge about the topic by social work professionals is often limited.

Miia Lyyra encourages people to use their own skills and expertise for encouraging digitalization in social work. If there are no professionals available with the required knowledge it may be useful to attend seminars but knowledge can also be acquired by discussing with the target group and ask possible questions to them about the hardware and what gaming is like. (Lyyra 2018)

Several projects and organizations have successfully tried to include video games into their social work practice. One example for this is the gaming center Pelikeskus Score in Helsinki that was funded by the ministry of culture and the municipality. There are several gaming computers available and they do include a changing program every week, trying to include minority groups at risk of social exclusion. They furthermore try to avoid toxic gaming behavior. They also helped implementing games in seven youth centers in Helsinki as well as some libraries. (Pelikeskus Score 2018)

Another successful implementation was done in Ylivieska by the MOBIDIGI project of the Settinetti Youth Information Service. They organized a LAN-Party for approximately 40 participants. It was an overnight event for youth over the age of 15 years and certain rules had been established. This included that the participants had to bring their own devices, food and snacks and alcohol, drugs, games with an age limit of 18 were not allowed. (Pihlaja 2018)

6.1 Benefits

The advantages of using games in social work exist on a lot of different levels. As the results of the research have shown, there is an interest for gaming events from the participants. At the same time it has become obvious that a lot of young people use gaming as a daily activity, but they do not meet their friends in person or some of them do not know any other persons who are sharing the same interest with them. Persons who do mainly spend their time playing online games alone at home might increase their social interactions and find new social contacts by connecting people with the same hobby.

Furthermore, it is an opportunity for social workers to get in contact with a new target group, that might not necessarily be reached by other methods. Whereas some young people might usually, for various reasons, not be interested in visiting a youth center, this might change if online games are used in the facility.

Challenging aspects regarding online games can also be discussed and supervised by social workers in these kind of events. Toxic gaming behavior can be decreased and healthy gaming behavior can be supported. It also gives the opportunity for social workers who have not yet been familiar with the topic to learn something new about multiplayer online games, which are nowadays nearly as common as the use of social media amongst young adults. To understand the target group one is working with it is always advisable to know about the impact digitalization has and how quickly the digital world is developing further. This can at the same time improve the social connection between the clients and work professionals.

Therefore, games could be used and improve people's social life. If there is a person showing unhealthy gaming behavior and also addiction might be possible, the social workers can possibly intervene in the situation.

6.2 Risks & Limitations

The risks of using online games vary from financial aspects to limited knowledge about video games by the professionals to challenges of monitoring healthy gaming behavior.

If the organizer themselves want to have gaming computers present, the costs per machine can be estimated at about 1000€. As implementations in the past have shown this might not be necessary: those people who do play games do also usually already own the necessary hardware and one option is to ask the participants to bring it along to gaming events.

Social workers who want to be part of implementing games in their work should be aware of the possibly available negative impacts of games. They should try to encourage non-toxic gaming behavior and be aware of the age limits of games and design their work accordingly. They also need to acquire a basic level of knowledge about individual games, age restrictions and the technological skills needed for implementation. All these aspects require time and are possibly not free of charge for the organization.

7 PROFESSIONAL DEVELOPMENT

I have learned a lot of things about video games from a professional perspective that I personally did not yet consider as a consumer of video games. As a person who does play games I did of course also consider where I would see myself on the scale. Especially my own comparison with how others perceive video games in their life was a very interesting part. My own expectation of how the results turn out sometimes differed immensely from the actual results of the survey.

I also had to keep an open mind while spreading the survey. I got a lot of valuable feedback and input from the participants themselves in the comment section as well as by private messages. The participants helped me to further develop the survey and after a lot of feedback a few additional questions were added to the survey. This did occur as a result of the previous aspect as I personally never considered these aspects for myself but others saw them as a very important factor of multiplayer online games.

Even though I knew quite a lot about video games before starting the process of writing my thesis, I never considered what it would mean to use these games in social work. The results also helped me to see this topic from a professional perspective and think about which aspects that are resulting from the design of games, such as communication tools but also topics dealt with within games are relevant for social workers.

My previous knowledge about data analysis was very limited and I had also used Excel only a few times in my life. It took reading and watching a lot of tutorials and in the end I was able to do things that I did not think were possible with my data set in the beginning, such as cross tabulation.

8 CONCLUSION

Multiplayer online games could and should be used in social work. Both of my hypotheses were met. Video games do have a positive impact on the player's social life and could be used in a beneficial way. The results of my thesis can furthermore lead to further understanding of multiplayer online games for social work professionals. Even if games are not actively used as a work method acquiring some knowledge about the topic is advisable for everyone working with youth and young adults.

However, some aspects do need some special attention. This includes benefits as well as risks. It is important to acknowledge that there are a lot of positive impacts by online games but it also does include some risks that should not be ignored such as gaming addiction, social exclusion and loneliness which can be issues. If video games are used in an organization, it is a precondition that the social work professionals implementing the project are educated about the different aspects of gaming.

SOURCES

- Alin, E. (2018). Non-toxic. Selvitys kilpailullisia tietokone- ja konsolipelejä pelaavien nuorten kokemuksista vihapuheesta ja häirinnästä.
- Assembly. (2017). For parents. Retrieved 09/03, 2018, from <https://www.assembly.org/summer17/manual/parents/>
- Carras, M. C., & et al. (2016). Video gaming in a hyperconnected world: A cross-sectional study of heavy gaming, problematic gaming symptoms, and online socializing in adolescents. (Computers in Human Behavior)
- Cole, H., & Griffiths, M. D. (2007). Social interactions in massively multiplayer online role-playing gamers. *CyberPsychology & Behavior*, 10(4), 575-583.
- Daggubati, L. S. (2016). Effect of cooperation on players' immersion and enjoyment. (M.S., Missouri University of Science and Technology). ProQuest Dissertations and Theses.
- Dowsett, A. C. (2017). The effect of violent, competitive, and multiplayer video games on aggression. (Psychology, RMIT University).
- Drummond, J. A. (2014). Playing violent video games alone or with others present: Relations with aggressive behavior, aggressive cognition, and hostility. (Ph.D., Bowling Green State University). ProQuest Dissertations and Theses,
- ESA. (2018). 2018. sales, demographic and user data. Essential facts about the computer and video game industry.
- Ferguson, C. J. (2008). The school shooting/violent video game link: Causal relationship or moral panic? *Journal of Investigative Psychology & Offender Profiling*, 5(1), 25-37.

- Frey, N., & Monteleone, A. (2011). Förderung der sozialen Interaktion. Dysfunktionaler bis pathologischer MMORPG Gebrauch bei jugendlichen und jungen Erwachsenen. Mögliche Ein- und Ausstiegsfaktoren aus dem problematischen Gebrauch (pp. 13-13)
- Gamescom. Report 2017.
- Gharani, L. (Producer), & Gharani, L. (Director). (2017). The excel chart will grab your attention (infographic template included). [Video/DVD] YouTube.
- Gharani, L. (Producer), & Gharani, L. (Director). (2017). Simple explanation of excel SUMIFS, COUNTIFS & AVERAGEIFS (multiple criteria). [Video/DVD] YouTube.
- Gothóni, R., Hyväri, S., Karjalainen, A. L., Kivirinta, M., Kolkka, M. & Vuokila-Oikkonen, P. (toim.) (2016). Osallistavan ja tutkivan kehittämisen opas. (Diak opetus, 2). Helsinki: Diakonia-ammattikorkeakoulu. Saatavilla <http://libguides.diak.fi/tutkehopas>
- Grünbichler, B. (2008). Lost in cyberspace? Chancen and Risiken von Online-rollenspielen als Herausforderung für die Soziale Arbeit Books on Demand.
- Jang, Y., & Ryu, S. (2011). Exploring game experiences and game leadership in massively multiplayer online role-playing games. *British Journal of Educational Technology*, 42(4), 616-623.
- Kutner, L. A., Olson, C. K., Warner, D. E., & Hertzog, S. M. (2008). Parents' and sons' perspectives on video game play: A qualitative study. *Journal of Adolescent Research*, 23(1), 76-96.
- Kwak, H. e. a. (2015). Exploring cyberbullying and other toxic behavior in team competition online games.

- Kwak, H., & Blackburn, J. (2014). STFU NOOB! predicting crowdsourced decisions on toxic behavior in online games.
- Lyyra, M. (2018) Don't be scared of video games. Digital Youth Work - A Finnish Perspective.
- Muijs, D. (2004). Doing quantitative research in education with SPSS.
- Muriel, D., & Crawford, G. (2018). Video games as culture: Considering the role and importance of video games in contemporary society. London; New York, NY: Routledge.
- Pan, W., & et al. (2018). Spontaneous brain activity did not show the effect of violent video games on aggression: A resting-state fMRI study. *Frontiers in Psychology*.
- Pelikeskus Score. (2018). *Toiminta*. Retrieved 10/25, 2018, from <http://score.munstadi.fi>
- Pihlaja, M. (2018). Ylivieska game days. Digital youth work - A Finnish perspective. *Verke*.
- Rai, K., & Gill, G. (2016). Loneliness in relation to social networking site usage among university students. *Indian Journal of Health & Well-being*, 7(5), 518-521.
- Siitonen, M. (2017). Social interaction in online multiplayer communities. (Faculty of Humanities, University of Jyväskylä).
- Smahel, D., & et al. (2008). Playing MMORPGs: Connections between addiction and identifying with a character. *CyberPsychology & Behavior*, 11(6)
- Steam. (2018). Playerunknown's battleground. Retrieved 09/01, 2018, from https://store.steampowered.com/app/578080/PLAYERUNKNOWN_S_BATTLEGROUNDS/

- Steam. (2018). Steam & game stats. Retrieved 31/08, 2018, from <https://store.steampowered.com/stats/Steam-Game-and-Player-Statistics>
- Wolfe, A. (2012). Massively multiplayer online gamers: Motivations and risks. (Ph.D., Georgia State University). ProQuest Dissertations and Theses.
- World Health Organization. (2018). Gaming disorder. online Q&A. Retrieved 11/10, 2018, from <http://www.who.int/features/qa/gaming-disorder/en/>
- World Health Organization. (2018). ICD-11, 6C51 gaming disorder. Retrieved 09/04, 2018, from <https://icd.who.int/browse11/l-m/en#/http%3a%2f%2fid.who.int%2fcd%2fentity%2f338347362>
- World of Warcraft. (2018). New player's guide. Retrieved 30/08, 2018, from <https://worldofwarcraft.com/en-us/game/new-players-guide>
- World of Warcraft. (2018). Subscription. Retrieved 09/06, 2018, from <https://eu.shop.battle.net/en-us/product/world-of-warcraft-subscription>
- Yee, N. (2006). The demographics, motivations, and derived experiences of users of massively multi-user online graphical environments. *Presence: Teleoperators & Virtual Environments*, 15(3), 309-329.

I have participated already in a public event where I played games with others.

Yes

No

If yes, do you have any ideas or suggestions for this? If not, why not?

My close friends and me use video games to play together and meet face-to-face.

1 2 3 4 5 6 7 8 9 10

I spend more time playing online than meeting my friends and participating in other social activities.

1 2 3 4 5 6 7 8 9 10

I made a lot of social contacts through playing video games.

1 2 3 4 5 6 7 8 9 10

I use Facebook groups and online forums to meet people to play games with.

1 2 3 4 5 6 7 8 9 10

I do think that playing games is an interactive process that made me socialise more with others.

1 2 3 4 5 6 7 8 9 10

Which other hobbies do you have?

Second part of the questionnaire

I watch Let's Plays or Streams more often than I play games myself.

1 2 3 4 5 6 7 8 9 10

Do you produce Let's Plays or Streams yourself?

Yes

No

My relatives, teachers and acquaintances know what Multiplayer Online Games are.

1 2 3 4 5 6 7 8 9 10

Gaming is an important part of my life.

1 2 3 4 5 6 7 8 9 10

Describe why you play games and what it means to you in your life

APPENDIX 2 DATA ANALYSIS

	Strongly disagree					Strongly agree					
	1	2	3	4	5	6	7	8	9	10	Grand Total
My family or friends say I am playing too much.	225	122	168	99	180	95	174	143	49	122	1 377
	16,34 %	8,86 %	12,20 %	7,19 %	13,07 %	6,90 %	12,64 %	10,38 %	3,56 %	8,86 %	100,00 %
I think I could do better at school, university or work if I played less often	524	166	155	87	111	58	78	70	22	106	1 377
	38,05 %	12,06 %	11,26 %	6,32 %	8,06 %	4,21 %	5,66 %	5,08 %	1,60 %	7,70 %	100 %
I procrastinate or postpone scheduled tasks because I want to play instead.	458	143	177	110	132	86	85	93	21	72	1 377
	33,26 %	10,38 %	12,85 %	7,99 %	9,59 %	6,25 %	6,17 %	6,75 %	1,53 %	5,23 %	100,00 %
I have considered to try to play less often.	501	134	151	116	149	70	81	86	21	68	1 377
	36,38 %	9,73 %	10,97 %	8,42 %	10,82 %	5,08 %	5,88 %	6,25 %	1,53 %	4,94 %	100,00 %
I use social media more often than online games.	436	110	148	98	202	57	77	85	37	127	1 377
	31,66 %	7,99 %	10,75 %	7,12 %	14,67 %	4,14 %	5,59 %	6,17 %	2,69 %	9,22 %	100,00 %
The success of the whole team is important to me.	32	17	35	37	106	86	154	286	147	477	1 377
	2,32 %	1,23 %	2,54 %	2,69 %	7,70 %	6,25 %	11,18 %	20,77 %	10,68 %	34,64 %	100,00 %
I know the persons I'm playing with personally.	40	27	71	61	243	100	186	275	118	256	1 377
	2,90 %	1,96 %	5,16 %	4,43 %	17,65 %	7,26 %	13,51 %	19,97 %	8,57 %	18,59 %	100,00 %
I would participate in a gaming event organised for people at my age	222	41	71	40	126	52	89	164	86	486	1 377
	16,12 %	2,98 %	5,16 %	2,90 %	9,15 %	3,78 %	6,46 %	11,91 %	6,25 %	35,29 %	100,00 %
My close friends and me use video games to play together and meet face-to-face.	195	66	133	90	195	103	151	156	50	238	1 377
	14,16 %	4,79 %	9,66 %	6,54 %	14,16 %	7,48 %	10,97 %	11,33 %	3,63 %	17,28 %	100,00 %
I spend more time playing online than meeting my friends and participating in other social activities.	216	80	121	102	186	102	135	176	75	184	1 377
	15,69 %	5,81 %	8,79 %	7,41 %	13,51 %	7,41 %	9,80 %	12,78 %	5,45 %	13,36 %	100,00 %

I made a lot of social contacts through playing video games.	31	25	46	54	105	75	155	210	111	565	1 377
	2,25 %	1,82 %	3,34 %	3,92 %	7,63 %	5,45 %	11,26 %	15,25 %	8,06 %	41,03 %	100,00 %
I use Facebook groups and online forums to meet people to play games with.	256	105	106	74	129	95	136	135	60	281	1 377
	18,59 %	7,63 %	7,70 %	5,37 %	9,37 %	6,90 %	9,88 %	9,80 %	4,36 %	20,41 %	100,00 %
I do think that playing games is an interactive process that made me socialise more with others.	125	50	53	45	166	113	127	218	113	367	1 377
	9,08 %	3,63 %	3,85 %	3,27 %	12,06 %	8,21 %	9,22 %	15,83 %	8,21 %	26,65 %	100,00 %
I watch Let's Plays or Streams more often than I play games myself.	187	51	100	60	83	24	22	26	17	35	605
	30,91 %	8,43 %	16,53 %	9,92 %	13,72 %	3,97 %	3,64 %	4,30 %	2,81 %	5,79 %	100,00 %
My relatives, teachers and acquaintances know what Multiplayer Online Games are.	22	8	39	40	76	46	95	100	39	140	605
	3,64 %	1,32 %	6,45 %	6,61 %	12,56 %	7,60 %	15,70 %	16,53 %	6,45 %	23,14 %	100,00 %
Gaming is an important part of my life.	11	4	22	22	42	49	72	122	62	199	605
	1,82 %	0,66 %	3,64 %	3,64 %	6,94 %	8,10 %	11,90 %	20,17 %	10,25 %	32,89 %	100,00 %