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## **How toxicity differ between male and female players in competitive Overwatch**

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## **Abstract**

This thesis aims to research whether or not Overwatch players believe toxicity is an issue in today's gaming and how the toxicity differs itself between men and women. The purpose was to find out different kinds of toxicity and how these affected players in Overwatch, as well as to investigate if toxicity differed between men and women at all. The method of this thesis relied on answers from a survey, posted on Reddit's sub forums r/Overwatch and r/Competitiveoverwatch. The data used in the thesis is answers from 328 participants in the survey. The results of this thesis found that Overwatch players see toxicity as an issue today and that most of them have experienced toxicity and are affected negatively by it. The thesis found that there is a major difference in toxicity between men and women, as women are affected by toxicity more than men. Many female players feel the need to hide their gender in order to not receive toxicity which will lead to many women not utilizing important tools such as the voice chat to communicate important information to their team, which could put women at a disadvantage when trying to achieve higher ranks within the game, compared to men.

**Key words:** Toxicity, Meritocracy, Overwatch, Competitive, Esport, Gender

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# 1 Introduction

This paper will investigate if toxicity differs between men and women by looking at survey answers from Overwatch players gathered at one of the bigger Overwatch online forum platforms and by seeing what correlation these answers have with previous research in the same field.

## 1.1 Overwatch

Overwatch (Blizzard Entertainment. 2016) is a first-person shooter online multiplayer for both console and PC. In the game players play in six-player teams competing against each other to secure and defend control points on a map or escort a payload across the map during a certain amount of time. Each player gets to select a hero to play as from a roster of over 30 heroes, all with their unique playing styles. Players can engage in either casual play or competitive ranked play where their skill level is measured and players are placed in different skill tiers. While players are playing they can either chat using text chat or voice chat, all players are anonymous while they play with strangers with only their username showing.

## 1.2 Toxicity

The problem of toxic behavior amongst players in online games is a well studied topic and has been a problem for a long time. Some of these studies have found evidence of a hegemonic geek/nerd masculinity where women have a higher risk of being targeted with sexual harassment (Routsalainen and Friman. 2018, p.3). One common theory on why this behavior is so prevalent in online games is due to toxic disinhibition. In this thesis, toxic disinhibition is defined as the perceived lack of consequences for antisocial behaviour when one is anonymous on the internet and it includes griefing, trolling, flaming, harassment, bullying and cheating (Assunção. 2018, p.5).

## 1.3 Purpose

The purpose of this thesis is to investigate and answer the following research question ***“Does toxicity within competitive Overwatch differ between men and women?”***

People experience toxicity daily within online games and feel that it is important to look more upon that issue. This thesis aims to explore and see if toxicity difference itself in such a way between men and women in Overwatch so that it has become a contributing factor to why there are so few female players within the Overwatch esports scene. Overwatch has one of the biggest female player base with 16% being females, which is almost double compared to many other big first-person shooter games (Yee, N. 2017). More female players would perhaps like to compete professionally in competitive Overwatch but might feel restricted due to toxicity. The authors of this thesis believe that if esports and competitive games are to continue to grow and evolve the toxicity problem needs to be further studied and understood. Also, if esports as a sport is gonna keep growing, it will need more gender diversity and toxicity might stop esports from getting more diverse. So in order to do this, this thesis is going to investigate how toxicity differs between men and women and also how it affects them when playing.

### **1.3.1 Hypothesis**

Our hypothesis is that toxicity is different between men and women. We believe that many women might be affected by stereotypical and toxic statements, such as: “Women don’t belong in video games.”, “Games are not made for women.” and “Female players are worse at games than male players.”. We believe that many male players might become toxic towards a female player if she is using the voice chat, based only on the fact that it is a female player. We believe that this might also have additional consequences, such as female players feeling less motivated to utilize important tools in the game such as the voice chat, in order to not get toxicity towards them based on their gender.

## 2 Background

Since the introduction of online multiplayer games there has always been a problem with bad behavior from certain players and toxic environments in the online multiplayer games community. Toxic disinhibition is a common problem for players in online multiplayer games and it refers to the perceived lack of consequences for antisocial behaviors when one is anonymous. In professional competitive gaming, anonymity should not be that severe of a problem due to players being more easily identifiable but anonymity is generally the biggest factor to toxicity within multiplayer games. (Assunção. 2018.)

The toxicity and the harassment against female players is troubling and a big problem within the online multiplayer community especially in the competitive scene. There are many different reports on women being harassed due to their gender when playing or when streaming when they play online, often getting rude comments on their appearance and not on the gameplay itself. It has even got so far that certain professional players have gotten unsolicited nude photographs of men masturbating to pictures of them. (Assunção. 2018.)

According to different research papers written by both Suitila & Havaste (2018) and Ruotsalainen & Frimans (2018), a large amount of the male player base see the competitive esports scene for online multiplayer games as a meritocracy, where only personal skill matters, not gender nor identity. This part of the community seems to also agree that female gamers should not mention and hide their gender when playing and those who do reveal their gender just do it to get attention. There also seems to be a common belief amongst male players that female players are not into games as much as men and are not as skilled and that is why there are so few female players in esports even though there is no proof of these claims. Some even go so far as suggesting that women are biologically inferior when it comes to playing video games, yet again without any solid evidence for these claims Suitila & Havaste (2018). According to Tomlinsons (2019) findings, female motivation and preferences are very similar to that of men and that the common misconception that women do not enjoy competitive games or the pursuit of skill is false. Many women do however feel like they have additional pressure of being effective players when playing multiplayer games compared to men.

Overwatch (Blizzard Entertainment. 2016) is a first-person shooter online multiplayer game where two six-player teams compete against each other to secure and defend control points on a map or escort a payload across the map during a certain amount of time. Each player gets to select a hero to play as from a roster of over 30 heroes, all with their unique playing styles. For this reason some journalist separates this from other first-person shooters by calling it a “hero shooter”. Players can engage in either casual play or competitive ranked play and while they play they can either chat or speak to the other players in the current match they are playing.

Esports is a fast growing sport with millions of viewers and many professional players competing for million dollar prizes. Overwatch has an international esports league with 20 different teams all competing for the \$5 million in prizes that are given out each season (Blizzard Entertainment. 2020). Overwatch has over 40 million players all over the world and a female player base of around 16% (Yee N. 2017), twice the amount of many other first-person online shooters, yet there is only one single female professional player in the Overwatch League. Overwatch is not the only esports game where women are underrepresented, it is a problem throughout all of esports. Suitila & Havaste (2018).

### **3 Previous works within the subject area**

Toxicity and the gender differences in games has been studied in various ways before and in this chapter some of the authors and their works and findings that have been used as motivation and help in order to create this thesis will be introduced.

#### **3.1 Toxicity**

Assunção (2018) explored the professionalisation of gaming in her paper and discussed topics such as the gender gap in participation, how the paths into professional gaming differ between men and women and the existing toxic environment within online competitive games. Online text-based semi-structured interviews were conducted with both men and women that were actively involved in esports in different ways. The interviewees explained that toxic behavior within online games are indeed common but less so in higher esports leagues where the players get more exposure in media and on live tournaments and it is more difficult to maintain anonymity as a player. In the lower ranks where one's anonymity is easily hidden online games seem to be fertile grounds for toxic inhibition according to Assunção (2018) and other previous works she brings up in her paper. Amongst the male interviewees it was explained that is a very fierce competition between the players towards the race to become the best even outside of the professional scene. This often leads to taunts and other toxic behaviors towards other players when the adrenaline is high.

Different games such as League of Legends (Riot Games. 2009) or Overwatch (Blizzard Entertainment. 2016) have tried to solve this problem with different reporting systems, but it has not been enough to stop this problem and some players have lost faith in these kinds of reporting systems so they have stopped using them. Assunção (2018) discovered that not a single one of the female participants thought reporting toxic players was the right way to respond but to either ignore them completely or confront and respond with the same hostility.

#### **3.2 Hegemonic Meritocracy**

Routsalainen and Friman (2018) explored women's participation in esports and competitive gaming. They used an online questionnaire aimed towards women and looked at online forum discussions regarding women's participation in competitive Overwatch. Their findings showed that esports and competitive gaming as fields dominated by toxic meritocracy and hegemonic geek masculinity. In the online questionnaire responses, gender was explicitly mentioned as one of the reasons preventing them from participating in esports. Routsalainen and Friman's analysis argues that women's ways of participation and presence in competitive gaming is still very limited.

Siuttila and Havaste (2018) researched the perception of women prevalent to the online esports public. Their aim was to uncover stereotypes and ideas regarding particular topics such as, the all-female teams and 'girl-gamers' from mainly a male esports audience and fans perspective. They looked at 952 Reddit-comments in comment threads in the subreddits r/leagueoflegends and r/GlobalOffensive. What they discovered was a community that blindly believed in a meritocracy of esports where the playing field is truly level for all. According to the males in this study the reason why women are not more dominant in professional esports is because there must be something women are lacking. Due to the males blind belief in a meritocracy they thought it was wrong for women to bring up her gender into play or general knowledge, preferably hid it all together otherwise they were just seeking attention and not taking the

game seriously. The commenters also wrote that women should just embrace harassment as a natural part of the game.

### **3.3 Motivation**

Tomlinson (2019) researched motivation across genders, and explored the gender gaps in terms of entrance, experience and outcome. In Tomlinson's study, she used interviews with adult video game players and analyses of online forum discussions in order to understand players' experiences and motivations.

According to Tomlinson's (2019) findings, players are more similar, no matter the gender. Most players start gaming at approximately the same time, and the paths that lead them into gaming are generally similar, no matter their gender. Players identify the same motivation factors that make them want to play, which can be anything from opportunities to relax to overcome challenges and challenge yourself into becoming better at a game and reach a higher rank. According to Tomlinson's paper (2019), players are generally interested in the same things, no matter their gender, but that there are still some gender differences.

Tomlinson means that women have additional obstacles to face, which is seen most clearly in regard to the feeling of having additional pressures to cope with then playing online games with other people, in order to avoid social obligations.



#### **4 Method and materials**

To properly see if and how toxicity differs between men and women, a survey was made and shared in several sub-forums related to Overwatch on the website Reddit. The survey was sent out both to male and female participants to be able to see and compare the differences between how male players and female players perceive the toxicity within Overwatch and some of their preferences when playing the game.

Reddit is a link aggregation board that allows for and encourages discussion and voting of the links shared and has dedicated user created and moderated community/communities (Siutila & Havaste. 2018). Reddit has over 430 million monthly daily users and 130 000 active communities called subreddits. R/Overwatch and r/Competitiveoverwatch are two of these subreddits we shared our survey on. R/Overwatch is one of the bigger Overwatch communities online with over 2.9 million members (Reddit. 2020) and it covers everything Overwatch related. The second community r/Competitiveoverwatch focuses on competitive play within Overwatch and the Overwatch esports scene with over 250 000 members (Reddit. 2020). All users on the site are anonymous and even non-members of subreddits or non-members of Reddit itself can see posts in these subreddits but only members of Reddit itself can take part of the discussion, posting and voting process. Commenting was allowed in the threads where the survey was posted but any comments posted there would not be recorded as data for this particular paper. As this paper is looking specifically at the toxic environment in Overwatch, targeting the communities mentioned earlier would give us answers from people that play a lot of Overwatch or almost exclusively play Overwatch when it comes to competitive online shooters.

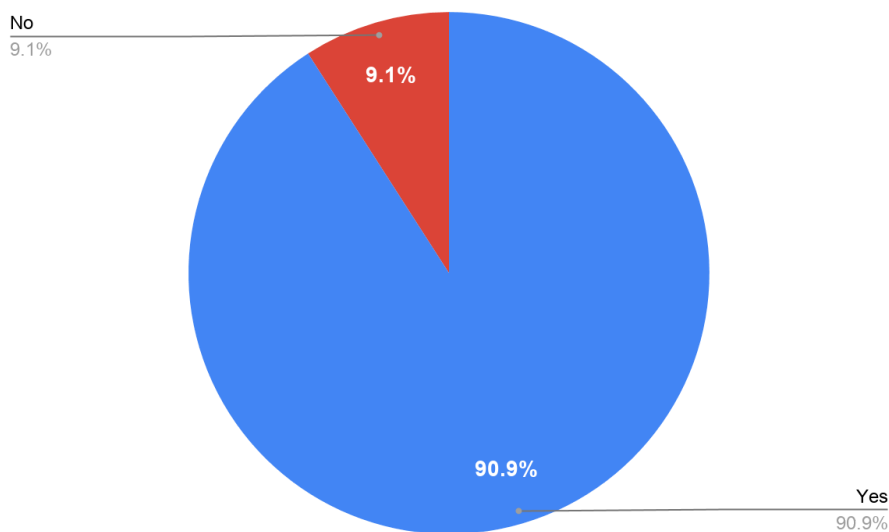
The Survey was anonymous and consisted of thirteen short questions with one of them simply asking if they would be available for further questions in case the authors would need to ask follow up questions. The survey had several different types of questions such as multiple choice questions and likert scale questions. The questions brought up some of the participants' playing habits and preferences such as; how they communicate while playing with others, if they play alone or with friends, why they play competitive Overwatch and likert scale questions such as how often they use the voice chat from 1-5. The participants were also asked if they see toxicity as a problem within online games and what type of toxicity they have experienced as well if their gender makes them feel restricted while playing. Lastly they were asked if they do in fact actually play Overwatch and what gender they have as knowing their gender and being able to compare male and female answers later on would be crucial to find out how the toxicity differs between the genders. The full survey and all its questions can be found in the Appendix.

## 5 Results

All results have been gathered from the survey “Toxicity in Overwatch”. The results are based on the answers from the survey. The survey had in total 552 participants with 328 completed surveys taken. Out of these 328 participants, 221 are male and 102 are female and 99.1% of these are playing Overwatch. The results are based on these 328 participants who completed the survey, with the answers from the participants who did not play Overwatch included. The results have been summarized and categorized into three different sections. The first section showing both male and female answers, the second section showing only male answers and the third section showing only female answers. Full answers on the survey for a more advanced view of the data is available in the appendix.

### 5.1 Combined answers

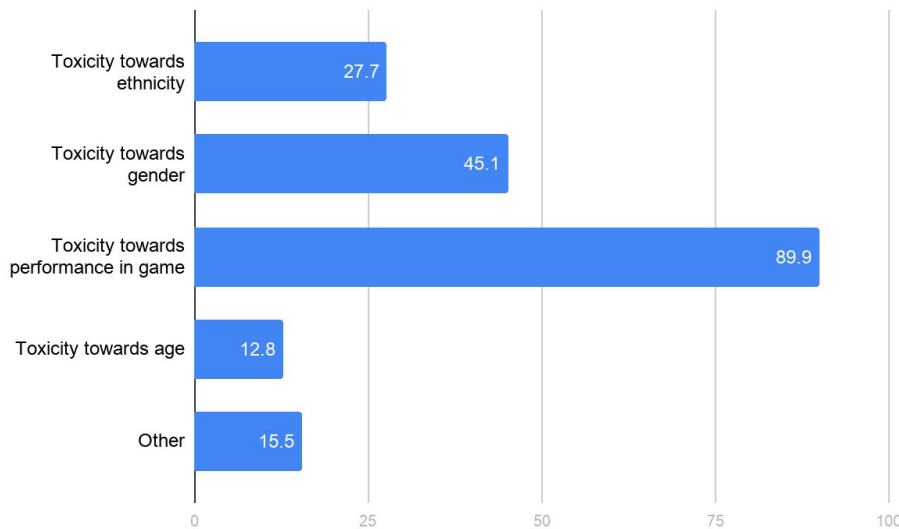
Do you feel that Toxicity is an issue in online games?



**Fig 1. Showing the results of the survey regarding if people feel like toxicity is a problem in online games.**

Looking at the answers from the survey, a vast majority do confirm that toxicity is in fact an issue in today's online games. With 90,9% (Fig. 1) saying yes to this question, most answers in the survey will be answered from participants who have experienced toxicity.

If you have experienced toxicity in-game, what kind of toxicity have you experienced?

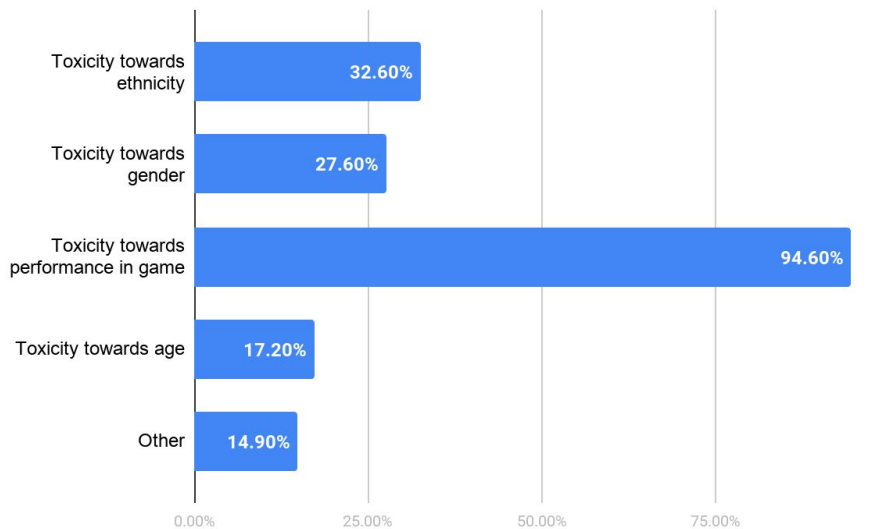


**Fig 2. Showing the results of the survey explaining what type of toxicity players have experienced.**

Looking at the answers from the survey, the form of toxicity is quite spread but the majority of the participants have at some point experienced toxicity towards their performance in the game, as 89.9% (Fig. 2) of all participants chose that following answer. Participants could also choose the option “other” where they could write their own answer. The appendix contains full details on the combined answers.

## 5.2 Male answers

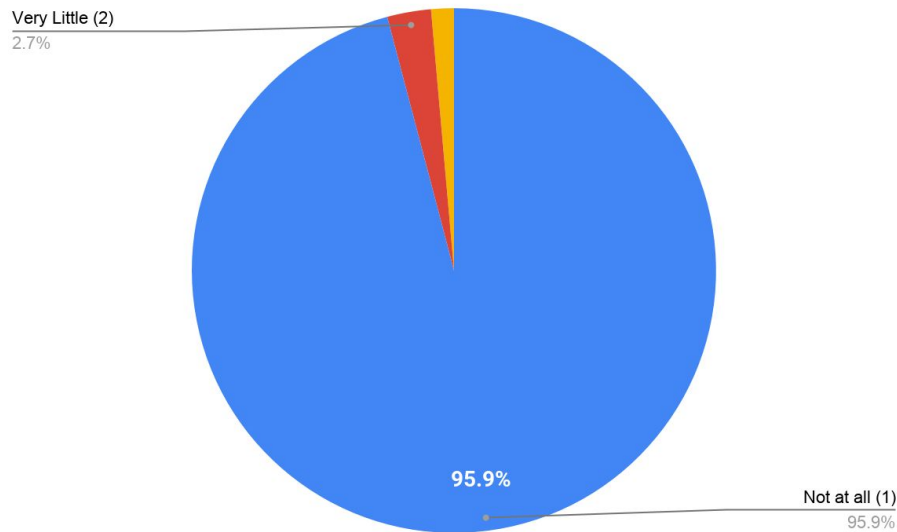
If you have experienced toxicity in-game, what kind of toxicity have you experienced?



**Fig 3. Showing the results of the survey explaining what type of toxicity male players have experienced.**

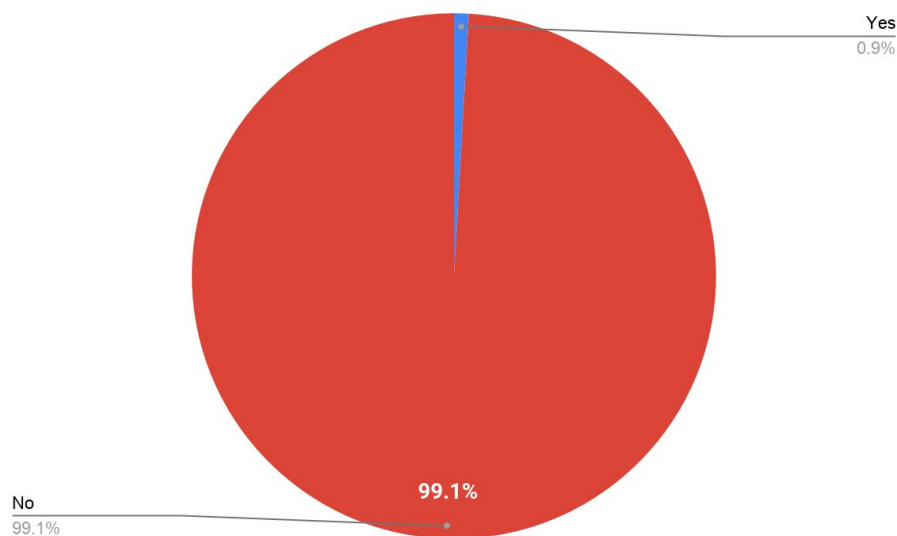
Looking at only the mens answer, the percentage of participants who have felt toxicity towards their performance has increased to 94.6% (Fig. 3), compared to the combined answers shown previously, being by far the most selected alternative on that question.

Do you feel restricted when you play due to your gender?  
(1=Not at all - 5 = Yes, very much)



**Fig 4. Showing the results of the male players if they feel restricted due to their gender.**

Do you feel the need to hide your gender, in order to not get harassed when you are playing online?

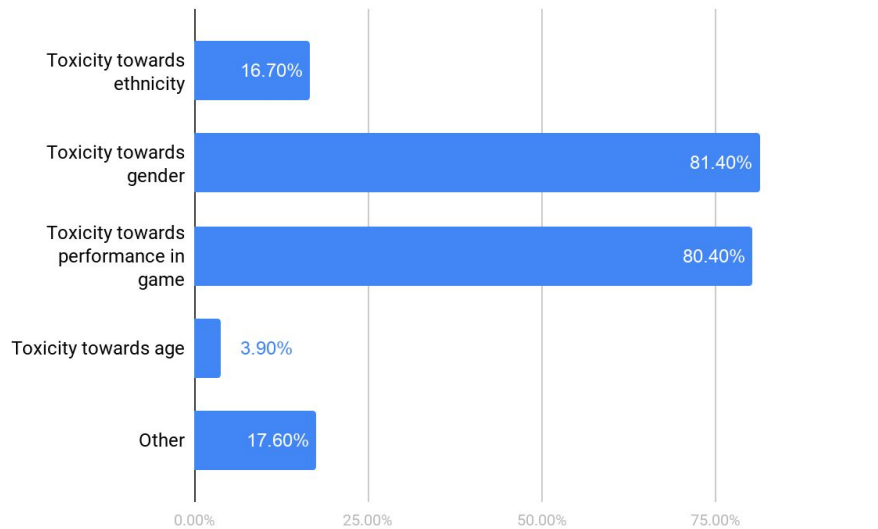


**Fig 5. Showing the results of the survey if male players feel like they need to hide their gender while playing.**

The results also show a vast majority of male players participating in the survey feel like they are not restricted, nor feel like they have to hide their gender in order to not get harassed when they are playing online, with 95.9% (Fig. 4) saying they do not feel restricted due to their gender and 99.1% (Fig. 5) saying they don't feel like they need to hide their gender, see figure 4 and 5. The appendix contains full details of the survey.

### 5.3 Female answers

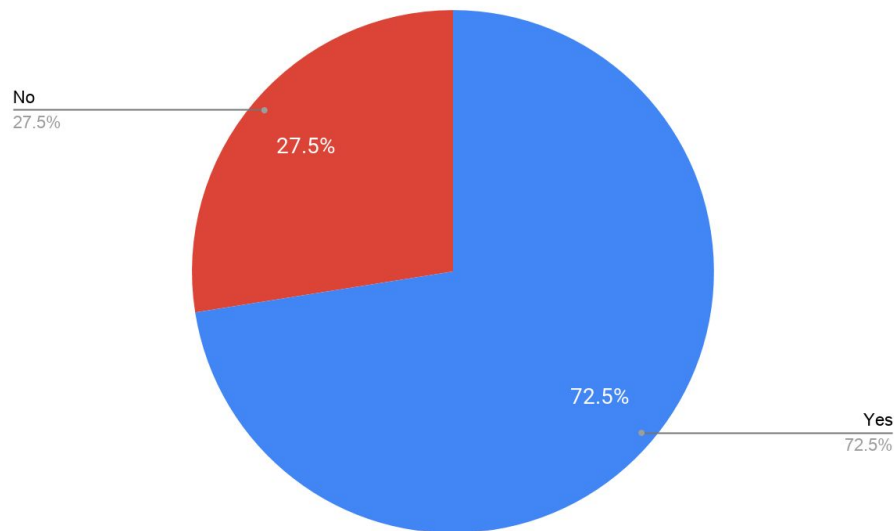
If you have experienced toxicity in-game, what kind of toxicity have you experienced?



**Fig 6. Showing the results of the survey explaining what type of toxicity female players have experienced.**

Looking at all the female answers in the survey, it was noticeable that the most picked answer for experienced toxicity was no longer towards performance in the game, but instead toxicity towards their gender, with 81.4% (Fig. 6) choosing that option compared to 80.4% (Fig. 6) saying toxicity towards performance.

Do you feel the need to hide your gender, in order to not get harassed when you are playing online?

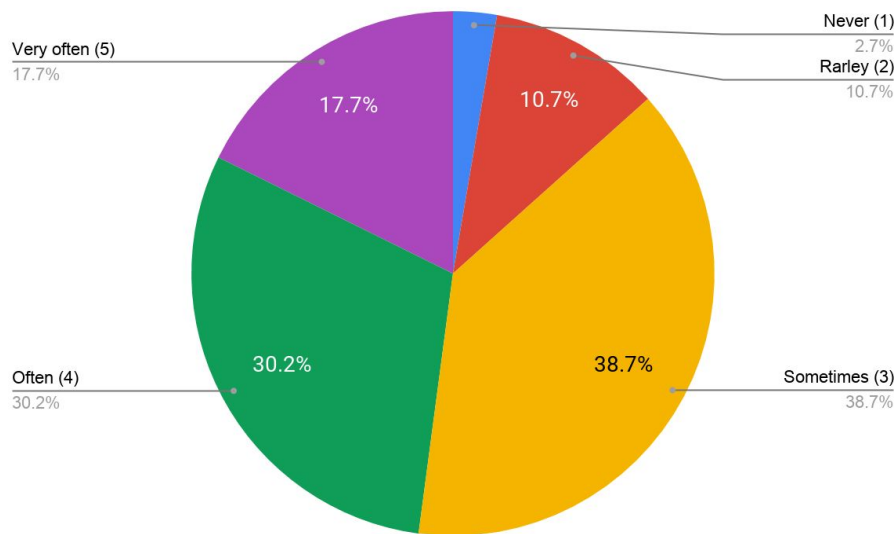


**Fig 7. Showing the results of the survey if female players feel like they need to hide their gender while playing.**

The survey also shows that the majority of females answering the survey do feel like they need to hide their gender when playing Overwatch, in order to not get harassed, as 72.5% (Fig. 7) answered this. The appendix contains full details on the survey.

## 5.4 Summary of results

Have you experienced toxicity when you have played online?  
(1=Never - 5=Very often)

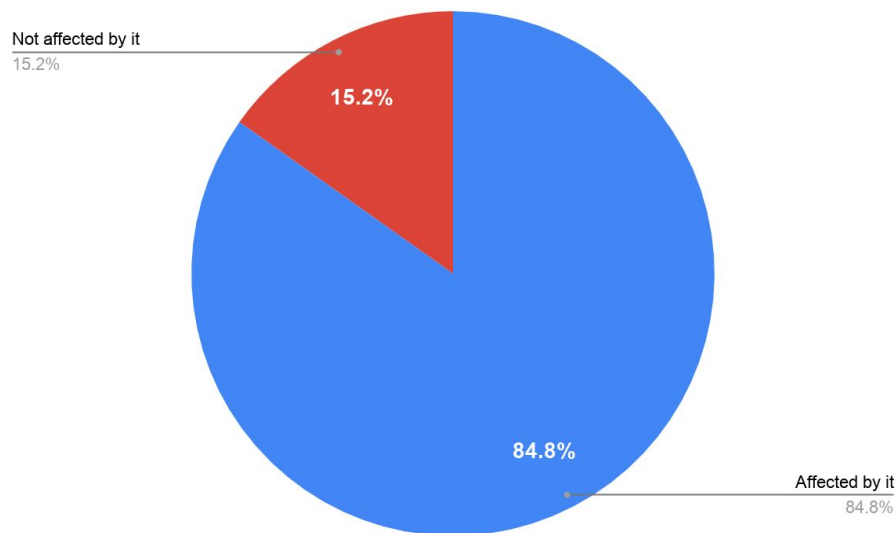


**Fig 8. Showing how much players experience toxicity while playing according to the survey.**

Looking at the results from the survey, most players do use some sort of communication when playing, as the answers in the survey is quite evenly spread out on a chart from 1-5 how often the player uses the in-game voice chat and the in-game text chat. According to 90.9% (Fig. 1) of all the participants of the survey, both men and women, toxicity is a problem in online games. On a chart from 1-5, with 1 being never and 5 being very often, most participants chose a mid to higher number, as 38.7% chose a 3 and 30.2% chose a 4 (Fig. 8).



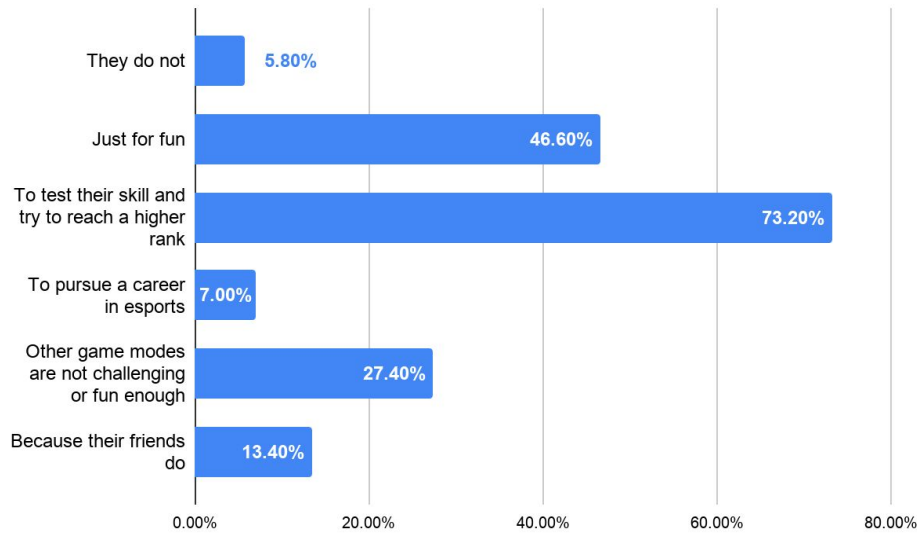
### If players feel negatively affected by toxicity when playing



**Fig 9. Showing the combined results if players feel negatively affected by toxicity when playing according to the findings in the survey.**

According to the results of the survey, 89.9% (Fig. 2) experience toxicity towards their performance in the game, but that female players also experience a high number of toxicity towards their gender, as 81.4% (Fig. 6) of female participants have experienced that. Participants could also write their own answers, where toxicity towards sexuality was brought up several times. All answers the participants wrote themselves can be seen in the appendix. The results of the survey show that the participants are affected negatively when there is toxicity in the game (Fig. 9). Only 15.2% of the participants felt that they were not affected at all, while the remaining 84.8% felt that they were affected negatively in some way.

### Why players play in competitive ranked online games



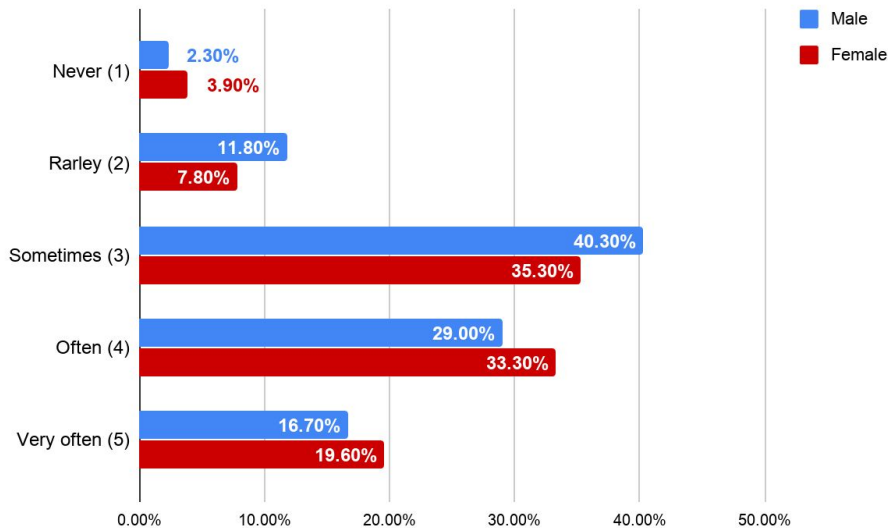
**Fig 10. Showing the combined results to why players play competitive game modes according to the survey.**

According to the survey, men do not feel restricted at all when playing online games, but that 72.5% (Fig. 7) of the female players feel like they need to hide their gender in order to not get harassed when playing. According to the results of the survey, most participants might not have a set goal to become a professional esports player, but rather want to try and see how high rank they can get and how far they can go with 73.2% stating this, compared to 7% having a set goal pursuing a career in esports (Fig. 10).

Full details, questions and answers of the survey can be found in the Appendix.

## 6 Analysis

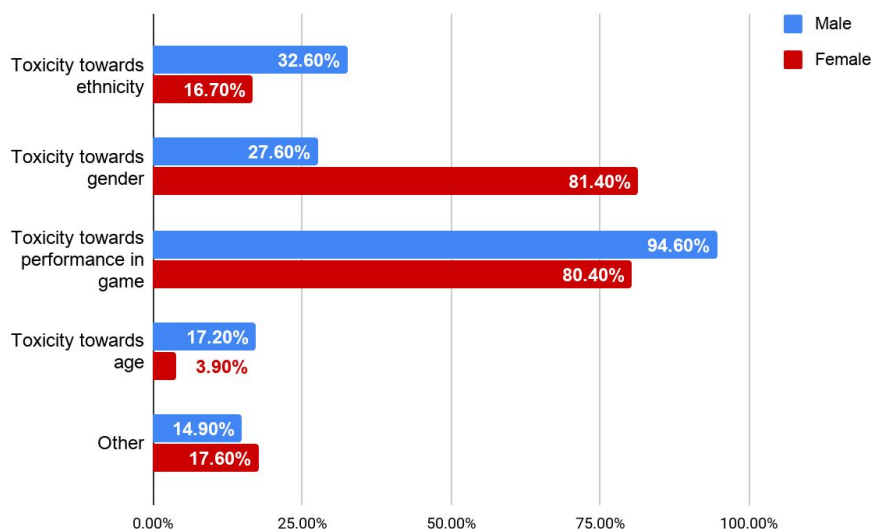
Have you experienced toxicity when you have played online?  
(1=Never - 5=Very often)



**Fig 11. Showing how much players experience toxicity while playing according to the survey and comparing the male and female answers.**

The results of the data collected from the survey shows that Overwatch players do feel like there is a problem with toxicity today but women do feel that they experience more toxicity in-game than men do. When asking the participants how much they have experienced toxicity when playing, 52.9% of the women answered a four or a five on a scale from 1-5, while 45.7% of the men answered the same (Fig. 11).

If you have experienced toxicity in-game, what kind of toxicity have you experienced?

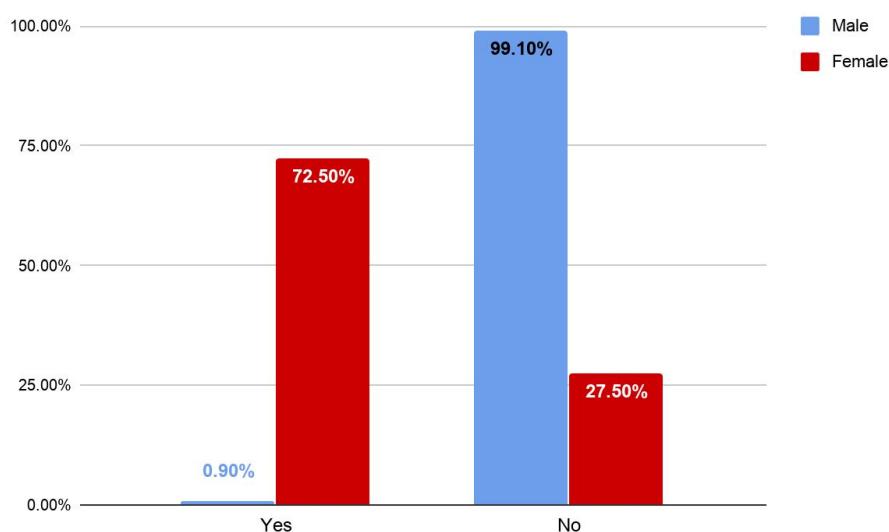


**Fig 12. Showing the difference in what type of toxicity male and female players have experienced according to the survey.**

This high number could be seen as further evidence that online games are fertile grounds for toxic inhibition due to the players being anonymous while playing and hard to identify as Assunção (2018) writes about in her paper. This also lines up with men mostly experiencing toxicity towards their performance in-game with 94.6% (Fig. 12) of men experiencing this, compared to women who do not only experience toxicity towards their performance (80.4% choosing this option) but also towards their gender where 81.4% (Fig.12) of the female participants chose this option, compared to men where only 27.6% picked the same option (Fig.12).

Looking at Suitila & Havaste (2018) findings, the results from this thesis survey aligns with the findings of Siutila & Havaste (2018) stating that male players feel that toxicity is based on personal skill and not gender or identity. This result is not surprising as both in Ruotsalainen and Frimans (2018) paper and in Siutila & Havastes (2018) paper talks about a hegemonic toxic meritocracy, therefore one should expect to see this result where the type of toxicity is aimed towards a players performance. Assunção (2018) also writes in her paper how the fierce competition amongst men to become the best often leads to toxic behavior towards each other. As Overwatch is a team based game, one cannot exclude the possibility that a lot of the toxic behavior between players can be between players on the same team where a less experienced player could lower a more experienced player's winning chance, especially when playing with strangers.

Do you feel the need to hide your gender, in order to not get harassed when you are playing online?



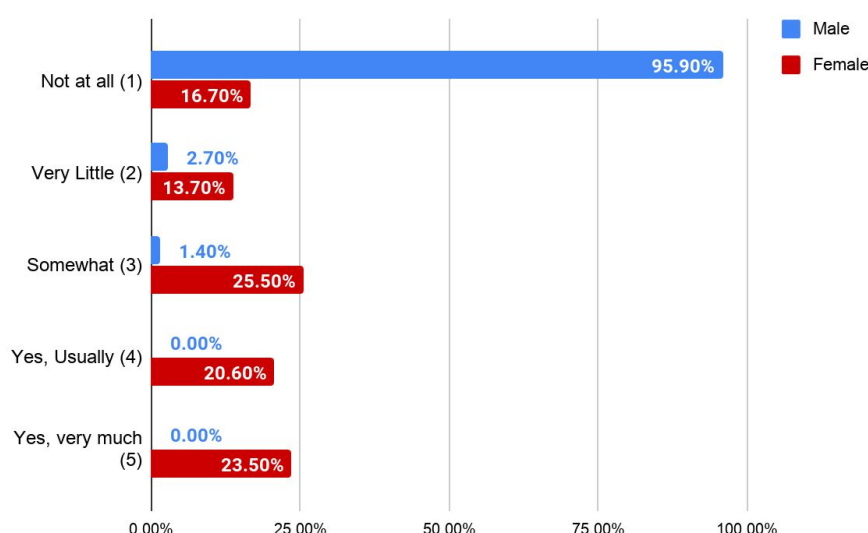
**Fig 13. Showing the difference in responses between male and female players if they feel like they need to hide their gender when playing online or not.**

With such a high percentage of women experiencing toxicity towards their gender, it could explain why women feel like they need to hide their gender way more than men do. This might be the biggest difference in the survey when comparing the male answers to the female answers. Almost no one of the male participants feel the need to hide their gender in order to

not get harassed when playing online, with 99.1% (Fig. 13) of the them answering that they do not feel the need to hide their gender, while at the same time, 72.5% (Fig. 13) of the female participants do feel like they need to hide their gender in order to not get harassed when they are playing online.

According to Suitila & Havaste (2018) findings, male players believe that female players who reveal their identity do so in order to get attention and that female players are not as into games as male players are. Looking at the results from this papers survey, almost a third of all the participants were female Overwatch players, which shows that there is a big interest for the game amongst women as well, which goes along with Tomlinson's (2019) findings where she state that female motivation and preferences are very similar to that of men, and that women do enjoy competitive games and want to pursue a higher skill in the game just as much as a male player.

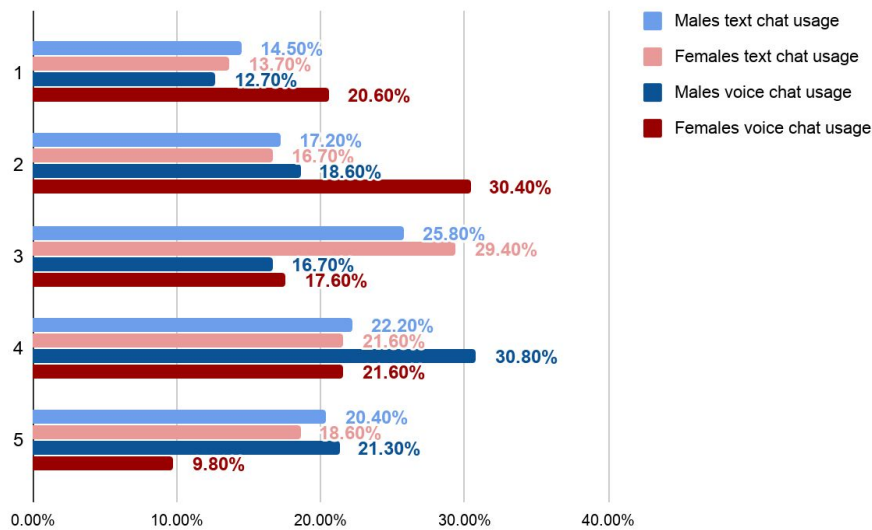
Do you feel restricted when you play due to your gender?  
(1=Not at all - 5 = Yes, very much)



**Fig 14. Showing the difference in responses between male and female players if they feel restricted when they play due to their gender.**

Looking at the statistics from figure 12, it is not surprising that since more than 81% of the female participants experience toxicity only aimed towards their gender, that they would also feel the need to hide their gender, in order to not receive that toxicity towards them. According to the survey there is also a huge difference between the two genders if compared to whether or not they feel restricted when they play due to their gender (Fig. 14). With the statistics from figure 11 and 12 in mind, one could argue that there is a pattern; on a scale from 1 - 5, 0% of the men chose a four or a five and 44.1% (Fig. 14) of the women did choose a four or a five on this scale.

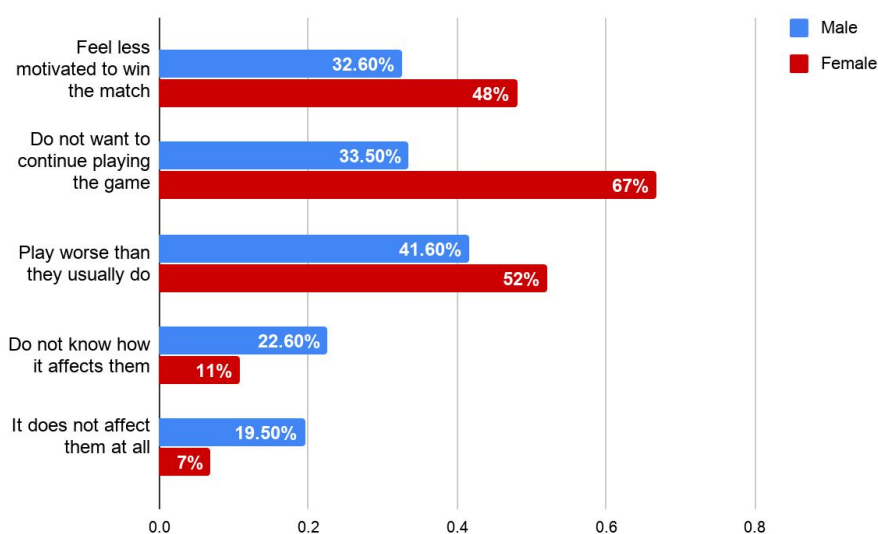
### Text and Voice chat usage in-game (1=Never - 5=Very often)



**Fig 15. Showing the difference between male and female voice- and text chat usage when playing online.**

There are very few of the female participants who always use the voice chat when playing (only 9.8%), almost half of that of men (21.3%). The usage of text chat is almost the same between men and women with only small variations between them, indicating that both men and women feel the same need to communicate with the other players in the game. See figure 15 for a visual comparison between the voice and text chat usage between men and women.

### How players feel like they are negatively affected when there is toxicity in the game

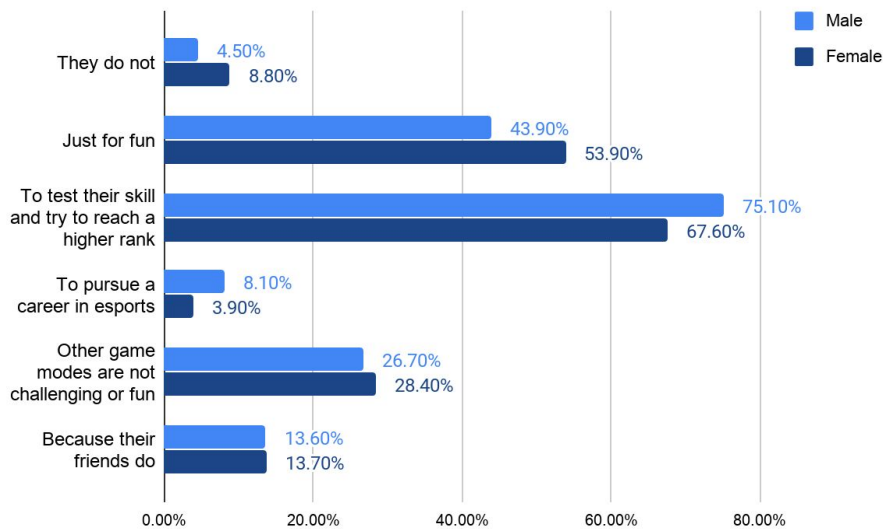


**Fig 16: Showing the difference between how male and female players feel like they are negatively affected by toxicity when playing.**

It makes sense that if female players feel like they need to hide their gender that they would also feel restricted when they play and not be able to use voice chat to communicate with their team. The usage of voice chat and fast communication is often key to success in fast team based games as it is very difficult to type whilst in the middle of the action of the match, so feeling prevented from using this tool in order to not reveal your gender would most likely automatically put you in a disadvantage when trying to push for a higher rank or pursuing a career within esports which could be argued as the highest tier of competitive play. According to Tomlinson's findings (2019) many women do feel like they have additional pressure of being effective players when playing multiplayer games compared to men. Comparing these findings with the results of this thesis survey, 67.6% (Fig. 16) of the female participants want to test their skills and try to reach for a higher rank in the game but could feel additional pressure as Tomlinson (2019) state, this pressure could be the need to further prove themselves that they are as good as their skill tier shows when they feel that they cannot use the voice chat to talk about tactics with the other team members without being harassed for being a woman. Another reason for the added pressure could be to prove to be the best on the team and invaluable to avoid being harassed for their performance and/or being judged due to their gender.

According to the results of the survey, most players are affected by toxicity within a match in some way, as only 15.2% (Fig. 16) said that toxicity did not affect them at all. According to the answers in the survey, most players felt less motivated to win or even continue playing the game but also felt like they play worse than they usually do when encountering toxicity. Comparing the female answers with the male answers however, show that men feel less affected by toxicity than women do, as 19.5% of the male participants do not feel affected by toxicity, where only 6.9% of the female participants feel that they are not affected at all. The result also shows that when male players are affected by toxicity, 41.6% feel that it affects them in the way that they are playing worse than they usually do, while as for women, 52% feel like they play worse than they usually do but also that 66.7% doesn't even want to continue playing the game when affected by toxicity which is almost twice the amount compared to men (33.5%). See figure 16 for a more detailed view of how male and female players feel they are affected by toxicity when playing.

### Why players play in competitive ranked online games



**Fig 17. Showing the difference between why male and female players play competitive game modes according to the survey.**

The result of the survey is again strengthened by Tomlinsons findings (2019) stating that women do enjoy competitive games and the pursuit of skill just as much as male players as 53.9% (Fig. 17) of the female participants chose that the reason they play competitive ranked games is just for fun and 67.6% chose they play competitive games to test out their skills, trying to reach a higher rank compared to men's 43.9% respectively 75.1%. The results shown in figure 17 do however show that more than double the amount of men (8.1%) want to pursue a career in esports compared to 3.9% of the women. This could be an effect of women feeling restricted due to their gender.

The answers of the survey points on some important results when exploring this thesis research question. There are a lot of female Overwatch players, with almost a third of the participants of the papers survey being women. Tomlinsons (2019) findings about women enjoying and having the will to compete in competitive games has been strengthened by the results of this thesis. Women do have a wider experience of different kinds of toxicity towards them, compared to what men experienced. Women do want to challenge themselves, seeing how far their skills can take them and try to achieve a higher rank, but at the same time, they do feel restricted when playing and feel the need to hide their gender when playing online games. All these results explains why many female players do not want to reveal their gender while playing, as in many cases that could lead to people being toxic towards the female players based only on their gender, which could result in the female player feeling restricted and possibly lose the will to continue playing the game. Communication is important in all types of sports or activities where teamwork plays a vital part, if women feel that they can't fully utilize the communication tools given to them during play that would automatically give the male players an edge while playing. Assunção (2018) findings seem to suggest that the social aspect (excluding toxicity) is somewhat more positive for women than for men, not having the same need for networking and having an easier time to get recruited in professional teams. This could point towards toxicity as an important contributing factor to why there are not more female players trying to pursue a career in esports in Overwatch. The data collected



and previous research shows that women are as motivated as men to get as good as possible at the game, that women have even a somewhat easier time getting noticed and recruited but also that toxicity is stopping women from fully communicating with their team. According to the interviews conducted by Assunção (2018) where she speaks with professional esports players both male and female, most of them mention the importance of teamwork to be able to succeed and reach higher levels in esports. The data gathered for this paper strongly hints towards that toxicity is stopping some women from being able to play on the highest skill tiers in Overwatch and that toxicity experienced by players is different if you are male or female.

## 7 Discussion

Overwatch has approximately 40 million players (Blizzard Entertainment), with a female player base of 16% (Yee N. 2017), which means that Overwatch has about 6.4 million female players. Comparing that number to the answers of the survey, about 3.9% of those female players would like to pursue a career in esports, which would mean that Overwatch has about 250.000 female players that would like to compete in esports and the Overwatch league. Looking at the competition for a spot in one of the very best Overwatch teams, both women and men would have to compete against each other, so looking at the male side of this, where 8.1% would like to pursue a career in esports, that would mean that there is approximately 2.72 million male players that would want to compete in esports and the Overwatch league. All of this together results in a player base of approximately 2.97 million players who would want to compete in esports. This means that about 8.4% of everyone that wants to compete in esports are women, yet the amount of female players in the Overwatch league is about 0.5%.

Looking at these statistics, it is questionable why there are not more female players in the Overwatch league. However, according to the results of this thesis, most female players do not use the voice chat when they are playing, which could put them at a significant disadvantage. As most sports and team based games where teamwork and quick communication is essential, a player would be put at a significant disadvantage if that player would not be able to fully utilize those communication tools given to them. It would be reasonable to assume that most female players are put at a disadvantage when they are playing the game, if they are not using the in game voice chat. It would also make sense to believe that the reason many female players are not using the voice chat as much as men, is not due to lack of understanding the importance of this tool, as female players use the in game chat almost the same as men, but instead of the additional toxicity female players have to face. As where most men mostly feel a toxicity towards their performance in the game, women also experience a lot of toxicity toward their gender, while men do not. Female players also feel way more restricted due to their gender, compared to men, and feel the need to hide their gender in order to not get harassed or experience toxicity when they play. This could explain the reason for why female players would not utilize the voice chat as much as men do, since men do not have to approach the same amount of toxicity based on their gender, as female players do. It makes sense that if a female player would use the voice chat, they would immediately reveal their gender and therefore choose not to do so in order to avoid that toxicity that likely could have been if they did reveal their gender.

According to the results of the survey, both male and female players do feel like there is a problem with toxicity in online games today and the majority of the participants do experience toxicity quite often. This leaves one to wonder why there is toxicity, when many people agree that toxicity is a problem and that most participants are affected negatively in some way when they are playing if they encountered toxicity. Assunção (2018) is stating in her paper that toxic disinhibition is a common problem for players in online games, and is due because of the lack of consequences for people's behavior when being anonymous on the internet. This could also go well with the argument that certain people feel that they don't have to care towards how they act, since they most likely are never going to talk with the person they were being toxic towards ever again once the game is complete which again points to the lack of consequences for one's behavior. This statement makes sense as Assunção (2018) also means that there is less toxicity in a professional level of gaming, due to the players there being more easily identifiable. Assunção (2018) means that toxic

disinhibition between male players can be explained as a fierce competition to become the “best” outside of the professional scene, and that this often leads to taunts and other toxic behaviors when the adrenaline is high, which could point at the results that most men find toxicity as an issue and are affected by toxicity.

One could also discuss whether or not one reason for toxicity towards the other team could be a strategy to lower the performance of the other teams members. As shown in the results, 84.8% (Fig. 9) of the participants felt that they were affected negatively when they encountered toxicity in the game. 44.2% stated that they do not want to continue playing and 45.4% stated that they play worse than they usually do. With these results in mind (Fig. 16), it would not be impossible if some players used this, in order to try and make their opponents play worse. However, we do not know how toxicity towards the enemy team affects that player's own team, in which the toxicity is not directly aimed towards. This opens up space for more discussion and further research.

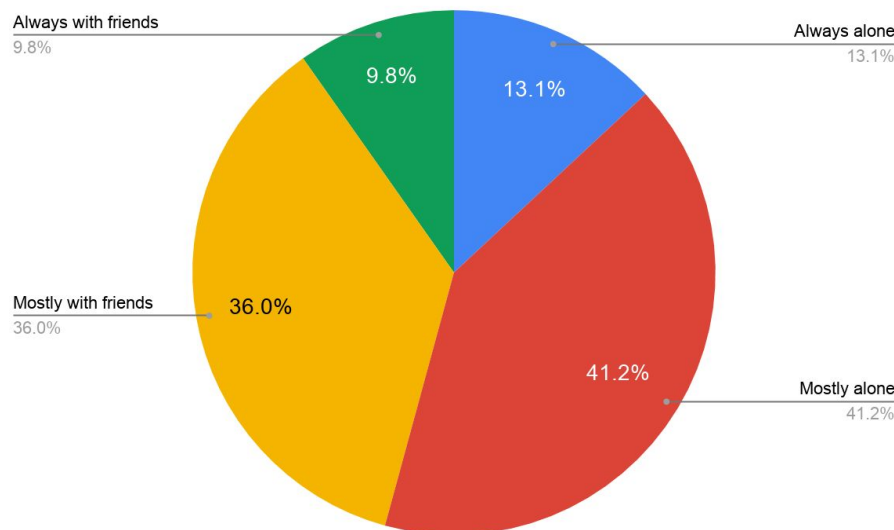
According to the findings by Suitila & Havaste (2018) and in Ruotsalainen & Frimans (2018) paper, men see esports as a haven for meritocracy where personal skill is the only thing that matters and not gender or ethnicity. Suitila & Havaste (2018) discovered that men try to explain the lack of women in esports by pointing towards biological and social differences that women easily could overcome with just hard work and dedication. The data found in this paper's survey shows that the most common type of toxicity is aimed towards other players' performance (see Fig. 2 on page 11) and seems to have a correlation with the general view amongst the players in previous research that esports and competitive gaming should be viewed as a perfect meritocracy.

As skill is regarded as the most important factor in competitive gaming, insulting a player's performance could be seen as the easiest and most effective way to insult someone they don't personally know. As the importance of skill is so high and if a player on the same team is playing worse than expected or if the team is losing due to a mistake by another player and it therefore negatively affects a player's statistical skill by changing for example their win and lose ratio, players could release their negative emotions by being toxic to their own teammate as there is little consequence of doing so. In Ruotsalainen & Friman (2018) findings, several misconceptions regarding female gamers could be seen from men in the Overwatch community. A common misconception was that female players almost exclusively play the in-game hero Mercy and this could be explained with women's biological and physiological qualities. There is no scientific data backing up these claims from the male player base though. According to Ruotsalainen & Friman (2018) findings, women could also be ridiculed by playing Mercy, as it is often viewed as a playable hero that requires low player skill; yet again showing the meritocratic view that many male players have.

In a perfect meritocratic system, only skill would matter and therefore everyone would start on an even playing field but the data of this thesis clearly shows that is not the case within Overwatch and this might be true for other games as well but cannot be concluded with the data collected in this thesis. Women do experience toxicity both on their performance but also on their gender if they chose to reveal it, as mentioned several times in this paper, women can not in many cases fully utilize the communication tool in order to not get harassed but the data of this thesis also shows that women are more affected by the toxicity than men are. Both male and female players experience toxicity in Overwatch but women are far more affected

by it than men are and this is nothing they are in control of, which clearly shows that competitive gaming in Overwatch is not a haven for pure meritocracy as it stands now.

### Do players look for and play matches alone or with friends?



**Fig 18. Showing when players are searching for or play competitive ranked matches if they play alone or with friends.**

According to the survey, toxicity does not have a major influence towards if players choose to play alone, matched up with random people, or looking to play games with friends as the result shows that 41.2% mostly play alone and 36% mostly play with friends (Fig 18).

With these results, together with only 13.4% saying that they play competitive ranked game just because their friends do and 73.2% playing competitive ranked games to test their skills and try to reach for a higher rank, it would make sense to believe that players are mostly not influenced by toxicity when they queue up for a game, but rather just want to push their skills and try to achieve a better rank.

The strengths of this study is the amount of respondents of the survey. The survey quickly blew away after it got posted, and got to the first page of r/Competitiveoverwatch for a while. A lot of people interacted and showed interest in the survey, thesis and subject and we were lucky to get hundreds of responses from people on an international forum where people come from both different parts of the world and from different backgrounds. This could also be seen as a weakness, if trying to nail a certainty on a specific question, as the answers are only from a small portion of the entire playerbase of Overwatch.

In order to further strengthen this thesis, interviews could be made with players in order to get a more personal experience on certain questions. A day-by-day follow up on a player could be made, to see how a player's statistics change in a game when that person has been affected with toxicity, compared to when the player has not, to see the effect toxicity has on a player's game performance. This could be something to have in mind for further research about the area.

According to the results, women do experience more toxicity than men do (Fig. 11 and Fig. 12). Women do feel restricted when playing, and when trying to pursue a higher rank or even a career in esports due to their gender. Many women even feel the need to hide their gender, in order to not get harassed when they play. With female players feeling that they can't utilize important tools in the game, such as voice chat for communication in the game, it will put them at a disadvantage compared to men and making it a lot more difficult to progress with their Overwatch rank. With approximately 40 million players playing Overwatch, a player is going to have to be in the top to get noticed and possibly recruited to the Overwatch league, and by not having a high rank or something to show for, recognition is going to be very difficult. Receiving toxicity based on being a woman will naturally result in many female players trying to hide their gender. This will in many cases mean that the female player will not use tools in the game necessary for reaching a top rank, which in the end, will lead to many female players not reaching an esports level, even though they might have the talent and possibility for it. Female players are being held back by the fear of being targeted by toxicity, which results in them not being able to take that last step into an esports scene dominated by men. These results show us that there indeed is a difference between men and women when it comes to toxicity within Overwatch and that the toxicity could hold women back from reaching a higher rank in Overwatch.

## 8 Conclusion

The research of this thesis found that there is a major difference in how male and female players of Overwatch experience toxicity. According to the thesis results, both male and female players experience toxicity in Overwatch, and feel that toxicity is an issue in today's online games. However, while the majority of men experience mostly toxicity towards their performance in game, women are affected in more ways by toxicity, experiencing toxicity not only based on their performance in game, but mostly due to their gender. This results in many women feeling the need to hide their gender, resulting in situations where the female players might not use the voice chat to communicate information to the team, which puts them in a disadvantage when trying to push for a higher rank in the game. The results of this thesis also shows that most players, no matter gender, are affected negatively by toxicity and that most players feel that they play worse than they usually do and lose the will to continue playing the game. The results show that almost twice the amount of female players compared to male players don't want to continue playing the game when affected by toxicity, which furthermore strengthens the hypothesis of this survey that toxicity is different between men and females and that the two genders are affected differently by it.

The purpose of this paper was to investigate if there were any differences in the toxicity between men and women who play Overwatch. Overwatch was picked for this thesis, as it is the first-person shooter game with the biggest female player base seen to the total number of players in the game. The researchers wanted to find out how Overwatch players see toxicity today and how toxicity differentiate itself between male and females. We believe that this is a topic that interests many people today, and that broader and more detailed findings could be discovered within the subject. Toxicity and toxic disinhibition is a broad subject where many findings could be found with future research.

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## **Games**

Blizzard Entertainment. (2016) Overwatch (Microsoft Windows, Xbox One, PlayStation 4, Nintendo Switch) Blizzard Entertainment.

Riot Games. (2009) League of Legends (Microsoft Windows, macOS) Riot Games.



## Appendix

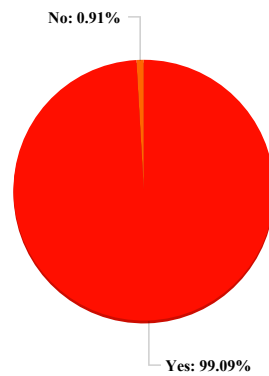
### Toxicity in Overwatch Survey

#### 1. Do you play Overwatch?

Number of participants:

328 325 (99.1%): **Yes**

3 (0.9%): **No**



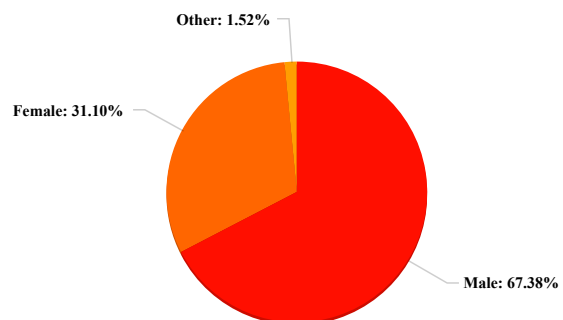
#### 2. What is your gender?

Number of participants:

328 221 (67.4%): **Male**

102 (31.1%): **Female**

5 (1.5%): **Other**



3. When you play Overwatch, do you use text chat? (1 = Never, 5 = Always) Number

of participants: 328

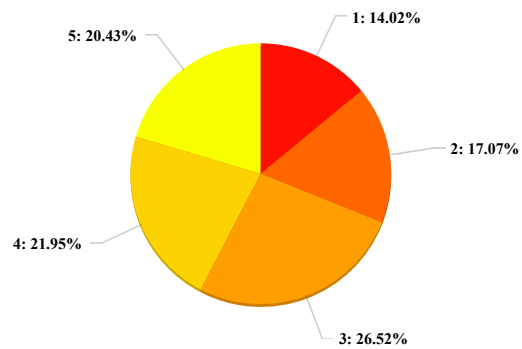
46 (14.0%): 1

56 (17.1%): 2

87 (26.5%): 3

72 (22.0%): 4

67 (20.4%): 5



4. When you play Overwatch, do you use voice chat? (1 = Never, 5 = Always) Number

of participants: 328

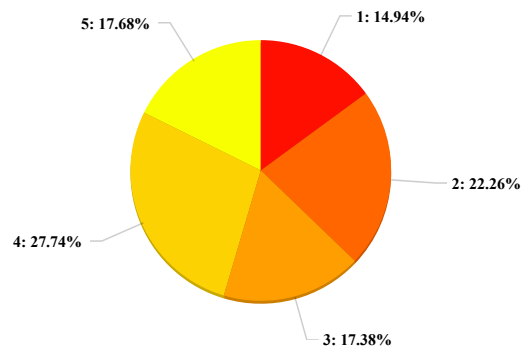
49 (14.9%): 1

73 (22.3%): 2

57 (17.4%): 3

91 (27.7%): 4

58 (17.7%): 5

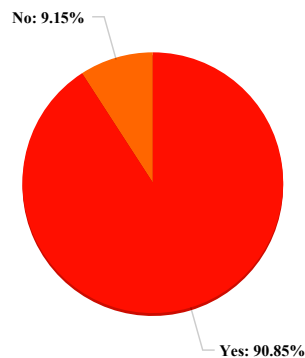


5. Do you feel that toxicity is an issue in online games?

Number of participants: 328

298 (90.9%): Yes

30 (9.1%): No



6. Have you ever experienced toxicity when you have played online? (1 = Never, 5 = Very often)

Number of participants: 328

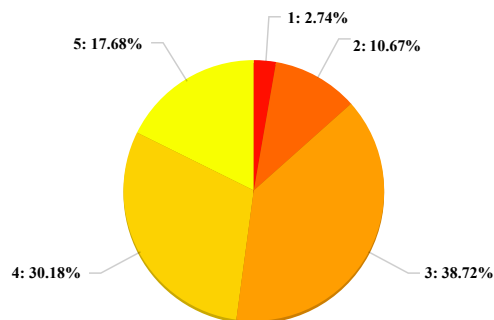
9 (2.7%): 1

35 (10.7%): 2

127 (38.7%): 3

99 (30.2%): 4

58 (17.7%): 5



7. If you have experienced toxicity, what kind of toxicity have you experienced?

Number of participants: 328

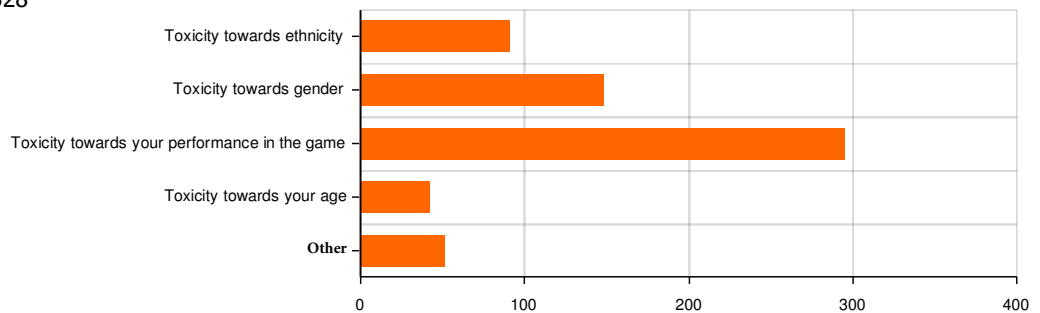
91 (27.7%): Toxicity towards ethnicity

148 (45.1%): Toxicity towards gender

295 (89.9%): Toxicity towards your performance in the game

42 (12.8%): Toxicity towards your age

51 (15.5%): Other



Answers added under

'Other':

- Toxicity towards skills/knowledge in the game
- People being mad for no reason on the other team and calling you bad
- Sexuality, if someone found out I'm a lesbian (I play with my wife)
- I've had guys trying to flirt with me mid-match when they heard my voice and realised I am a girl.
- Career Profile
- just other forms of bigotry, even types that wouldn't apply to me like homophobia when i am straight.
- homophobia
- Literally everything
- My voice
- nationality
- Toxicity towards perceived sexuality
- People don't like losing
- just to clarify: i mean with "experienced" to necessarily "towards me". Just what i witnessed
- Toxicity towards my accent
- personal attacks
- toward sexual orientation (gay is as a slur used often), joking about fucking women in a derogatory way when there's women on a team
- Toxicity when attempting to communicate a change in strategy is necessary.  
(After several failed attempts to capture an objective for example.)
- Country. Accent. People can be toxic about anything and everything, I feel.
- Toxic people identify one other player that, for some reason, they thought is losing them the game, then they improvise how to insult that person - race, gender, age are just the most obvious ways to get instant insults in, but it doesn't even matter -you could give nothing away, the player WILL try to insult you even if he has 0 info about who you are.
- Women starting shit with dudes for no reason.
- Toxicity for enforcing rules in a custom game?
- Haven't faced "toxicity"
- Towards choice of what character to play
- Towards someone's voice and hero choice
- Toxicity towards rank.
- level/border
- towards playing with a smurf player
- Towards nationality
- n/a
- Sexuality
- Toxicity towards hero choice, Toxicity towards others
- Character or role pick
- homophobia
- generally toxicity, it isn't always pointed at me. mostly performance based.
- True toxicity is throwers & feeders, people not trying their best to win.
- Toxicity towards mental or physical disabilities
- Nationality, Callouts and teammate performance
- Not any different to other mediums, it's not exclusive to online games which makes this irrelevant
- accent
- hero choice, playstyle, choices made in game
- Sexuality
- None
- towards the hero
- Someone just generally venting their anger to the chat without it having a specific purpose
- Many other things. Too many to go into detail
- sexuality
- Toxicity towards sexuality
- nonr
- Toxicity seemingly just for the sake of toxicity
- generally assholes

8. Do you feel like you are affected negatively when there is toxicity in the game?

Number of participants: 328

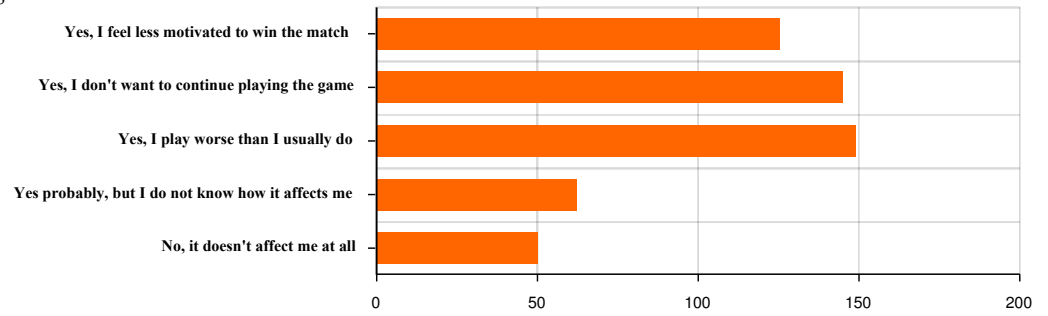
125 (38.1%): Yes, I feel less motivated to win the match

145 (44.2%): Yes, I don't want to continue playing the game

149 (45.4%): Yes, I play worse than I usually do

62 (18.9%): Yes probably, but I do not know how it affects me

50 (15.2%): No, it doesn't affect me at all



9. Do you feel restricted when you play due to your gender? (1 = Not at all, 5 = Yes, very much)

Number of participants: 328

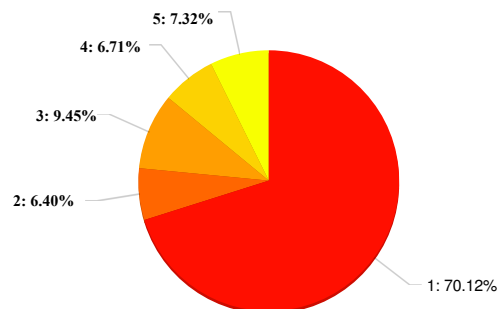
230 (70.1%): 1

21 (6.4%): 2

31 (9.5%): 3

22 (6.7%): 4

24 (7.3%): 5

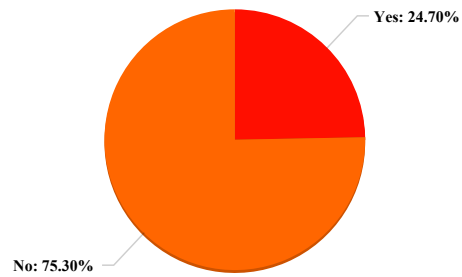


10. Do you feel like you need to hide your gender, in order to not get harassed when you are playing online?

Number of participants: 328

81 (24.7%): Yes

247 (75.3%): No



11. When you are playing competitive ranked online games, do you look for, and play matches alone or with friends?

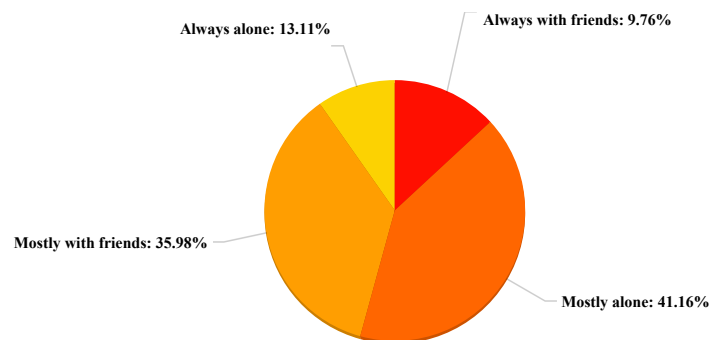
Number of participants: 328

43 (13.1%): Always alone

135 (41.2%): Mostly alone

118 (36.0%): Mostly with friends

32 (9.8%): Always with friends



12. Why do you play in competitive ranked online games?

Number of participants: 328

- 19 (5.8%): I don't
- 153 (46.6%): Just for fun
- 240 (73.2%): To test my skills and try to reach a higher rank
- 23 (7.0%): To pursue a career in esports
- 90 (27.4%): Other game modes are not challenging or fun enough
- 44 (13.4%): Because my friends do

