# MASKING TO SUCCEED: EXPLORING IDENTITY BARRIERS TO COMPETITIVE DRIVE IN ONLINE GAMING

by

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The toxic social environment of online competitive video games is well known, but despite negative experiences, gamers from all walks of life are continually motivated to improve and engage with others in the name of competition, including those often targeted by bigotry, such as women and transgender players. While research on how identity affects competitive drive exists within the esports space, there is no standard inclusion of other marginalized genders, few papers standardize identity and competitive drive variables, such as personality and competitive indexes, and papers covering individual motivations and experiences within online social environments have only been published within the last 4 years. I surveyed and interviewed 10 undergraduate gamers who played at least 5 hours of competitive ranked modes in video games a week. I used the HEXACO personality index specifically because of its reliability in describing personality, and the Competitive Index because of its multifaceted approach to defining competitive drive. After statistical analysis, and after coding each 25-45 minute long interview manually using the Competitive Index as a coding scheme, I found associations between gender identity and Enjoyment of Competition, both quantitatively and qualitatively. I also found a negative association between Desire to Win and Honesty-Humility, and a weaker positive association between Personal Development

Competitiveness, and Emotionality. Additionally, I found that while perceptions of online social environment interactions were generally negative, many found solace and enjoyment in competing with strangers, and others found ways around negative interactions to not sacrifice their competitive drive, such as playing in closed communities. While the methodology was flawed, and no significant conclusions could be derived from the quantitative analysis, these findings imply a complex relationship between individual differences in competitive drive and self-identity, and future research into personality as a factor of competitiveness, controlled for social environment, should be looked into.

# Acknowledgments

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# Introduction

"It's not rape if I like it, is it now?" This exact phrase, uttered by an Australian teen in a high-ranking VALORANT lobby's voice chat, was the last straw for Taylor Morgan, a Twitch streamer, as she completely shut off her game, broke down into tears, and ended the stream. She posted this full clip on X on May 13th, 2024[1], tagging the developer of VALORANT, Riot Games, and pleading for action. After unintentionally garnering over 41 million views, Riot Games took action, but not before the tweet sparked a larger conversation on harassment in online competitive games on the platform, lasting the greater part of the week after.

Perhaps the most appalling part of this situation comes from some of the replies: "Women are so fragile. Just banter back and top frag. (You can't do either)",[2] "Imagine melting down and making demands because you got roasted in a video game",[3] and "Women come into male spaces and want the rules to change for their feelings which fucks everything up for everyone else…Here's the equality feminism got you…You're a pussy and not cut out for gaming."[4] All of these tweets got at least 5,000 likes, with the most popular reply capping at above 11,000 likes. While many more replies showed their support for Morgan, and their disgust

[1] S Morgan, T. [TaylorMorganS_]. (2024, May 13). *I have never made a more desperate plea that what I am about to say right now. @riotgames @RiotSupport I need [Tweet]*. X (Formerly Twitter). https://x.com/TaylorMorganS_/status/1789927866865787228

[2] Dreamer, C. [captivedreamer7]. (2024, May 13). *Women are so fragile. Just banter back and top frag. (You can't do either) [Tweet]*. X (Formerly Twitter). https://twitter.com/CosmistRussian/status/1790118456819413218

[3] Demonologist, B. [TrevorsCrucifix]. (2024, May 13). *Imagine melting down and making demands because you got roasted in a video game.* X (Formerly Twitter). https://x.com/TrevorsCrucifix/status/1790184486950633874

[4] Gaines, M. [unplugfitX]. (2024, May 13). *This is why women need to stay out of male spaces or stfu if they get bullied. . . Women come into male.* X (Formerly Twitter). https://x.com/unplugfitX/status/1790579239323845059

of the behavior shown in the clip, the not-insignificant number of support these replies garnered is harrowing, at the very least. The normalization of sexual harassment, and the intentional categorization of this type of behavior as "banter" is, and was, a common theme in gaming spaces,[5] but even published researchers in the relatively new field recently stated that most do not know the scope to which toxicity undermines the positive social benefits of gaming scientifically.[6] The overwhelming number of replies and quotes to Morgan's tweet suggest that the scope to which toxicity affects motivation to participate and compete is quite high.

However, despite the overwhelmingly toxic community in some of these spaces, individuals are motivated to play regardless. Over 212 million people, from ages 5-90, play video games regularly, and only about 53% of them are male.[7] Although the ratio of men to women is still quite skewed in live service games,[8] with only 29% of female respondents stating interest in them, there is still considerable growth from the 80/20 split one magazine found back in 1982.[9] Additionally, interest in esports as a spectator sport has also grown considerably over the past 10 years.[10] There is enough benefit from playing to keep people coming back. What keeps people motivated to play casually in esports has been researched previously, using a

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[5] Beres, N. A., Frommel, J., Reid, E., Mandryk, R. L., & Klarkowski, M. (2021). Don't You Know That You're Toxic: Normalization of Toxicity in Online Gaming. *CHI '21: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, 438. https://doi.org/10.1145/3411764.3445157

[6] Frommel, J., Johnson, D., & Mandryk, R. L. (2023). How perceived toxicity of gaming communities is associated with social capital, satisfaction of relatedness, and loneliness. *Computers in Human Behavior Reports*, *10*, 100302. https://doi.org/10.1016/j.chbr.2023.100302

[7] The Enertainment Software Association. (2024, May 16). *2024 Essential facts about the U.S. Video game Industry - the ESA*. The ESA. https://www.theesa.com/resources/essential-facts-about-the-us-video-game- industry/2024-data/

[8] *For women playing video games, it's (still) a man's world*. (2024, May 21). Deloitte Insights. https://www2.deloitte.com/us/en/insights/industry/technology/digital-media-trends- consumption-habits-survey/2024/how-can-gaming-industry-get-more-female-gamers.html

[9] Old Game Mags [oldgamemags]. (n.d.). *Electronic Games, May 1982 - Women join the arcade revolution! A guide to how woman are now appearing in arcades.* Tumblr. https://www.tumblr.com/oldgamemags/71125969260/electronic-games-may-1982- women-join-the-arcade

[10] Jenny, S. E., Keiper, M. C., Taylor, B. J., Williams, D. P., Gawrysiak, J., Manning, R. D., & Tutka, P. M. (2018). eSports venues: A new sport business opportunity. *Journal of Applied Sport Management*, *10*(1), 8.

variety of different methods,[11] but I am personally interested in examining it from a personality psychology angle, due to the importance of identity, and lack thereof, in team-based competition settings[12].

I intend, through the course of this thesis, to shed light on specific individual motivations to play competitive online games, beyond survey questions, and how that trends between identity groups, as well as how social environment affects these motivations. More specifically, I wanted to examine between-group trends for gender identity, and for various levels of personality factors. This is a relatively new area of research, at least on the personality psychology side, but some papers have explored the topic before, although only through a survey format. Instead of just conducting a survey to gather personality factor results, I also wanted to compare individual responses in an interview-style format, to draw conclusions about competitive motivations and the online social environment without fully constraining responses to checkboxes. I believe this methodology is lacking in this field, and thus, I employed a mixed-methods format for data collection, combining a survey and interview into one format. I devised three separate research questions:

R1: Can gender identity, and/or factors of the HEXACO personality measure, predict levels of Competitive Index factors?

R2: How does the social environment of competitive games affect motivations to compete casually?

R3: What other insights into the environment of online competitive games can be derived?

[11] Beres et. al. 2021.
[12] Cikara, M., Botvinick, M. M., & Fiske, S. T. (2011). Us versus them: Social identity shapes neural responses to intergroup competition and harm. *Psychological science*, *22*(3), 306-313.

I approached R1 with a framework following Urbig et. al. 2021, who defined the Competitive Index I am utilizing to define competitive drive. I expected to find similar results to the paper in regards to the correlation between HEXACO, gender identity, and the Competitive Index. I approached R2 with the idea that various factors of the social environment would either encourage or discourage competitive drive, such as previously mentioned toxicity, or positive social experiences. I approached R3 with an exploratory method, meaning to report common responses that do not fit within the other two questions.

# Literature Review

## Background of esports research, and defining esports

To many uninvolved in esports and games studies research, the concept of "esports" and "online competitive gaming" might seem to refer to the same concept; However, the definition of esports has complex roots, due to its relative newness, ambiguity of the specific video games included, and lack of a governing body with the authority to standardize definition. [13] I also do not use the two interchangeably in the context of this thesis, as the inclusion of "online" in the second statement holds the true distinction. For this paper, I use the definition of Esports as defined by the Routledge Handbook of Esports: "an organized and codified competition between human players using video games." As for online competitive gaming, I use Liu et. al. (2013): "an IT-mediated competition among players of different skill levels that provides differing challenge levels."[14] I also include the stipulation of "guided by a public and standardized skill rating system" to the latter definition to differentiate between unranked and ranked modes, as many of these games include both while still being considered competitive games at their core. Both concepts involve the same core games, and are differentiated by the act of organization outside of the game itself.

Defining the core games of online competitive gaming is difficult, as the definition of an esport-eligible game is highly debatable. To be able to control for potential differences in competitive scenes, the online competitive games I focused on, and asked about in interviews are either defined as team-based First Person Shooters (FPS) and Multiplayer Online Battle Arenas

[13] Jenny, S. E., Besombes, N., Brock, T., Cote, A. C., & Scholz, T. M. (2024). *Routledge Handbook of Esports*. Taylor & Francis.
[14] De Liu, Li, X., & Santhanam, R. (2013). Digital Games and Beyond: What Happens When Players Compete? MIS Quarterly, 37(1), 111–124. http://www.jstor.org/stable/43825939

(MOBAs), both team-based online multiplayer genres with ranked modes included. The FPS games most often engaged in by the participants recruited included long-standing classics like Counter-Strike, almost decade-old esports such as Overwatch 2, and relatively new games like Valorant and The Finals. MOBAs mentioned by participants included League of Legends and DOTA.

Esports is a subject researched in a variety of different fields and industries, including business, medicine, sports science, computer science, and humanities subjects such as psychology and sociology.[15] There is quite an extensive history to video games as a subject of humanities research specifically: Motivations to play video games have been researched as early as 1981.[16] However, until the late 2010s, many institutions focused on analyzing computer games as a form of media entertainment, not as a medium of competitive expression. Even in the early days of high-level competition in esports, however, some academics spearheaded research into the subject, calling for analysis into framing esports in management theory as early as 2006.[17] Later on, several psychologists published investigations into psychological and sociological benefits[18][19] of gaming.

**Identity and Gender issues in competitive lobbies and discrepancy in research**

Women, nonbinary, and transgender individuals are a significant minority in esports and online competitive gaming, because of the social pressures and barriers involved with being a

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[15] Jenny et. al. 2024.
[16] Malone, T. (1981). "Toward a Theory of Intrinsically Motivating Instruction," Cognitive Science (5:4), pp. 333-369
[17] Wagner, M. G. (2006, June). On the Scientific Relevance of eSports. In *International conference on internet computing* (pp. 437-442).
[18] Mavromoustakos Blom, P. (2022). *Player Affect Modelling and Video Game Personalisation*. [Doctoral Thesis, Tilburg University].
[19] Gray, Peter (20 February 2015). "Cognitive Benefits of Playing Video Games". *Psychology Today*. Retrieved 1 March 2018.

minority in the space, as well as normalized bigotry often waved off as trash talk[20]. The latter is cited by interviewees as their main reason for not engaging in online competitive gaming at all.[21] Previous studies indicate that the combination of anonymity, lack of direct repercussions, high frequency of banter, and a competitive gaming culture in which players' thoughts and feelings are expressed loudly, often causes players to become more hostile and violent. Examining reactions to men's and women's voices in esports, Kuznekoff and Rose found that women's voices received three times more negative comments than a male voice or no voice.[22] Additionally, stereotype threat, or the idea that stereotype awareness affects performance in skill-based activities, is heavily observed in women's esports performance when their gender identity is cued. However, some early literature on the topic suggests that the social environment of esports differs heavily from game to game.

While other researchers have acknowledged the binary approach to researching this topic, there are very few papers that acknowledge gender identities outside of the social norm, and how these individuals may interact or approach the space differently, or similarly, to that of the gender they were socialized under. The research that exists is incredibly binary, and assumptions as to how individuals under the transgender umbrella interact and view online competitive spaces just extend to similarities to how women interact. A notable Feminist Studies Scholar, Amanda Cote, once wrote on the extensive nature of queer games studies, and directly acknowledges this.[23]

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[20] Cote, A. C. (2020). Gaming sexism. In *New York University Press eBooks*. https://doi.org/10.18574/nyu/9781479838523.001.0001
[21] Cote (2020).
[22] Kuznekoff, J. H., & Rose, L. M. (2013). Communication in multiplayer gaming: Examining player responses to gender cues. New Media & Society, 15(4), 541-556. https://doi.org/10.1177/1461444812458271
[23] Cote (2020).

**Personality research and motivations and identity in casual player psychology**

To fully capture the range of differences in individuality, I chose to expand my project to include a personality index. Personality indexes are psychometric assessments that numerically measure personality traits.[24] Corporations, schools, and individuals alike typically use more readable, mainstream tests such as the Myers-Brigg Type Indicator (MBTI) to predict job preferences as well as for entertainment purposes.[25] In personality psychology, researchers utilize these indexes to predict how personality traits influence thoughts, behaviors, feelings, and social adjustments in different individuals.[2627] The Big Five factors, Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism[28], have been agreed upon as the standard for personality measures since the 1990s, but I have personally chosen to use the HEXACO personality index[29] as an alternative. HEXACO contains the 5 factors of the Big Five (renaming neuroticism to the more positive connotation emotionality), as well as a 6th factor, Honesty-Humility. This is specifically because Honesty-Humility has been previously found as a factor of competitive drive when papers use the index, and because I believe that including measures of moral tendencies in personality indexes should be standard practice.

[24] Saucier, G., & Goldberg, L. R. (2003). The structure of personality attributes. *Personality and work: Reconsidering the role of personality in organizations*, 1-29.
[25] Pittenger, D. J. (1993). The utility of the Myers-Briggs type indicator. *Review of educational research*, *63*(4), 467- 488.
[26] Burisch, M. (1984). Approaches to personality inventory construction: A comparison of merits. *American psychologist*, *39*(3), 214.
[27] Reise, S. P., & Henson, J. M. (2003). A discussion of modern versus traditional psychometrics as applied to personality assessment scales. *Journal of personality assessment*, *81*(2), 93-103.
[28] McCrae, R. R., & John, O. P. (1992). An introduction to the Five-Factor model and its applications. *Journal of Personality*, *60*(2), 175–215. https://doi.org/10.1111/j.1467-6494.1992.tb00970.x
[29] Ashton, M. C., & Lee, K. (2009). The HEXACO-60: A short measure of the major dimensions of personality. Journal of Personality Assessment, 91, 340-345.

Several papers use personality indexes to measure motivations in online competitive gaming[30][31] and have discovered trends between a higher competitive motivation and personality factors like higher Emotionality, higher Conscientiousness, higher Openness, and lower Honesty-Humility. Like personality, researchers sought to define competitive motivations as a measurable index for similar purposes, although a standard measure of competitive drive seemingly does not exist.[32] Instead, many used two general frameworks to guide their survey questions, being Self-Determination Theory (SDT), and Achievement Goal Theory (AGT).

Achievement Goal Theory posits that all individuals have a level of need for achievement, particularly for goals that are challenging and meaningful,[33] while Self-Determination Theory concerns itself with the personality and cultural factors that drive motivation, measuring motivation itself, and how motivation affects individuals.[34] Because SDT positions personality factors as a cornerstone of the framework, I chose to frame my interview questions and such under this theory.

As for a quantifiable definition of competitive drive, I chose to use the Competitive Index from Urbig et. al. 2021, a paper that explored interactions between personality, competitive drive, and gender identity, in a quantitative format. They defined competitive drive as a multifaceted concept, with three main factors: Desire to Win, Personal Development Competitiveness, and Enjoyment of Competition. Individuals with a high Desire to Win feel a

[30] Abbasi et. al. 2020.
[31] de Hesselle, L. C., Rozgonjuk, D., Sindermann, C., Pontes, H. M., & Montag, C. (2021). The associations between Big Five personality traits, gaming motives, and self-reported time spent gaming. *Personality and Individual Differences*, *171*, 110483.
[32] Urbig et. al. 2021.
[33] Chi, L. (2004). Achievement goal theory.
[34] Deci, E. L., & Ryan, R. M. (2012). Self-determination theory. *Handbook of theories of social psychology*, *1*(20), 416-436.

heightened need to win more than others, and might go to riskier lengths just to win,[35] Individuals with higher Personal Development Competitiveness focus instead on mastery and skill[36] and individuals with a higher Enjoyment of Competition think higher of the competitive process itself, not to the achievement.[37]

[35] Malhotra, D. (2010). The desire to win: The effects of competitive arousal on motivation and behavior. *Organizational behavior and human decision processes*, *111*(2), 139-146.
[36] Ryckman, R. M., Hammer, M., Kaczor, L. M., & Gold, J. A. (1996). Construction of a personal development competitive attitude scale. *Journal of personality assessment*, *66*(2), 374-385.
[37] Houston, J., Harris, P., McIntire, S., & Francis, D. (2002). Revising the competitiveness index using factor analysis. *Psychological Reports*, *90*(1), 31-34.

# Methods

This project was approved by the IRB for data collection in February 2024.

## Research Population

The participant population consists of undergraduate students, from the United States, who have played at least one of five of the following games and logged at least 5 hours a week within the last 6 months: VALORANT, League of Legends, Overwatch 2, Call of Duty: Modern Warfare III, or Counter-Strike: Global Offensive. To be included, participants were required to complete both the interview and survey sections and provide all necessary demographic information. No incentive was provided. I recruited participants in two different ways: 3 were approached directly by me, and the rest responded to public posts on X or Discord calling for participation. Recruitment efforts yielded 10 participants, with a 65% response rate, and no exclusions.

## Demographics

The average age was 22 years, and 50% of respondents identified as male, while the rest of the pool identified as female (20%), or an identity under the non-binary umbrella (20%). 90% of respondents identified as bisexual. 80% of respondents played Overwatch 2 as their primary competitive game, but games such as DOTA, The Finals, and older versions of popular FPS games such as CounterStrike Source were mentioned.

## Data Collection Methods

Measurement was garnered through a combination of survey and semi-structured interviews over a 3 month (90-day) period. The survey included demographic questions, the six-factorial 60-item HEXACO personality index, and the three-factorial 12-item Competitive Index.

Both indexes were administered on a 5-point Likert[38] scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). After recoding as directed, average responses for each factor, as well as averages between men and non-men, were recorded.

The interview questions were designed specifically for this study and covered a variety of topics including competitive drive, identity, and opinions on online social environments of their game of choice. Interviews ranged from 20 minutes to 50 minutes. Interviewees were recruited either through direct messaging, word of mouth, or public posts on online forums.

All surveys and subsequent interviews were conducted on video call (e.g., Zoom/Skype). In all cases, the survey portion commenced with the informed consent process. All participants were given a survey link that proceeded with them signing an introductory informed consent script providing detailed information of the activity in which they were about to participate, the procedures that were involved in and the nature of the study. They were also informed that participation is voluntary and that they may withdraw at any time, as well as the aims of the study, an explanation of the study's confidentiality and contact information. Upon consent, the survey would commence.

Participants were prompted to consent to the interview after the survey portion, as well as to the interview being recorded (via audio) or not. Upon approval, semi-structured interview questions were administered. These questions were identically structured: two warm up questions, at least 3 questions relating to competitive drive and personal definitions of improvement, at least 2 questions related to identity, and 2 questions relating to online social environments. Audio recordings of the interviews were encrypted, password protected and stored

[38] Emerson, R. W. (2017). Likert scales. *Journal of Visual Impairment & Blindness*, *111*(5), 488-488.

on Dropbox, and promptly destroyed after use. Finally, an automated transcription service on Dropbox was used to provide transcripts of all interviews.

**Analytical Approach**

Considering the small scope of the survey portion of the project, any attempts of comparison to the true population may not be statistically meaningful.. Thus, there is no guarantee that the sample population presented here represents the larger casual gaming population, regardless of any appearance of normal distribution. Instead of analyzing the validity of the sample population, the quantitative data is simply utilized as supplementary data for more feasible conclusions to average responses in the qualitative data section. Any claims as to the statistical relationship between competitive drive and identity are drawn from previous conclusions published by Urbig et. al. 2021, while generalizations made from the qualitative responses are of my own findings, as the amount of data derived from my own interviews is sufficient.

Although true tests of correlation and variance cannot be derived from the final dataset, simple comparisons between genders within the dataset can be numerically performed, and present possibly significant differences without senselessly generalizing to a wider population. As such, a set of t-tests comparing personality and competitive index scores between cisgender men and the conglomerate of other gender identities are presented for speculation. Additionally, I chose to compare the quantitative dataset to Urbig et. al. 2021's dataset, as the group's conclusions are the closest to representing the larger population. However, this comparison is not entirely accurate to the true population, as the larger data set's population is not from the United States, and likely does not reflect the personality averages of online competitive gaming.

Interviews were coded by hand through a modified version of the three-factorial Competitive Index, on a 5-point scale that ranged from 1 (Little to No Indication) to 5 (High Indication). Responses to each question were rated on this scale, and a comparison of average CI scores between ranges of Personality Index scores, as well as between gender identities, was performed.

Despite utilizing established instruments, there is a high chance for some biases, on both sides and no way to truly conclude the extent to which the data is manipulated, as true measures of validity are impossible to perform. As the only individual interpreting the data, I took considerable effort towards reducing Researcher bias by meticulously formatting questions to be as objective as possible and took care to avoid Question-order bias through external advice.

# Results

## Quantitative Results

Summary Statistics

| Variable | mean | sd | median | min | max | range | skew |
|---|---|---|---|---|---|---|---|
| Gender* | 1.5 | 0.53 | 1.5 | 1 | 2 | 1 | 0 |
| Honesty-Humility | 3.35 | 0.4 | 3.4 | 2.8 | 4 | 1.2 | 0.11 |
| Emotionality | 3.67 | 0.8 | 3.75 | 1.7 | 4.6 | 2.9 | -1.27 |
| Extraversion | 2.64 | 0.58 | 2.85 | 1.7 | 3.3 | 1.6 | -0.34 |
| Agreeableness | 3.18 | 0.84 | 3.25 | 2 | 4.4 | 2.4 | -0.07 |
| Conscientiousness | 3.37 | 0.72 | 3.3 | 2.4 | 4.5 | 2.1 | 0.11 |
| Openness | 3.73 | 0.47 | 3.75 | 3 | 4.5 | 1.5 | -0.02 |
| Desire to Win | 3.6 | 1.04 | 3.75 | 1.75 | 4.75 | 3 | -0.48 |
| Personal Development | 3.76 | 0.98 | 3.875 | 1.5 | 5 | 3.5 | -0.87 |
| Enjoyment of Competition | 3.75 | 1.1 | 4 | 2 | 5 | 3 | -0.57 |

Table 1: Summary Statistics. N=10.

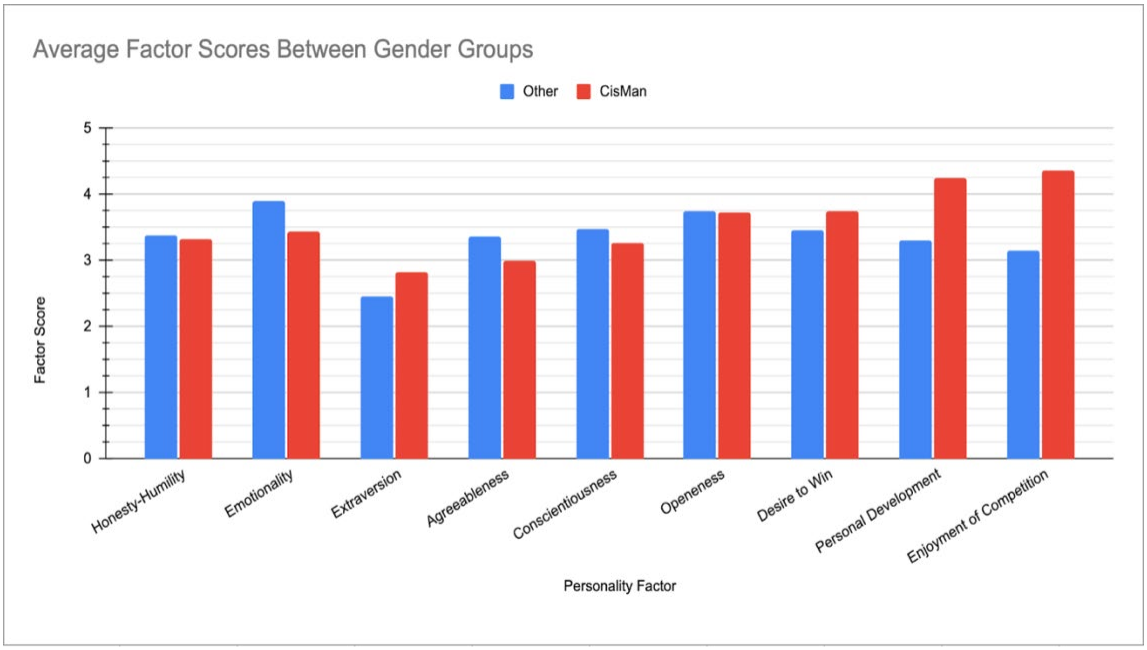


Figure 1: Average factor score comparison between men and non-men.

Notes: Other = all reported identities besides male, including but not limited to female, genderfluid, and nonbinary.

Table 1 reports the summary statistics for the esports dataset. While meaningful takeaways on the validity of the dataset cannot be made, observing the raw data trends raises potential points of interest for future investigations. Most notably, a majority of the variables presented follow a relatively normal distribution, apart from Emotionality and the Competitive Index traits, which all appear to be negatively skewed. Additionally, all Competitive Index traits presented a higher range and standard deviation. This trend aligns with the findings of Urbig et. al., whose summary statistics are presented in Table 2.

**Appendix C: Summary statistics**

| Variable | Means | Standard deviation |
|---|---|---|
| *Competitiveness* | | |
| Enjoyment of competition | 4.35 | 1.53 |
| Personal development competitiveness | 5.09 | 1.42 |
| Desire to win | 4.57 | 1.44 |
| *Personality* | | |
| Honesty-Humility | 4.86 | 1.00 |
| Emotionality | 4.42 | 1.02 |
| Extraversion | 4.64 | 1.11 |
| Agreeableness | 4.40 | 0.98 |
| Conscientiousness | 4.93 | 0.96 |
| Openness to experience | 5.08 | 0.97 |
| *Gender* | | |
| Female | 0.54 | 0.50 |
| *Confounding variables* | | |
| General self-efficacy (GSE) | 5.28 | 1.05 |
| General risk-taking (GRT) | 7.49 | 1.95 |

N=1,520.

Table 2: Urbig et. al. 2021 summary statistics.

While the averages for every factor for the esports dataset appear to be at least a datapoint lower than the larger dataset, the most noticeable difference seems to be the average responses for extraversion. While Urbig et. al. reports an average level of 4.64, the esports dataset reports an average of 2.64.

Means

| Gender | Honesty-Humility | Emotionality | Extraversion | Agreeableness | Conscientiousness | Openeness | Desire to Win | Personal D | Enjoyment of |
|---|---|---|---|---|---|---|---|---|---|
| Other | 3.38 | 3.9 | 2.46 | 3.36 | 3.48 | 3.74 | 3.45 | 3.3 | 3.15 |
| CisMan | 3.32 | 3.44 | 2.82 | 3 | 3.26 | 3.72 | 3.75 | 4.25 | 4.35 |

Standard Deviation

| Gender | Honesty-Humility | Emotionality | Extraversion | Agreeableness | Conscientiousness | Openeness | Desire to Win | Personal D | Enjoyment of |
|---|---|---|---|---|---|---|---|---|---|
| Other | 0.42 | 0.38 | 0.65 | 0.66 | **0.56** | **0.47** | 1.15 | 1.05 | 0.49 |
| CisMan | 0.41 | **1.07** | 0.5 | 1.04 | 0.9 | 0.53 | 1.02 | 0.71 | 0.49 |

Analysis Results

| T-Test | # Honesty-Hur | # Emotiona | # Extravers | # Agreeablene | # Conscientiousn | # Openene | # Desire to W | # Person | # Enjoyme |
|---|---|---|---|---|---|---|---|---|---|
| P value | 0.83 | 0.39 | 0.35 | 0.53 | 0.66 | 0.95 | 0.67 | 0.13 | 0.08 |

Table 3: Gender Differences in Competitive Drive. N=10

The comparison statistics between gender groups, and the resulting test statistics and p-values, are presented in Table 3. Comparisons between genders for each personality factor are included, as well as the intended comparison between genders and competitive drive. No single personality factor was found to significantly differ between gender groups. However, regarding Enjoyment of Competition , Cis Men (M=4.25, SD = 0.71) significantly and positively correlated, with the other gender group trending negatively with the variable (M=3.3, SD=1.05) (p = .08). This is at a 90% Confidence Interval, aligning with Urbig et. al.'s conclusions.

Comparison of genders concerning Personal Development yielded a p-value of 0.13, while Desire to Win was solidly insignificant.

## Qualitative Results

*General Perceptions of Casual Play, Social Environments, and Other Insights*

Visible improvement in online ranked games can be most easily indicated by your in-game rank, and most research projects utilize in-game rankings as a measure of skill. However, when asked about how they define improvement for competitive motivation, the consensus among the interviewees suggested the opposite. While four individuals cited K/D/A (your kills/deaths/assists ratio) or one's actual rank, a quarter of all respondents cited their measures of improvement in the game as "a feeling," or "a realization that you are making more informed

decisions." Two individuals stated their displeasure with using rank as a true test of skill, and cited experiences with low-rank coaches with the game sense of top-ranked players, as they generally don't dedicate significant time to raising their rank.

Almost all respondents, when prompted to share their feelings on their chosen game's social environment, responded generally negatively, although the relative emotional intensity of the respondents varied. Many shared the sentiment that the online environments of major online competitive games, such as Valorant, Overwatch, Call of Duty, League of Legends, Counter-Strike, and other games felt "hostile," "stressful," and/or "spitefully driven." However, this did not necessarily trend with any specific identity group: an equal number of men and non-men were either ambivalent towards the scene, or outwardly negative, although all respondents acknowledged a presence of good and bad lobbies.

Those who expressed negative feelings towards their online social environments often cited ways they dealt or coped with it: one non-man individual intentionally chooses to play in closed community leagues, which are privately hosted lobbies with verified players, in order to control the people they play against, and thus avoid negative interactions. Another male respondent chooses to turn off voice chat or match chat when faced with negative teammates.

Interestingly, there were a couple of answers given that suggested a difference in social environments between ranks, at least in Overwatch 2. One male individual cited that the social environment in lower ranked lobbies felt much more relaxed, and unconcerned with winning, compared to the middle to high ranked lobbies. Another repeatedly encounters higher than average ranked lobbies where teammates do not communicate or coordinate at all, and play individually instead. Interestingly, two top-ranked individuals in Overwatch 2 separately noted that top ranked games were less hostile, and more cooperative, than the lobbies just a few ranks

below them. They shared that, because very few people actually qualify to play in high ranked lobbies, you often run into the same people (known by unique username) day after day. Because these people do not have the luxury of full anonymity, these individuals mused that might be what discourages aggressive and/or negative behavior.

All participants were asked about the efficacy and morality of marginalized gender competitions, offering the Blizzard-created Calling All Heroes series for Overwatch 2 as an example, in order to determine their place in competitive play for the interviewees. While, for the most part, the men praised the effort, citing inclusivity and the importance of carving out a space for non-men as good reasons for it to exist, other individuals were unhappy with how these competitions are managed. A few participants happened to play in Calling All Heroes at some point, and expressed negative interest in their policy regarding gender verification, which was implemented because a few all-men teams posing as nonbinary teams slipped through the cracks in previous seasons. SixSix individuals shared frustration with the gender verification process because of its "invasive and/or gatekeeping" nature, as they generally ask for medical or legal documents for proof of gender identity, or to share life experiences with gender to strangers. They also require proof of identity from at least a year before the date of competition, barring individuals who recently came out from competing. Additionally, some had a problem with the type of proof the verification process asked for, as sharing definitive proof through these documents is difficult for nonbinary players, as well as pre-transition transgender gamers.

Lastly, I noticed a trend regarding individual opinions on competition that did not fit within the coding scheme I devised. A few participants mentioned offhandedly that they approached ranked modes of different competitive games differently, depending on their self-perceived skill level in each game. While in one game, such as Overwatch, they would treat

ranked modes extremely seriously, they would play other games' ranked modes very casually. This might be because of a stark difference in ranking between games: as previously mentioned, lower ranks tend to be treated more casually by their playerbase, and so that mentality might transfer between games.

*Desire to Win*

**Personality Differences**

Both numerically, and qualitatively, Individuals with higher Honesty-Humility (HH) scores trended towards a lower Desire to Win (DW) code, and vice versa. These individuals tended to either cite reasons I classify as enjoyment of competition, in a sort of "journey, not the destination" mentality, or simply enjoying playing the game with friends. One individual shared a personal change in mentality between games, where their proficiency in said game directly influenced their motivation to win: if they felt new, or just underperforming in general, they generally don't try as hard as when they feel they have the ability to win. Interestingly, this difference presented itself best when lower HH individuals were asked an unrelated question: how they would react when faced with teammates who make bigoted comments based on profile presentation. Three individuals with low HH scores (and one with a midrange HH score), and high DW, all individually expressed interest in punishing these players, ranging from leaving the game to "throwing" the game (intentionally playing to lose). Those that scored higher either stated that they were not affected, or simply would stay quiet.

**Gender Differences**

The biggest difference between gender identities in the DW category was in how often a desire to win was mentioned during the interview. While non-men generally expressed a baseline desire to keep winning to improve, 4 of the 5 spoke more on the other categories of competitive

drive, even when explicitly asked about barriers to winning games. On the other side, 4 of the 5 male-identified participants cited a desire to win as their reason for competing alongside reasons that fall under Personal Development Competitiveness. Between groups as a whole, however, there weren't any responses given by the interviewees that suggested any other reasoning for their desire to win beyond reasonings fueled by the game's social environment (such as spite, or self-improvement reasons), which are covered in the next section.

*Personal Development Competitiveness*

**Personality Differences**

While there were no significant numerical differences between personality scores and Personal Development Competitiveness (PDC) found in my data, higher coded responses toward PDC (from 3.5-4) were seen in individuals who scored higher on Emotionality. All interviewees were asked a question about what drives them to improve in online games, and the high Emotionality scorers generally expressed a higher concern with improving their performance compared to low Emotionality scorers, although their cited reasoning varied. Most of these were generally concerned with improvement for others' sake. One was concerned with "being a hindrance to others," while another simply wanted to show off and to be known as a good player by others. Others were much more concerned with proving their proficiency to themselves: some liked comparing their current ability to past ranks, while others wanted to prove they had skills to feel more reliable.

**Gender Differences**

PDC, as well as motivations for PDC, did not significantly differ between genders in the interview process, as most responses scored at about 3.5, but specific anecdotes shared by a few individuals may suggest some socially driven reasons. One interviewee directly cited spite as an

extrinsically driven core reason for their expressed PDC, citing social pressure to prove stereotypes about their gender wrong. Another, who scored low on PDC both in responses as well as in the survey, shared that they did not have intentions to improve because of that same overwhelming social pressure, stating that trying to strive for acknowledgment by randoms "felt like too much." A transgender individual included in the study shared their higher motivations for PDC being a result of stereotype threat but felt less pressure to do so after transitioning, and feels that reasoning has changed to one of personal betterment. On the other hand, men's responses generally shared some sort of intrinsic motivation to improve, although that reasoning differed more on the personality side. Some simply wanted to repeatedly show off their skill, and "watch the number (rank) get higher," or some just simply wanted to improve just to improve, although a couple of non-men also shared these reasonings.

*Enjoyment of Competition*

**Personality Differences**

Numerically, Enjoyment of Competition (EC) was generally high among respondents, but there was no one individual personality trait that trended heavily either way in the coding process. One trend of note, however, was that those with lower Agreeableness scores happened to express more problems with the competitive environment as a whole compared to their peers, and had an overall negative outlook on competing when prompted by interview questions such as one that asked about social environment. This did not accurately reflect the numerical responses they gave, but the survey questions cannot fully measure cases where EC could vary based on the situation, so the discrepancy is to be expected.

**Gender Differences**

Like in the dataset, gender identity was a clearer differentiator between EC respondents, with non-men responding with an EC code much lower than men did on questions related to interacting with the competitive space in general. While one respondent expressed that competing was "a waste of time," and generally expressed disinterest in the competitive side of games, but suggested that their enjoyment of competition was higher at one point, and cited social experiences as a factor, which will be discussed further later on. Others mentioned that the social pressure concerning stereotype threat made competing either unfun or emotionally exhausting, as they felt a higher pressure compared to their male peers. Male respondents responded the opposite: they generally did not feel a high pressure to perform for any reason other than their own perceived proficiency, or they did not feel any pressure to perform at all, perhaps contributing to a higher EC score on their side.

Two non-men scored as high on EC as the rest of the men did numerically, but the interview process revealed a clearer line. The first shared that they only compete in closed communities for the original Counter-Strike, and while they highly enjoy competing in those spaces, they emotionally shut down if they play in an online lobby with strangers. The second, while scoring high numerically, shared that this enjoyment is highly situational: they much rather enjoy competing when playing with teammates that they know intimately, and, when faced with random teammates, they shut down similarly to the person who plays Counter-Strike.

## Discussion

The combination of quantitative and qualitative data yielded unique conclusions on the associations between identity and competitive drive. The unconventional gender divide between men and non-men yielded a potentially significantly different Enjoyment of Competition average for both research methods, which aligns with the conclusions of Urbig. Et. al. 2021. Non-men tended to score lower in EC than men did, and further questioning through interviews suggested that relative reclusiveness from fully public gaming spaces, and a clear intention to play with known teammates instead of randoms, were considered means to avoid toxicity in some way. This finding implies that gendered differences in some factors of competitive drive could be a direct result of social environments. While this has been directly concluded before,[39] the methods utilized in this project are novel and unique to the esports field and could serve as a baseline for future esports research related to identity. Additionally, by including transgender and nonbinary individuals in this study, and still yielding similar results to previously binary reports, results suggest that social "othering" in general affects levels of competitive drive, and not just your socialized gender identity.

The quantitative results indicate potential threads for future research into the average personality factor scores of competitive gamers compared to casual gamers. Namely, the Extraversion average of the full sample scored below the average score of Urbig et. al. Previous findings referred to a positive association between social games and extraversion[40][41] but none

[39] Cote (2020).
[40] Zeigler-Hill, V., & Monica, S. (2015). The HEXACO model of personality and video game preferences. *Entertainment Computing*, *11*, 21–26. https://doi.org/10.1016/j.entcom.2015.08.001
[41] Abbasi AZ, Nisar S, Rehman U, Ting DH. Impact of HEXACO Personality Factors on Consumer Video Game Engagement: A Study on eSports. Front Psychol. 2020 Aug 5;11:1831. doi: 10.3389/fpsyg.2020.01831. PMID: 32849078; PMCID: PMC7422731.

specifically focus on online competitive gaming demographics. Future studies on average personality factor levels specifically in competitive social environments, could use this as a guideline while acknowledging the inconclusive evidence.

The social environment of online games based on the conclusions of the participants suggest that while the environment is toxic, these participants either found ways to cope with it and engage in the area despite these or weren't really bothered by them in general. This environment motivated some people to either carve out space for themselves to enjoy competition without interference or simply or spiteful enough to throw themselves headfirst into a disagreeing environment and improve themselves, regardless. Many decided positive interactions with random people in these games as a contributing factor towards coming back and playing on these ranked systems. As a result, I concluded that the social environment of online competitive games is complex and multifaceted but not discouraging enough to stop the sample population from engaging with it.

Further investigation into how social environment changes the perception of competitive play should likely include direct comparisons between men and non-men as the contrasting data assisted in comparing both sides' personal experiences and provided a clearer picture of their differences in experience.

There are a myriad of limitations to consider when interpreting this paper. Namely, the lack of data on the quantitative side renders most of the associated conclusions questionable. The decision to survey and interview the same participants allowed for manual associations between personality scores and individual responses, which assisted in finding identity-based trends, but left the statistical side of the paper lacking in reasonable evidence. If this study is repeated, a larger scale study utilizing the same variables would take the place of the existing survey, and

interviewing participants would be contacted randomly after completing the survey separately, therefore gathering a larger, more randomized population. Additionally, this study was conducted with a single undergraduate researcher, using data collection methods developed and implemented in the esports field within the past 4 years.

Through a mixed methods format, I sought to find distinct competitive motivations between identity factors, record the effects of social environment on competitive drive, and present unique insights into the nature of the online competitive social environment not recorded elsewhere. Over the course of the study, I found conclusive evidence of gendered differences in certain factors of competitive drive, as well as personality differences, all stemming from anecdotal issues either related to the social environment, or personal perceptions of skill. Furthermore, I arrived at my conclusions on how identity interacts with competitive drive that prove similar to an existing paper covering a larger data pool and offered insight into how individual players think of, and navigate through, such a unique competitive environment. While the methodology is imperfect, I hope to lay some groundwork for future investigations into individualized experiences, and motivations, with online competitive gaming.

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