

Addiction to eSports and customer's well being

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Abstract:

The research carried out in this article focuses on the role of eSports on consumer well-being, in this case on “gamers”. The research was carried through a questionnaire to eSports practitioners in Italy to understand which variables influence their well-being. In particular, the construct “Passion” (Vallerand 2003) was used. The results indicate that unregulated control sessions, lack of coaching/support during gaming sessions and unhealthy inclusive contexts can lead to the development of gaming disorder.

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Introduction

The term eSport¹ refers to all video game competitions organized and practiced at a professional level. Literally, it translates as “electronic sports”, where the prefix “e” refers to the concept of electronic, while the noun sport emphasizes the element of competition, discipline and preparation that characterizes such practices.

Over the years, many definitions of eSports and their connection to traditional sports have been given; “eSports is an area of sporting activities in which people develop and train mental or physical abilities in the use of information and communication technologies” (Wagner, 2006).

ESports are organized into tournaments for different kind of video games: from sports games such as “Fifa”/’eFootball’ to strategy games such as “Starcraft”, “Moba” (Multiplayer Online Battle Arena) games such as “Dota 2” and “League of Legends”, driving simulators and First-person shooters. Since 2010, the eSports sector has expanded significantly, reaching its peak in 2020 during lockdown, thanks to the increased dissemination of eSports content by streaming platforms such as YouTube and Twitch.

As examined in the report by Deloitte and IIDEA (2024) at the heart of the eSports sector is an ecosystem that is fundamental to the development of its market, and this ecosystem is based on tournaments (which are supported by teams and leagues). The global eSports audience has grown from 300 million viewers in 2022 to 474 million in 2024, reaching an estimated 600 million in 2025 (IFSE 2022). Various explanations have been given regarding eSports consumption and why viewers follow live eSports events, including that of Hua, Y (2023). which attributes the main motivations for eSports consumption to entertainment, escapism, knowledge of the game, and player skills. The European eSports market is worth around 1.4 billion dollars (AsoWorld 2024), but it should be noted that in 2024, approximately 784 million dollars (Cognitive Market research) of this market was attributable to betting on eSports. The eSports sector is frequented by a predominantly young target audience, the issue of problem gambling takes on particular importance, especially given the disorders it could cause in young people who are still developing emotionally and cognitively. Several studies have been published on how gaming, and eSports in particular, can lead to the development of a series of gaming disorders, including gambling addiction. This relationship, as also analyzed by Bányai, F., Griffiths (2019), is considered in terms of how unregulated gaming can have significant repercussions on the mental and physical health of individuals, with children and adolescents being particularly vulnerable.

The World Health Organization in 2013 included the “Internet Gaming Disorder” in the list of mental and behavioral disorders are recognized by the American Psychiatric Association (DSM-5). Video game manufacturers have been called upon to take the necessary measures to discourage this type of addiction to their content, particularly that derived from content markets that develop within them and often involve minors. According to Yap. (2024), it is necessary to establish a set of ethical standards within the eSports ecosystem to ensure responsible and sustainable growth in this sector, without leading to tighter regulation by institutions that would block the development of this sector in various countries.

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The main objective of this article was to analyze how eSports activity is permeated by passion. The study aims to understand how the mental health of eSports trainees (pro-players, gamers, or spectators) may be influenced by such activity, and whether it fosters a predisposition toward obsessive and problematic play, or rather harmonious and flexible engagement.

eSport Passion

Passion's scale (Vallerand, 2003) was adopted to understand how eSports activities affect the well-being of practitioners. To be a passion, this activity must denote something meaningful in one's life or, at the very least, something that one cares deeply about and regularly devotes time to. Passion is seen as a source of motivation that can bring well-being and motivation to every individual's daily life but, at the same time, it can also arouse negative emotions and interfere with the achievement of a balanced and successful life.

Two different types of passion are thus identified, which vary according to how the activity has been internalized by the individual, namely: harmonious passion (HP) derives from an autonomous internalization of the activity in the person's identity, which occurs when the individual accepts the activity as important to them, without any contingency. This type of internalization produces a motivational force that drives individuals to willingly engage in the activity, in harmony with other aspects of their lives, so that they are not forced to do a given activity but freely choose to do it. Obsessive passion (OP), on the other hand, derives from a controlled internalization of the activity in one's life. Unlike activities carried out with harmonious passion, such activities involve contingencies such as feelings of social acceptance or self-esteem. These contingencies lead individuals to engage in such activities, not so much because they want to, but because they feel compelled to, leading to an uncontrollable commitment to an activity. In fact, although such activities may be enjoyable for various individuals, in these cases, due to contingencies, passion controls the individual, taking up a disproportionate amount of space in their lives and placing this activity in conflict with others.

This analysis of passion leads us to consider the prevalence of harmonious passion, in terms of emotional outcomes, in an individual, as contributing to greater positive emotions and fewer negative emotions, while the opposite is true for obsessive passion. This is justified by the fact that an activity carried out with harmonious passion is more flexible in terms of commitment on the part of the individual, while an activity carried out with obsessive passion is much more rigid in terms of commitment and in the sense of compulsion to carry out that activity. The two passions also have effects at the end of the activities carried out. In fact, with harmonious passion, positive emotions will predominate after carrying out the activity, with the individual deciding for themselves when and how much to commit without feelings of remorse or obligation, while with obsessive passion, negative emotions will predominate once a given activity has been completed. These negative effects can manifest themselves as a form of remorse for "having completed the activity when time could have been spent on other things that were considered more useful", or as a feeling of anger when the activity is prevented. A very important contribution to the research was also made by the analysis of previous studies on the incidence of passion in video games and how this activity affects the well-being of players and their mental health. These analyses are fundamental in order to frame the role of passion within eSports, as the world of eSports is closely linked to that of video games.

Also Lafreni`ere et al. (2009) analyze the impact that this activity has on gamers in terms of wellbeing and passion and harmonious and obsessive passion. In all studies on this topic, harmonious and obsessive passion have always been subject to positive emotional experiences for the former and negative emotional experiences for the latter. Furthermore, the correlation between the two in terms of positive emotions in various areas of life has always been negative. In the research by “Lafreni`ere” et al. (2009), this correlation was found to be positive, as it was found that engaging in an activity linked to obsessive passion leads in any case to a sense of satisfaction that evokes a positive emotional experience, since completing that compulsive activity determined by contingencies gives the player a sense of relief and reassurance. As analyzed in the study by Lafreni`ere et al. (2009) and Infanti (2023) “harmonious passion is seen as a positive predictor of life satisfaction, while obsessive passion is not related to life satisfaction. Similarly, HP has a positive influence on players” psychology, while OP is harmful to it. In addition, predictive symptoms have been identified on how video game activity is expressed and carried out under the influence of problematic gaming, and it has been found that symptoms such as patience, low levels of conflict and mood swings are predictors of a harmonious passion, while loss of calm, a high level of conflict and relapses are predictors of an obsessive passion and problematic gaming disorder.

Methodology

The analysis began with a survey containing 14 items divided into 7 questions concerning harmonious passion (HP) and 7 questions concerning obsessive passion (OP) on a Likert scale ranging from 1: strongly disagree to 7: strongly agree.

The questionnaire to eSports practitioners in Italy, circulating the questionnaire within various communities and eSport (within WhatsApp groups that included both amateur players and real professional players) and by posting flyers containing the QR code to participate in the questionnaire in various video game stores, inviting eSports players to participate.

Respondents were 294 individuals, 92% men, 6% women, and 2% preferred not to specify. The percentages of age groups are more evenly distributed: the largest group, 35%, was in the 26-30 age group, 20% were between 21 and 25, 18% were between 31 and 35, 11% were between 15 and 20, 10% between 36 and 40, 4% between 45 and 49, and 1% between 46 and 50. 73% have participated in official eSports competitions at least once, while 27% have never participated in official competitions.

We implemented a data cleaning procedure to ensure data quality and completeness. Specifically, cases where respondents had answered less than 30% of the total items were excluded, resulting in a final working dataset of 202 valid observations. We verified the factor structure and internal consistency of the two key constructs measuring passion for eSports, HP and OP, through exploratory factor analysis and Cronbach's alpha coefficients, which confirmed the expected two-factor solution and satisfactory levels of reliability. Regarding the composition of the sample, the gender distribution was as follows: 1 = male, 2 = female, and 3 = prefer not to answer. The age distribution, as well as the variables indicating years of eSport practice, since when participants have been training, frequency of play, and average time per session, were all categorical and summarized using frequency tables. One key variable, eSports category, allowed for multiple responses, as participants could indicate all the categories of eSports they actively played. This variable was broken down into a set of dummy variables, one for each category, using a string

splitting procedure. From this matrix, we calculated both (a) the total number of eSports played by each respondent and (b) a more parsimonious categorization that aggregates similar genres. A descriptive summary was then produced to assess the overall distribution of participation across eSports categories. The same procedure was applied to other multiple-choice items, including inclusion, psychological support, competition, and practices. Each of these questions was split into multiple dummy variables representing the different response options, followed by descriptive tables showing the frequency of each category selected among participants. Finally, we included a series of binary and categorical indicators that capture additional aspects of competitive participation and context, namely recognition protection, membership of an eSport team, competitions and competition level, which were also summarized through frequency distributions.

Results

The linear regression model was estimated to be harmonious passion (HP) as the dependent variable and all other variables in the dataset, except obsessive passion, as predictors. The model explains approximately 47.7% of the total variance in HP (adjusted $R^2 = 0.34$), indicating moderate explanatory power. To test whether harmonious passion could be predicted from the set of available variables, we implemented an XGBoost regression using HP as the dependent variable and all other variables (except obsessive passion) as predictors. After converting categorical variables into dummy indicators and dividing the sample into training (80%) and test (20%) sets, the model was trained with standard gradient boosting parameters. Model performance was evaluated using root mean square error (RMSE) and coefficient of determination (R^2) on the test set. The results indicate an RMSE of 1.02 and an R^2 of 0.33, demonstrating that the model performs worse than a simple baseline that predicts the mean of the dependent variable. In practical terms, this means that the variability in harmonious passion cannot be meaningfully explained by the available predictors and that the best prediction for any individual's level of harmonious passion is close to the sample mean rather than a weighted combination of sociodemographic, behavioral, or attitudinal variables.

The second linear regression model was estimated using obsessive passion (OP) as the dependent variable and all remaining variables, except harmonious passion, as predictors. The model explains a substantial percentage of variance in obsessive passion ($R^2 = 0.58$, adjusted $R^2 = 0.47$), with the overall F-test indicating a highly significant fit. Thus, the set of predictors together accounts for nearly half of the variation in OP among respondents. We also estimated an XGBoost regression with OP as the dependent variable and all remaining variables, excluding harmonious passion, as predictors, as in the previous model. The model's performance indicates a root mean square error (RMSE) of 1.02 and a coefficient of determination (R^2) of 0.42, suggesting that approximately 42% of the variance in OP is captured by the set of predictors. Overall, the XGBoost model reveals that obsessive passion is partly predictable from observable behavioral and social variables, unlike harmonious passion, which remained statistically idiosyncratic. To complement the linear and XGBoost analyses, a regression tree was estimated. In this case, the OP tree retains several terminal nodes indicating how different variables jointly contribute to significant divisions. The first and most important partition occurs on average time per session, separating participants with shorter gaming sessions (< 4) from those with longer gaming sessions (≥ 4). This suggests that time intensity is the main factor differentiating low from high OP levels. Among respondents with shorter gaming sessions, further subdivisions occur based on frequency and professional

orientation. Individuals who play frequently (≥ 4) but with short sessions show the lowest expected obsession, while those who play less frequently but without professional goals tend to report higher OP. This pattern implies that obsessive engagement may stem more from irregular but emotionally charged involvement than from consistent, disciplined activity. Among longer gaming sessions (average_time ≥ 4), the next key division of the branch is inclusion, distinguishing less socially integrated participants (inclusion < 4 , average ≈ 3.32) from those with higher levels of inclusion (≥ 4 , average ≈ 5.18) the last shows higher level of OP. Within the latter group, psychological support and game genre further subdivide the data: greater OP appears among those who receive greater psychological support and play combat-oriented games. The respondents with longer gaming sessions showed higher level of OP overall.

This structure suggests a link between social and emotional dependence and high OP.

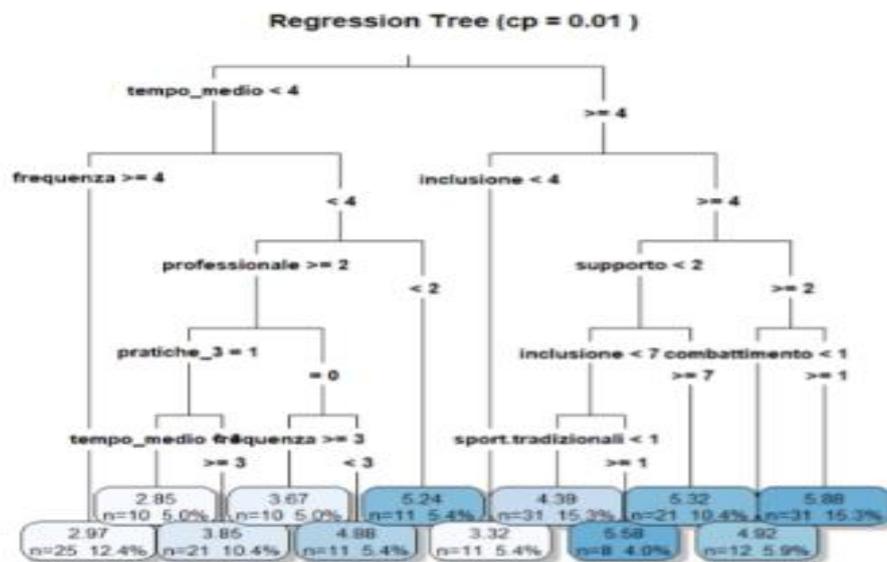


Figure 1: OP Regression Tree

Conclusion

Overall, the analyses converge in revealing two distinct motivational profiles underlying engagement in eSports.

The harmonious passion variable was found to be a relatively flat variable that could not be predicted by external and social factors, unlike obsessive passion.

Obsessive passion was found to be a variable closely linked to and conditioned by external factors, including playing time, inclusion, and psychological support. In particular, the model portrays obsessive passion as a state that arises when an individual's connection to eSports becomes socially anchored and emotionally regulated by the expectations of others or by belonging to the community, rather than being internally self-determined.

Therefore, particular attention must be paid to playing time, which needs to be regulated and controlled as much as possible, as great level of playing time has been found to be the most accurate predictor of high levels of obsessive passion. Inclusion in communities must be perceived as healthy inclusion and not as inclusion that is affected a sense of external acceptance and social pressure. To encourage this, it is necessary to remove elitism and gatekeeping from communities. Finally, the high level of psychological support for those who show higher levels of obsessive passion highlights the lack of coaches and psychologists before burnout and gaming disorder

manifested themselves, leading to the need for educational courses on self-regulation and motivation.

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