Aloma 2018, 36(2), 59-68
Revista de Psicologia, Ciències de l'Eduació i de l'Esport
ISSN: 1138-3194

Basic psychological needs, passion and motivations in amateur and semi-professional eSports players

Samuel García-Lanzo & Andrés Chamarro
Autonomous University of Barcelona

Received: 19-7-2018
Accepted: 29-10-2018

Basic psychological needs, passion and motivations in amateur and semi-professional eSports players

Summary. *Electronic sports (eSports) are a category of video games that are played competitively following rules, either in teams or individually. Currently, the top videogame is League of Legends (LoL), a game in the genre known as Multiplayer Online Battle Arena (MOBA) with more than 100 million monthly active players worldwide. Research has shown that video games can satisfy basic psychological needs and be experienced as a passion, and that passion is a useful construct to help understand the different motivational patterns of video game use. In addition, no relevant studies have been found with professional players. Therefore, the objective of this study is to explore whether knowledge of the degree of frustration of gamers' basic psychological needs in everyday life, users' passion and their motives to play makes it possible to distinguish between types of players (amateurs or semi-professionals). The participants were 195 Spanish-speaking LoL players (156 amateurs and 39 semi-professionals) who were passionate about LoL. The results indicate that the game is most often played for competitive, social and exploration reasons. As for passion, players play more out of harmonious passion than out of obsessive passion, the latter being associated with the frustration of basic psychological needs. As a whole, being younger, less motivated by the plot of the game, having greater motivation to improve mental abilities, and spending more hours playing are predictors of the type of player (semi-professional). It is concluded that eSports players are not characterized as obsessed or frustrated people, and that the use of videogames is not necessarily harmful.*

Keywords: *eSports; basic psychological needs; passion; motivation; League of Legends*

Correspondence
Ander Chamarro

http://orcid.org/0000-0002-8059-5467
Universitat Autònoma de Barcelona
Andres.chamarro@uab.es

Necesidades psicológicas básicas, pasión y motivaciones en jugadores amateurs y semi-profesionales de eSports

Resumen. *Los deportes electrónicos (eSports) son un conjunto de videojuegos que se juegan de manera competitiva siguiendo unas reglas, ya sea por equipos o en solitario. Actualmente, el videojuego por excelencia es el League of Legends (LoL), del género Multiplayer Online Battle Arena (MOBA), con más de 100 millones de jugadores mensuales activos a nivel mundial. La investigación ha demostrado que los videojuegos pueden satisfacer necesidades psicológicas básicas y ser vividos como una pasión, y que la pasión es un constructo útil para ayudar a comprender los diferentes patrones motivacionales del uso del videojuego. Además, no se han encontrado estudios relevantes con jugadores profesionales. Así pues, el objetivo de este estudio es explorar si la frustración de las necesidades psicológicas básicas en la vida cotidiana, la pasión y los motivos de juego permiten diferenciar el tipo de jugador (amateur y semi-profesional). Los participantes fueron 195 jugadores de LoL (156 amateurs y 39 semi-profesionales) castellano-hablantes y apasionados al LoL. Los resultados indican que el uso predominante del juego son los motivos competitivos, sociales y de exploración. En cuanto a la pasión, los jugadores juegan más por pasión armoniosa que por pasión obsesiva, siendo esta última junto con la frustración de las necesidades psicológicas básicas las más bajas. En conjunto, tener menor edad, una menor motivación por la historia del juego, una mayor motivación por mejorar las capacidades mentales, y dedicar más horas de juego por semana son predictores del tipo de jugador (semi-profesional). Se concluye que los jugadores de eSports no se caracterizan por ser personas obsesivas o frustradas, y que el uso del videojuego no es necesariamente perjudicial.*

Palabras clave: *eSports; necesidades psicológicas básicas; pasión; motivación; League of Legends*

Introduction

eSports consist of a number of organized video game competitions in which individuals or teams play by a set of established rules. Among the most popular video games are those referred to as Massively Multiplayer Online (MMO) games. These games are distinctive because they allow many players to be connected at the same time via the Internet and they permit the players to interact with one another. Some of the games in this category are Multiplayer Online Battle Arena (MOBA) games (e.g., *League of Legends* and *DOTA 2*) (AEVI, 2018). *eSports* are set apart from other video game play by the fact that they are organised competitions (Plarium, 2017), with video game events taking place in large sports facilities and followed by an audience of millions online (Chanson, 2017).

Today, the eSports video game par excellence is *League of Legends* (LoL). The game had more than million active players around the world each month in 2016, according to figures from the company Riot Games (Vallejo, 2016). Over 80 million viewers watched the finals of the video game's World Championship live on the Internet (Riot Games, 2017).

LoL is a real time strategy game played in teams. Each contest pits two five-member teams against one another, with each team member playing one of a range of specific roles: *ADC* (Attack, Damage, Carry, or players focused on attacking the opponent and causing the greatest possible amount of damage, but lacking in defensive skills or battlefield capabilities), *Support* (players who focus on backing their allies by providing medical help or by hindering the activities of their enemies), *Top* (players who focus defending and attacking the upper line), *Mid* (players focused on protecting the middle line) and *Jungler* (players focused on acquiring experience and gold by confronting the neutral creatures that are found in the jungle). The field of play is called *Summoner's Rift,* and it is divided into three "lanes" (Top, Mid and Bot). Also on the game map is the jungle, home of the neutral monsters. By killing them, players can get rewards such as gold and experience. Gold is among the resources that can be used to help strengthen a team. The ultimate object of the game is to destroy the opposing team's main base, called the Nexus.

LoL players (known as summoners) can choose from over 140 different characters, each of whom has five unique abilities that can be used at any point. Each participant in the game plays a certain position with a certain role, and these roles can require the use of specific abilities. In addition to the players' range of abilities, clear communication during game play is critical. Teams make sure that they can communicate smoothly by choosing a captain, known as a shot caller. This player issues instructions to his or her teammates as to the team's strategy and the targets they should prioritise (Pereira, Wilwert, & Takase, 2016). Some studies have underlined the similarities between eSports and traditional sports: the teams compete toward a common goal, the players use strategies as a team and each plays his or her own position or role (Costa, 2013). The parallels with traditional sports even go beyond the competitions themselves, with professional players living together in training centres known as Gaming Houses. The training sessions held there can consist of *scrims* (sessions against other professional teams) or of *replays* (the viewing of your own or other teams' recorded matches in order to analyse mistakes and learn new techniques or tactics) (Pereira et al., 2016). Himmelstein, Liu, and Shapiro (2017) have also suggested that the mental requirements to which competitive eSports participants are subjected are similar to those placed upon traditional athletes. Elsewhere, Nuyens, Kuss, López-Fernández, and Griffiths (2018) have argued that non-problematic video gaming can have a positive impact on players' cognitive processes.

Lately, the eSports sector has become much more professionalised, with official teams now boasting coaches, psychologists and other trainers, as well as significant investments in infrastructure and advertising. Nonetheless, little research has examined this expanding practice, even though millions of people now take part in these activities on a daily basis, and despite the fact that the public at large, and especially young people and adolescents, are devoting an ever-larger share of their leisure time to them (Pérez-Rubio, González, & Garcés de los Fayos, 2017). The sheer magnitude of this social phenomenon, then, points to the importance of studying the behaviour of participants in this video game. However, when Mora-Cantallops and Sicilia (2018) conducted a comprehensive review of the academic literature on MOBA games, they found that the genre had been largely neglected by researchers and that no studies including professional players had been carried out.

It is true, though that there has been a good deal of psychological research into video games in general. Yee (2006) found that there are three overarching kinds of factors that drive people to play video games: the desire for achievement, the seeking of immersion and social factors. Fuster, Chamarro, Carbonell, and Vallerand (2014) identified four motivating factors: exploration, socialisation, achievement and dissociation. Finally, Kahn et al. (2015) identified six types of player motivations: *socializers* (the interest in building and maintaining social relationships), *completionists* (the interest in exploring all elements of the game to the greatest extent possible), *competitors* (the interest in winning games and engaging in behaviour that contributes to victory), *escapists* (the interest in escaping from reality), *story-driven* (the interest in a game's plot ant the characters' backgrounds), and *smarty-pants* (an interest in enhancing mental capacity and intelligence).

Researchers have also connected these motivating factors to personality characteristics (Graham, & Gosling, 2013) and even to satisfaction and wellbeing (Woo, Woong, & Young, 2012). Others have analysed

issues such as players' performance and their chances of victory (Ng, Nesbitt, & Blackmore, 2014), their perceived self-efficacy (Giménez, 2015) and their degree of enjoyment (Trepte & Reinecke, 2011). Finally, another recent study explored the links between eSports players' personalities and the tendency toward burnout (Pérez-Rubio et al., 2017).

One suitable tool for the study of the implications of video game use is the Dualistic Model of Passion (DMP), created by Vallerand et al. (2003). This model defines passion as an individual's strong tendency to engage in an activity that he or she enjoys, an activity upon which the person places importance and in which he or she invests time and energy. Activities that awaken passion also have strong implications for individuals' identities, coming to form a part of how they define themselves. It is important to examine the different ways in which individuals interiorise game playing as part of their identities. It is possible to draw a distinction in this regard between two different kinds of passion: harmonic passion (HP) and obsessive passion (OP). HP is the result of the autonomous internalisation of the activity as part of the person's identity. When an individual exhibits this kind of passion, the activity plays an important role in his or her identity, but it does not overwhelm other aspects of identity and can harmoniously share space with other parts of the person's life. People experiencing HP can give up the activity if they decide that it is having a negative impact on their lives. Meanwhile, OP emerges from an externally driven, controlled internalisation of the activity into the person's identity. This control can come from intrapersonal and/or interpersonal pressure to engage in the activity. Because the individual's commitment to the activity is not under his or her control, the passion for the activity gradually occupies a disproportionate part of the person's identity and ultimately encroaches on and clashes with other parts of the person's life. As a result of this process, people continue inflexibly to engage in the activity, even when it does not provide them with positive experiences and even though it may involve a high cost to them in the form of deteriorating relationships or the failure to meet work obligations (see Vallerand, 2012, for a review).

In a meta-analysis, Curran, Hill, Appleton, Vallerand, and Standage (2015) showed that HP is linked to positive interpersonal results (such as positive affect, flow and performance). Meanwhile, OP was associated with both positive and negative interpersonal results (including negative affect, rumination and vitality).

There have been a number of studies related to passion in video games. For example, Fuster et al. (2014) explored the links between passion and players' differing motivations to play *World of Warcraft* (WoW), finding that HP and OP were associated with different kinds of involvement in Massively Multiplayer Online Role-Playing Games (MMORPG), which more than other games are focused on exploration, plot, missions and other more cooperative activities. This study also found passion to be a useful construct in the study of players' range of motivational patterns. Elsewhere, Bertran and Chamarro (2016) have shown that passion is linked both to performance and to abusive game playing by LoL users. Their results indicate that HP tends to insulate players from the negative consequences of gaming. Conversely, OP is associated with greater negative consequences and the use of gaming to evade reality, as well as with improved game performance. These results suggest that the type of passion exhibited by players is important, as it influences their likelihood of engaging in maladaptive behaviour and their game performance.

Another model that can be used to measure players' implication in video gaming is the Basic Psychological Needs Theory (BPNT), which postulates that individuals meet their needs is a process similar to that of nutrition, with certain nutrients being necessary for any living being's growth, integrity and overall health (Ryan & Deci, 2000). Humans take in these "nutrients" when they satisfy their needs for autonomy, competency and relatedness. BPNT argues that factors or situations that facilitate the meeting of these three needs foster wellbeing, while factors that thwart the satisfaction of these needs detract from individuals' wellbeing.

In a study that found links between video gaming and the satisfaction of psychological needs, Weinstein, Przybylski and Murayama (2017) showed that the meeting of psychological needs led to improved health and acted as a protective factor against Internet Gaming Disorder (IGD), a pattern of persistent gaming that is characterised by a lack of control over the impulse to play video games. Allen and Anderson (2018) have shown that a lack of satisfaction of basic psychological needs, both in video games and in everyday life, makes gamers more likely to suffer from IGD. Elsewhere, it has been shown that video games can in fact satisfy basic psychological needs and that users can experience them as a passion (Mills et al., 2018).

Recent research has suggested that prolonged experiences of the frustration of basic psychological needs (FBPN) (in other words, the frequent appearance of obstacles that stand in the way of the satisfaction of individuals' basic psychological needs) can lead to greater OP and engender a greater risk of dependency on an activity (Lalande et al., 2017).

Finally, it is worth underlining that prior research into eSports has been conducted using samples taken from the population of university students. These studies have failed to consider different kinds of players or the different motivations that drive people to play. These factors are worthy of attention, especially given that, according to Todoli (2017), LoL is becoming a sport, and it is possible that some players do not view the game as mere entertainment, but rather as a sporting competition like any other. Thus, distinctions must be drawn between those who play the game for entertainment purposes and others who use it in the hope of becoming professionals.

Table 1. Characteristics of the sample

		n (%)
Gender	Man	181 (92.8%)
	Woman	14 (7.2%)
Type of gamer	Amateur	156 (80%)
	Semi-Professional	39 (20%)
Position	ADC	51 (26.2%)
	Jungler	37 (19%)
	Mid	41 (21%)
	Support	38 (19%)
	Top	28 (14.4%)
Education	Primary	4 (2.1%)
	High school	67 (34.4%)
	University	124 (63.5%)
Occupation	Student	102 (52.2%)
	Job holder	43 (22.1%)
	Student and job holder	37 (19%)
	No job or studies	13 (6.7%)

In light of all the observations above and of previous research (e.g., Mills et al., 2018; Kahn et al., 2015), this study takes as its main aim the exploration of whether data on motivations, passion and the frustration of basic psychological needs in everyday life make it possible to distinguish types of players (between amateur and semi-professional gamers). It was anticipated that age, hours of play a week, frustration of basic psychological needs, the different kinds of passion and the different motivations for playing would all be predictive of the type of player. Specifically, it was hypothesised that semi-professional players would be younger, spend more hours a week playing, display greater motivation to compete and improve their mental capacities, show lesser frustration of their basic psychological needs and tend more toward harmonious passion and less toward obsessive passion.

Methods

Participants

The study obtained 356 answers to an online questionnaire. Of these, 46 cases were discarded because they featured incomplete data. Of the remaining 310 cases, 115 were discarded because the respondents did not meet the criteria to be considered passionate gamers. According to Vallerand et al. (2012), subjects cannot be considered passionate if the sum of the items used to calculate the variable of passion is less than 20 points. Thus, the final participants in the study were 195 Spanish speaking LoL players who agreed to complete an online survey and who were passionate about LoL (see Table 1). In order to be included, respondents had to be at least 16 years of age and had to play LoL regularly. The mean age of the sample was 21.72 years old (SD=4.48), and the mean weekly playing time was 16.88 hours (SD=121.4).

Instruments

The questionnaire included items collecting sociodemographic and game use data, including age, gender, education completed, job, type of player, position in the game and the number of hours spent playing a week.

Passion was assessed using the Passion Scale (Vallerand et al. 2003) adapted for use with the Spanish population (Chamarro et al., 2015). This instrument consists of two sub-scales of six items each, designed to measure HP and OP, as well as five criteria items used to assess respondents' degree of passion for the activity. Respondents answer each item on a seven-point Likert scale that ranges from "*Completely disagree*" to "*Completely agree*". For example, one of the items measuring HP reads *"This activity is in harmony with other things that are part of me"*. An example of an item measuring OP is *"I have a tough time controlling my urges to do this activity"*. In the criteria items, respondents are asked about the degree to which the value the activity, devote their time and energy to it and consider it to be a passion. The internal consistency coefficients can be consulted in Table 2.

In order to assess the frustration of basic psychological needs, the study used the version adapted for use with the Spanish population of the *Psychological Need Thwarting Scale* (PNTS; Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011; adaptation by Sicilia, Ferriz, & Sáenz-Álvarez, 2013). This instrument is made up of 12 items divided into three groups, each of them representing a factor and consisting of four items. It measures the extent to which individuals perceive they are being frustrated in their psychological needs for autonomy (e.g. *"I feel an obligation to follow others' decisions"*), competence (e.g. *"There are situations in which I feel incompetent"*), and relatedness

Table 2. Descriptive statistics and differences in the variables by type of player

Variables	Min.	Max.	α	Amateur M (DT)	Semi-Professional M (DT)	F	p	η^2
Age	16	36		22.28 (4.66)	19.49 (2.69)	12.910	.000	.063
H/W	1	50		15.12 (11.20)	23.90 (13.33)	17.696	.000	.084
Socializers	3	15	33	10.43 (2.44)	10.79 (2.17)	.754	.386	.004
Completionists	3	15	52	12.45 (2.09)	13.35 (1.97)	6.254	.013	.031
Competitors	3	15	75	11.30 (2.52)	13.02 (2.18)	15.279	.000	.073
Escapists	2	10	67	4.76 (2.23)	5.00 (2.32)	.346	.557	.002
Story-Driven	2	10	60	5.92 (2.06)	5.89 (2.28)	.007	.932	.000
Smarty-Pants	2	10	73	5.88 (2.02)	7.07 (1.67)	11.526	.001	.056
Passion criteria	5	35	62	24.85 (4.04)	27.61 (4.71)	13.551	.000	.066
HP	6	42	74	27.60 (5.74)	31.30 (5.96)	12.737	.000	.062
OP	6	42	86	17.09 (7.91)	19.41 (8.26)	2.623	.107	.013
FBPN	12	54	88	28.55 (11.44)	27.51 (9.94)	.270	.604	.001

Note: H/W = Hours of play a week; OP = Obsessive Passion; HP = Harmonious Passion; FBPN = Frustration of Basic Psychological Needs

(e.g. *"I feel rejected by the people around me"*). Respondents answer each item on a five-point Likert scale that ranges from "Completely disagree" to "Completely agree". The internal consistency coefficients can be consulted in Table 2.

Motivations for gaming were measured using a Spanish adaptation of the *Scale of Video Game Play Motivations* (Kahn et al., 2015). In order to adapt the scale for use in Spanish, a translation of the original English-language scale was carried out, and the translated version was reviewed by a committee of psychologists. One of the experts was bilingual. This procedure meets the standards for intercultural adaptation of tests proposed by Muñiz, Elosua and Hambleton (2013). This instrument assesses six motivational factors that can drive people to play video games: *socializers* (3 items) (e.g., "*I like using the voice communication tool while I'm playing*"), *completionists* (3 items) (e.g., "*I like trying out everything you can possible do in the game*"), *competitors* (3 items) (e.g., "*Winning is a big reason why I play*"), *escapists* (2 items) (e.g., "*I like doing things in the game that I couldn't do in real life*"), *story-driven* (2 items) (e.g., "*I like feeling that I'm part of a story*"), *smarty-pants* (2 items) (e.g., "*I play to improve my intellectual abilities*"). Respondents answer each item on a five-point Likert scale that ranges from "Completely disagree" to "Completely agree". The internal consistency coefficients can be consulted in Table 2.

Procedure

Data collection took place between March and May 2018. Respondents were able to freely access the questionnaire via an online link. The researchers participating in the study posted messages in several specialised gaming forums online (Mediavida, LoL ESP, Riot Games) to invite gamers to take part in the study. The first section of the questionnaire includes an explanation of the study and its objectives and a statement that responses are voluntary, confidential and anonymous. In this section, participants were asked to give informed consent in order to continue with the questionnaire, and they were advised that they could stop answering the questions at any point and not be included in the study. At the end of the questionnaire, participants were asked if they were willing to recommend the questionnaire to other gamers.

Data analysis

Data analysis was carried out using version 17.0 of the statistics software SPSS in Spanish. First, descriptive statistics and Pearson correlations were obtained. For the purposes of testing the hypothesis, a logistic regression analysis was conducted with selection of predictors using the enter method, in which socio-demographic variables were introduced as a first step and the variables of passion, FBPN and motivation in a second step. The type of player (amateur or semi-professional) was taken as the dependent variable.

Results

Preliminary results

Table 1 shows that the participants were mostly men (91.9%) and amateurs (80%), and that most of them had completed some higher education (63.5%) and were students at the time of completing the questionnaire (52.2%). Table 2 shows that the most common motivations for playing were: interest in building and maintaining social relationships, desire to explore the game, and interest in winning or contributing to victory. In terms of type of passion HP is predominant, and FBPN is low.

Meanwhile, Table 2 shows comparisons of means for the variables broken down by type of player. Semi-professional players tend to be younger, more motivated to improve their mental capacities and more likely to display greater HP than the amateurs.

Correlation analysis

As is apparent from Table 3, age displayed negative correlations with the motivation factors *escapists* and *story-driven,* and with both kinds of passion. The number of hours spent playing a week was positively correlated with the motivation factors *completionists*,

Table 3. Variable correlations: frustration of needs, passion, motivation for playing, age and hours of play a week

	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	-	-.043	-.053	-.035	-.005	-.182*	-.190**	-.097	-.279**	-.173*	-.237**	-.091
2. H/W		-	.015	.148*	.328**	.048	.018	.142*	.345**	.146*	.186**	-.063
3. Socializers			-	.272**	.042	.001	.078	.160*	.050	.204**	.000	-.041
4. Completionists				-	.172*	.152*	.337**	.252**	.176*	.331**	.084	-.008
5. Competitors					-	.024	.047	.145*	.199**	.096	.230**	-.004
6. Escapists						-	.528**	.363**	.216**	.247**	.340**	.424**
7. Story-Driven							-	.392**	.145*	.448**	.166*	.120
8. Smarty-Pants								-	.134	.401**	.114	.126
9. Passion criteria									-	.428**	.489**	.166*
10. HP										-	.028	.050
11. OP											-	.396**
12. FBPN												-

Note. *p < ,05; ** p < ,01
H/W=Hours of play a week; OP=Obsessive Passion; HP=Harmonious Passion; FBPN=Frustration of Basic Psychological Needs

Table 4. Results of the logistic regression analysis

Dependent Variable	Nagelkerke R^2	Predictive variables	ß	*p*	Exp(B)
Type of player	.414	Age	-.263	.000	.769
		H/W	.040	.025	1.041
		Socializers	-.002	.983	.998
		Completionists	.145	.270	1.156
		Competitors	.206	.052	1.228
		Escapists	.104	.417	1.110
		Story-Driven	-.425	.005	.654
		Smarty-Pants	.310	.016	1.363
		HP	.107	.061	1.113
		OP	.001	.984	1.001
		FBPN	-.032	.184	.968

Note: H/W=Hours of play a week; OP=Obsessive Passion; HP=Harmonious Passion; FBPN=Frustration of Basic Psychological Needs

competitors and *smarty-pants,* as well as with both kinds of passion, but there was no correlation here with FBPN. The motivation factor *socializers* showed positive correlations with the motivation factors *completionists* and *smarty-pants,* as well as with HP, but there was no correlation with OP or with FBPN. The motivation factor *completionists* displayed positive correlations with the number of hours of play a week, all the motivation variables and HP, but there was no correlation with OP or with FBPN. The motivation factor *competitors* displayed positive correlations with the number of hours of play a week, with the motivation factors *completionists* and *smarty-pants* and with OP, but there was no correlation with HP or with FBPN. The motivation factor *escapists* showed positive correlations with the motivation factors *completionists*, *story-driven* and *smarty-pants*, as well as with HP, OP and FPBN, but there was no correlation with hours of play a week. The motivation factor *story-driven* was positively correlated with the motivation factors *completionists*, *escapists* and *smarty-pants*, as well as with HP and OP, but no correlation was observed with FPBN or with hours of play a week. HP was positively correlated with all the variables, with the exceptions of the motivation factor *competitors*, OP and FBPN. OP showed positive correlations with all the variables, except for the motivation factors *socializers*, *completionists* and *smarty-pants*. Finally, FBPN showed positive correlations with the motivation factor, *escapists* and with OP.

Regression analysis

The results of the logistic regression analysis with selection of predictors using the enter method of variable entry are shown in Table 4. Taking the type of player as the dependent variable, age, hours of play a week and the motivation factors *completionists*, *competitors* and *smarty-pants*, together account for 41.4% of the variance, with 94.2% of the amateur players and 46.3% of the semi-professionals classified in the correct categories. Thus, looking at gamers who were older, spent more hours a week playing, had lesser *story-driven* and greater *smarty-pants* motivation made it possible to distinguish between amateur players and semi-professionals.

Discussion

The aim of this study is to explore whether knowledge of gamers' age, hours of game play a week, motivations for playing, the frustration of basic psychological needs and the type of passion exhibited makes it possible to differentiate between amateur and semi-professional players of eSports. The hypothesis was that semi-professional players would be younger, spend more time playing, display a greater motivation for competition and improvement of their mental capacities, and show greater harmonious passion and lesser obsessive passion than the amateur players.

The results partially confirm the hypothesis. Amateurs are distinct from semi-professionals gamers in several variables, including the number of hours a week they spend playing and the tendency to be *story-driven* and *smarty-pants* in their motivation. However, the motivation factors *socializers, competitors, completionists* and *escapists* do not contribute to explaining the distinction between types of gamers, nor do HP, OP or FBPN.

Firstly, it is worth highlighting that our study is the first of its kind to incorporate gamers beyond merely recreational players. In the world of eSports, it is not the same to play video games for entertainment as to train to become a professional gamer (Todoli, 2017).

The results show that players whose motivations are *story-driven*, or in other words gamers who cite a reason for playing that lacks any direct connection with performance within the game, are less likely to be professionals. This finding echoes the suggestion made by Mora-Cantallops and Sicilia (2016), who pointed out that LoL is not a game that is marked by its plot or the background of its characters. The *smarty-pants* category of motivation is positively associated with the professionality of players (gamers more interested in improving their mental capacities were more likely to be professionals). This finding is in accordance with the results of a study by Nuyens et al. (2018), who underlined that video gaming can lead to more effective attentional control, faster processing and improved perception. Thus, gamers who play in order to improve their mental capacities are better able to focus on their performance within the game, a practice characteristic of aspiring professionals.

The rest of the kinds of motivation identified by Kahn et al. (2015) do not contribute to distinguishing the types of players. This lack of distinction between types of gamers in terms of these variables could have been anticipated, for example, for the motivation factor *socializers,* because the nature of LoL as a team game means that communication between teammates is necessary for effective game play, whether the players are professionals (Himmelstein et al., 2017), or amateurs. The motivation factor *escapists* also fails to play a role in distinguishing the types of players. From this, one could conclude that the desire to escape from everyday life is not one of the predominant motivating factors. It is worth emphasising that this study found

a link between this latter kind of motivation and OP and FBPN, results that echo an earlier study by Fuster et al. (2014), which found that video gaming to escape reality was associated with problematic video game use. In any case, this variable's lack of predictive value in this study would suggest that current LoL players can be considered serious gamers. The motivation factors called *competitors* and *completionists* also lack any predictive value in determining the type of player. This lack of effect was also to be expected, as LoL is a highly competitive game that requires players to be fully familiarised with and proficient in all its elements. This kind of knowledge of the game is necessary if players are to perform at the highest level, and this is true of both amateurs and semi-professionals.

When it comes to the variables measuring passion, neither HP nor OP was found to contribute to distinguishing between the kinds of gamers. This finding makes sense if we take into account both the fact that all the participants in the study were passionate about the game, and that, unlike in previous studies (Bertran & Chamarro, 2016), our sample was not characterised by the use of video games to escape reality or by abusive use of games (both associated with OP). In any case, this trend requires verification by future studies.

The fact that no relationship was found between FBPN and the dependent variable is consistent with earlier results from a study by Allen and Anderson (2018), who suggested that gamers who play LoL are not driven to play by a lack of satisfaction of their psychological needs for competence, relatedness and autonomy in their everyday lives. This absence of frustrated needs acts to protect players from video game addiction. This finding is also consistent with the results found by Lalande et al. (2017), who said that low levels of satisfaction of basic psychological needs (in other words, high levels of FBPN) could contribute to creating an excessive dependence on the activity about which the user feels passionate. Because OP was not found in our study to have value in predicting the type of gamer, it stands to reason that FBPN would not have an effect either, given the positive relationship between these two variables.

Finally, the fact that semi-professional players tend to be younger than amateurs suggests that the approach to playing LoL is undergoing a change, possible connected to the growing view of the game as a competitive sporting activity. Meanwhile, as too stands to reason if we consider the need for practice, semi-professional players devote more of their time to playing. This result is significant, because while previously the frequent use of video games has always been associated with addictive or obsessive motivations (Mills et al., 2018), eSports are now increasingly viewed as sports, and may gamers play them competitively. The fact that they spend long hours training makes them no different in this respect from traditional athletes.

Limitations and proposals for future research

This study is, of course, not without its limitations. Firstly, the sample is made up of volunteers and is not very homogeneous in terms of the type of player, a fact that could make it difficult to generalise from the results. Secondly, the *scale of video game play motivations* (Kahn et al., 2015) used in this study shows a low reliability. For the purposes of further research, it would be a good idea to add additional items to each factor in an effort to attain better reliability. Additionally, it would be revealing to consider gamers' degree of satisfaction of basic psychological needs (SBPN) and to examine how this variable is related to the type of player. It is possible that having one's needs for relatedness, autonomy and competence satisfied might be a key to becoming a serious player.

Finally, it should be emphasised that future studies would do well to consider economic motivating factors (video gaming to earn money), the sense of belonging to a community (gaming to feel like part of the community) and communication among players as potential characteristics of serious players.

Conclusion

eSports are growing exponentially from one year to the next, and now they boast big competitions that have come to be seen as sporting events, with gamers now seen as having the same psychological needs as traditional athletes. Our results highlight the fact that LoL players do not tend to be obsessive people or to experience the frustration of their basic psychological needs in their everyday lives. In fact, the opposite is true: they are passionate young people who are highly dedicated to what they do and interested in developing their psychological abilities through gaming. Additionally, we think it is worth underlining that the psychological profile of players found here flies in the face of popular stereotypes about gamers and reveals that video gaming need not be viewed as necessarily harmful. To further ensure gamers' wellbeing, we suggest offering them training in values, teamwork and communication skills, all of which will be of use especially to those who would like to develop professional careers. Moreover, we believe it would be positive to promote healthy habits in terms of physical activity, rest and diet, as well as encouraging gamers to combine video gaming with other activities in such a way as to ensure that the activity about which they are so passionate can be in harmony with other parts of everyday life.

References

AEVI. (2018). *El libro blanco de los esports en España*. Accessed at http://www.aevi.org.es/web/wp-content/uploads/2018/05/ES_libroblanco_online.pdf

Allen, J., & Anderson, C. (2018). Satisfaction and frustration of basic psychological needs in the real world and in video games predict internet gaming disorder scores and well-being. *Computers in Human Behavior, 84*, 220-229. https://doi.org/10.1016/j.

chb.2018.02.034

Bartholomew, K., Ntoumanis, N., Ryan, R., Bosch, J., & Thøgersen-Ntoumani, C. (2011). Self-determination theory and diminished functioning: The role of interpersonal control and psychological need thwarting. *Personality and Social Psychology Bulletin, 37*, 1459–1473. https://doi.org/10.1177/0146167211413125

Bertran, A., & Chamarro, A. (2016). Videojugadores del League of Legends: El papel de la pasión en el uso abusivo y en el rendimiento. *Adicciones, 28*(1), 28-34.

Chamarro, A., Penelo, E., Fornieles, A., Oberst, U., Vallerand, R., & Fernández-Castro, J. (2015). Psychometric properties of the Spanish version of the Passion Scale. *Psicothema, 27*(4), 402-409. https://doi.org/10.7334/psicothema2015.80

Chanson, R. (2017). *eSports: Todo lo que necesitas saber de League of Legends al Fifa*. Spain: Timunmas.

Costa, P. (2013). *Ludus online: um estudo ludológico e social de League of Legends*. Accessed at http://bdm.unb.br/handle/10483/6513?

Curran, T., Hill, A., Appleton, P., Vallerand, R., & Standage, M. (2015). The psychology of passion: A meta-analytical review of a decade of research on intrapersonal outcomes. *Motivation and Emotion, 39*(5), 631-655. https://doi.org/10.1007/s11031-015-9503-0

Fuster, H., Chamarro, A., Carbonell, X., & Vallerand, R. J. (2014). Relationship between passion and motivation for gaming in players of massively multiplayer online role-playing games. *Cyberpsychology, Behavior and Social Networking, 17*, 292-297. https://doi.org/10.1089/cyber.2013.0349

Giménez, D. (2015). *Autoeficacia percibida en League of Legends*. Undergraduate thesis, Universidad Jaume-I. Acessed at http://repositori.uji.es/xmlui/bitstream/handle/10234/137467/TFG_2014_gimenezD.pdf?sequence=1

Graham, L. T., & Gosling, S. D. (2013). Personality profiles associated with different motivations for playing World of Warcraft. *Cyberpsychology, Behavior, and Social Networking, 16*(3), 189-193. https://doi.org/10.1089/cyber.2012.0090

Himmelstein, D., Liu, Y., & Shapiro, J. L. (2017). An exploration of mental skills among competitive league of legend players. *International Journal of Gaming and Computer-Mediated Simulations*, *9*(2), 1-21. https://doi.org/10.4018/IJGCMS.2017040101

Kahn, S., Shen, C., Lu, L., Ratan, R., Coary, S., Hou, J., Meng, J., Osborn, J., & Williams, D. (2015). The Trojan Player Typology: A cross-genre, cross-cultural, behaviorally validated scale of video game play motivations. *Computers in Human Behavior*, *49*, 354-361. https://doi.org/10.1016/j.chb.2015.03.018

Lalande, D., Vallerand, R. J., Lafreniere, M.-A. K., Verner-Filion, J., Laurent, F.-A., Forest, J., & Paquet, Y. (2017). Obsessive passion: A compensatory response to unsatisfied needs. *Journal of Personality, 85*(2), 163–178. https://doi.org/10.1111/jopy.12229

Mills, D., Milyavskaya, M., Mettler, J. Heath, N., & Derevensky, J. (2018). How do passion for video games and needs frustration explain time spent gaming? *British Journal of Social Psychology*, 1-21. https://doi.org/10.1111/bjso.12239

Mora-Cantallops, M., & Sicilia, M. (2016). Motivations to read and learn in videogame lore: the case of league of legends. *Theme, 16*, 585-591. https://doi.org/10.1145/3012430.3012578

Mora-Cantallops, M., & Sicilia, M. (2018). MOBA games: A literature review. *Entertainment Computing, 26*, 128-138. https://doi.org/10.1016/j.entcom.2018.02.005

Muñiz, J., Elosua, P., & Hambleton, R. (2013). Directrices para la traducción y adaptación de los tests: Segunda edición. *Psicothema, 25*(2), 151-157. https://doi.org/10.7334/psicothema2013.24

Ng, P., Nesbitt, K., & Blackmore, K. (2015). Sound Improves Player Performance in a Multiplayer Online Battle Arena Game. *Artificial Life and Computational Intelligence, 2*, 166-174. https://doi.org/10.1007/978-3-319-14803-8_13

Nuyens, F., Kuss, D., Lopez-Fernandez, O., & Griffiths, M. (2018). The Empirical Analysis of Non-problematic Video Gaming and Cognitive Skills: A Systematic Review. *International Journal of Mental Health and Addiction*, 1-26. https://doi.org/10.1007/s11469-018-9946-0

Pereira, R., Wilwert, M. L., & Takase, E. (2016). Contributions of Sport Psychology to the Competitive Gaming: An Experience Report with a Professional Team of League of Legends. *International Journal of Applied Psychology*, *6*(2), 27-30. https://doi.org/10.5923/j.ijap.20160602.01

Pérez-Rubio, C., González, J., & Garcés de los Fayos, E. (2017). Personalidad y burnout en jugadores profesionales de e-sports. *Cuadernos de Psicología del Deporte, 17*(1), 41-49.

Plarium (2017). *¿Pueden los juegos MMO convertirse en eSports?* Accessed at https://plarium.com/es/blog/esports/

Riot Games (2017). *Las cifras de los esports 2017*. Accessed at https://euw.leagueoflegends.com/es/page/lol-esports-events-numbers-2017

Ryan, R. M., & Deci, E. L. (2000). Self-Determination Theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68

Sicilia, A., Ferriz, R., & Sáenz-Álvarez, P. (2013). Validación española de la Escala de Frustración de las Necesidades Psicológicas (EFNP) en el ejercicio físico. *Psychology, Society, & Education, 5*(1), 1–19.

Todoli, A. (2017). El contrato de trabajo en los deportes electrónicos. *Revista Aranzadi de derecho de deporte y entretenimiento, 56*, 113-137.

Trepte, S. & Reinecke, L. (2011). The pleasures of success: Game-related efficacy experiences as a mediator between player performance and game enjoyment. *Cyberpsychology, Behavior, and Social Networking, 14*(9), 555-557. https://doi.org/10.1089/cyber.2010.0358

Vallerand, R. J. (2012). From motivation to passion: In search of the motivational processes involved in a

meaningful life. *Canadian Psychology/Psychologie Canadienne*, 53, 42–52. https://doi.org/10.1037/a0026377

Vallerand, R. J., Blanchard, C., Mageau, G. A, Koestner, R., Ratelle, C., Leonard, M., & Marsolais, J. (2003). Les passions de l'ame: On obsessive and harmonious passion. *Journal of Personality and Social Psychology, 85*, 756–767. https://doi.org/10.1037/0022-3514.85.4.756

Vallejo. F. (2016). *Somos 100 millones de jugadores de League of Legends al mes*. España, (ES): *Pure Gaming*. Recuperado de: https://puregaming.es/100-millones-jugadores-league-legends/

Weinstein N., Przybylski A.K., & Murayama K. (2017). A prospective study of the motivational and health dynamics of Internet Gaming Disorder. *PeerJ* 5:e3838 https://doi.org/10.7717/peerj.3838

Woo, S., Woong, J., & Young, J. (2012) The Relationship between e-sports Viewing Motives and Satisfaction: The Case of League of Legends. *Journal of Korea Game Society, 14*(3), 35-46. https://doi.org/10.7583/JKGS.2014.14.3.35

Yee, N. (2006). The demographics, motivations, and derived experiences of users of massively multi-user online graphical environments. *Presence: Teleoperators and Virtual Environments*, *15*, 309–329. https://doi.org/10.1162/pres.15.3.309