It’s Not Just a Game: Virtual Edgework and Subjective Well-Being in E-Sports

IT'S NOT JUST A GAME: VIRTUAL EDGEWORK AND SUBJECTIVE WELL-BEING IN ESPORTS

ABSTRACT

We investigate subjective well-being in the context of eSports (competitive videogames). We adopt the theoretical lenses of virtual edgework theory, a recent adaptation of edgework theory from physical to digital contexts. Sports have long been used as a tool to improve subjective well-being. Our research question is whether eSports lead to well-being, as their physical counterparts do, and through what psychological mechanisms. We answer through a conceptual model of moderated mediation tested on hundreds of eSports players. We also address the role of privacy concerns, as eSports pose several potential threats to players' privacy that could hinder players' achievement of well-being. Findings suggest that virtual edgework provides a useful theoretical perspective for understanding consumers' behavior in digital environments. They also show that eSports can lead to well-being by achieving feelings of self-enhancement under the positive moderation of perceived control over the digital environment and the negative moderation of privacy concerns.

KEYWORDS

Well-being; Edgework theory; eSports; Privacy.

INTRODUCTION

We are witnessing unprecedented development in information and communications technologies (ICTs). The possibility of being constantly connected has dramatically changed the way people live their everyday life, relate to their peers, access information, and even do sports.

In particular, physical activity can contribute to enjoyment and happiness and, more broadly, life satisfaction and well-being. It can increase a sense of purpose and pride, and sports participation can increase self-esteem and confidence. In particular, action or adventure sports are usually investigated from the perspective of edgework theory (Lyng, 1990): it posits that individuals push their physical and psychological limits through action sports to improve themselves and feel better about themselves, ultimately leaving the athletes better off.

However, recent years have witnessed the rise and evolution of different sports, entirely electronic or digital, called eSports. ESports represent "a competitive approach to playing computer games" (Seo, 2016, p. 2) and typically entail organized competitions (Jenny et al., 2017). Following the remarkable rise of the eSports phenomenon (474 million players and $1.62 billion expected revenues by 2024, Statista, 2021), research has called for the development of models to understand consumers in eSports (Bányai et al., 2019; Funk, Pizzo, & Baker, 2018; Seo, 2016). Despite these calls, marketing research in this context still is in its infancy (Bertschy, Mühlbacher, & Desbordes, 2020) and largely "atheoretical in nature" (Cunningham et al., 2018, p. 4).

As participation in eSports is constantly rising, it appears compelling to develop regulatory frameworks for preserving participants' physical and mental well-being (Kelly, Derrington, & Star, 2022). In this vein, previous studies have suggested that engagement in

technology-based environments could positively affect individuals' well-being (e.g., Halbrook et al., 2019). However, extant research has often addressed the pathological side of electronic gaming (Granic, Lobel, & Engels, 2014), related to alienation, addiction (Farman, 2010), and violence (Griffiths, 1999).

Thus, it is largely unknown whether eSports positively reflect on well-being. In particular, whether they leave the gamers better off, allowing them to mature the feeling of having reached a better version of themselves, as physical action sports have been recently found to do (Raggiotto & Scarpi, 2021). Our research questions are 1-whether eSports lead players to subjective well-being, as offline sports usually do, 2-through what psychological mechanism, and 3-which theoretical perspective helps understand eSports players.

In this vein, action sports are usually investigated from the perspective of edgework theory (Lyng, 1990). Building on the suggested similarities between offline action sports and eSports (Jenny et al., 2017), we contribute by providing virtual edgework theory (Shay, 2017) as the theoretical framework for addressing eSports players' well-being. Specifically, we posit that eSports players' well-being can be envisioned through the lenses of literature investigating the drivers of individuals' engagement in action sports. These streams of research illuminate that (offline) action sports and eSports share a sense of searching for emotions, sensations, challenges, and competitive situations. This consideration underscores that eSports' increasing complexity and realism (Qian et al., 2022), made possible by technological advancement, can foster real-world psychosocial benefits and allow virtual worlds to meet self-enhancement needs and -ultimately- subjective well-being.

We also posit that, in esports settings, privacy issues further complicate the picture: privacy pervasiveness is reminded by recurring incidents such as hacker attacks and data leakages on popular eSports (e.g., Fortnite; FIFA Global Series). Thus, privacy concerns are

likely to increase gamers' well-being, affecting participants' fun and serenity when using technology (Pizzi & Scarpi, 2020).

The present research makes four contributions: First, few studies have investigated eSports from a marketing perspective, and even less have addressed players' well-being (see literature review Table 1). To fill the gap, this research focuses specifically on well-being. In particular, it does so from the novel theoretical lenses of virtual edgework theory (Shay, 2017). Second, the present research explores the role of privacy concerns on well-being in eSports. This focus answers recent calls for research on how privacy perceptions drive consumer behavior in digital environments (e.g., Bandara, Fernando, & Akter, 2020; Scarpi, Pizzi, & Matta, 2022) and provides evidence of how players' privacy concerns shape the playing experience.

Third, when addressing the "healthy" side of gaming, literature has done so from the perspective of sponsors, game developers, spectators, or professional gamers (Pizzo et al., 2018; Sjöblom et al., 2017; Ströbel & Germelmann, 2020). However, non-professional players constitute the bulk of this industry. For instance, it is estimated that the Chinese esports player base exceeds 680 million people (ESTNN, 2019); of them, only 2,000 are pro-gamers (Cyber Athletics, 2019). Finally, few studies have investigated eSports empirically. So, we contribute also methodologically, advancing and empirically testing a conceptual model of multiple moderated mediation to test virtual edgework theory and eSports' relationship to well-being.

THEORETICAL BACKGROUND AND HYPOTHESES

Esports

Esports began emerging yet in the late 1990s (e.g., Wagner, 2006). However, they gained rapid momentum only recently (Yu et al., 2022), driven by the emergence of new consumption habits and technological evolution (Cranmer et al., 2021).

Following the surge in popularity, scholars have developed a rich, multidisciplinary debate on eSports, spanning from the conceptual roots (see Cranmer et al., 2021 for a review) to the sociological implications of esports, the antecedents of players' gaming performance, and the dynamics of competing teams. However, marketing research on eSports is still in its infancy (Reitman et al., 2020).

Table 1 provides a literature review showing that marketing literature on eSports appears intrinsically limited to a focus on spectatorship (e.g., Lopez et al., 2021; Cuesta et al., 2022) or comparison with traditional sports (e.g., Pizzo et al., 2022). Mostly underexplored is the active participation in eSports and its outcomes in terms of expenditures, loyalty, and psychological benefit. Notably, several marketing scholars studied video gaming settings.

However, prior research has shown that video games are not the same as eSport. Esports, also named electronic/virtual/cyber-sports, or competitive gaming (Jenny et al., 2017), are "an organized and competitive approach to playing computer games" (Witkowski, 2012, p.350). More synthetically, they are "organized video game competitions" (Cranmer et al., 2021, p.1) that involve competitive, technology-based immersive activities. ESports are digital competitions (Funk et al., 2018), characterized by an intense sense of challenge, which brings them akin to action sports in the physical world (Jenny et al., 2017). Accordingly, eSports are commonly considered "a specific subset of online gaming with a focus on the competition between human players [...] in a video/ computer game with predefined rules"

(McKinsey, 2020). In this vein, Funk et al. (2018) reported that to be considered esports, videogames must be structured by rules, adhere to them (i.e., be organized), and be competitive.

Thus, "while all esports are video games, not all video gaming should be classified as sport" (Funk et al., 2018, p. 9). Similarly, Jenny et al. (2017) noted that "eSports include playing and competition, are organized by rules, require skill" (p. 15). As such, "Esports is the future of all sports" (Miah, 2022) and constitutes a "new area in the gaming culture" (Banyai et al., 2019, p. 352).

Table 1. Literature review table on eSports

Author(s)	Year	Journal	Object / Context	Variables	Main findings
Cranmer et al.	2021	CHB	Conceptual paper	N/A	Scholars should focus on eSports as: 1-representations of physical sports, 2- multi-player experience, 3- modifying sports through digital augmentations, 4-new technology advances
Cunningham et al.	2018	SMR	Conceptual paper	N/A	Conceptual positioning of esports within sport management research
Cuesta-Valiño et al.	2022	JBR	Sponsorship in esports	Sponsor features, sponsor image, consumer reactions to sponsorship	Attitude, sincerity and ubiquity affect sponsorship image in esports; consumer reactions to esports sponsorship can be improved by leveraging consumer active participation in esports
Funk et al.	2018	SMR	Conceptual paper	N/A	Positioning of esports within sport management
Hallmann & Giel	2018	SMR	Conceptual paper	N/A	Conceptualization of esports within traditional sports
Hamari & Sjöblom	2017	IR	Esports spectatorship	Individual motivations of sport consumption	Spectating frequency is predicted by escapism, novelty, need for developing knowledge about esports and aggressiveness of esports athletes

Hong et al.	2022a	CHB	Players of collaborative esports	Family intimacy, anxiety, flow, perceived value of playing	Family intimacy predicts esports flow experience, that, in turn, predicts perceived value. No significant effect of anxiety
Hong	2022	ESMQ	Need for a support system	Stakeholders' perspectives, well-being and health	Stakeholder should ensure eSports players' health and wellbeing, understating criticisms of eSports; players should balance training for eSports with education
Jang & Byon	2020	CHB	Esports players	Hedonic motivation, flow, habit, price value, effort expectancy, social influence, esports genre	Antecedents of players gaming intentions vary according to different genres
Lopez et al.	2021	JBR	Esports sponsorship management	N/A	Physical and digital domains can be merged in sponsorship strategies for esports leagues
Macey & Hamari	2018	CHB	Gambling	Video gaming habits, esports viewing habits,	Videogaming habits do not related to online/offline gaming habits; esports viewing habits are only

				gambling habits, problematic gambling	moderately related to online gambling and problematic gambling
Macey et al.	2022	BIT	Esports spectatorship	Esports gaming motives, watching intention, gaming intention, purchase intention	Esports watching intention predicts gaming intention for videogames, but not purchasing intentions for them; gaming intention predicts purchasing intention for videogames
Pizzo et al.	2022	JBR	Esports companies	N/A	Company-embedded, tacit sports industry knowledge is key for traditional sports companies entering the esports domain
Qian et al.	2022	JBR	Esports viewers	Gamification, perceived value, viewer engagement	Immersion gamification and functional value of esports events affect more engagement of female spectators than male ones; socialization gamification and social value affect more engagement of male spectators than female ones.
Seo	2013	JMM	Conceptual paper	N/A	Conceptual discussion about the stakeholder structure in the esports industry

Seo	2016	JBR	Professional esports players	N/A	Definition and identification of several characteristics of eSports
Sjöblom et al.	2020	IR	Esports spectators (online/offline)	Consumption motivations, WOM, intention to attend	Online and offline spectators of eSports vary in motivations and antecedents of recommendation and future attendance
Weiss & Schiele	2013	EM	Esports players	Players needs	Esports usage is driven both by competitive and hedonic need gratifications
Yu et al.	2022	CHB	Female esports spectators	Esports spectating motives and point of attachment	Female spectators are motivated more by social opportunities, interest in players, and players physical attractiveness, whereas male spectators by enjoyment of aggression and entertainment value.

Note. BIT=Behavior and Information Technology; CHB=Computers in Human Behavior; EM=Electronic Markets; ESMQ = European Sport Management Quarterly; IR=Internet Research; JBR= Journal of Business Research; JMM=Journal of Marketing Management; SMR=Sport Management Review

Edgework and Virtual Edgework

Research studying the impact of esports participation leveraged previous studies on physical sports and -more specifically- action sports. Consumer behavior and well-being in those sports are usually addressed from the perspective of edgework theory (Lyng, 2014). Edgework theory explains people's voluntary engagement in sensational activities in terms of a need to explore one's physical and psychological limits, push those limits (Brymer & Houge-Mackenzie, 2016), and ultimately feel better about themselves (Lyng & Matthews, 2007; Raggiotto & Scarpi, 2021). In particular, the main construct in edgework theory, and the driver of all behaviors by edgework individuals, is sensation-seeking (Brymer & Houge Mackenzie, 2016; Cohen et al., 2018; Lyng, 1990).

With recent technological advancements in virtual reality and digital technologies, virtual gaming worlds can provide the same sensation intensity as action sports in the physical world (Chen, Wilhelm, & Joeckel, 2019; Zhai et al., 2020). Furthermore, eSports players seek to test the limits of their abilities in the game world just as action sports players do in the physical world (Hart, 2017; Shay, 2017). ESports might be even more desirable for sensation-seekers because they offer increasingly intense and immersive challenges (Ortiz de Gortari & Griffiths, 2017), sometimes even more than the physical world (Chicchi-Giglioli et al., 2021). On this point, Jansz & Tanis (2007) found that eSports players scored highest on motives related to sensation-seeking and challenge.

Thus, the literature has established a link between edgework theory and competitive videogames (Macey & Hamari, 2018; Seo, 2016): the theory has been translated into digital contexts, where it takes the name of "virtual edgework" (Shay, 2017).

According to edgework and virtual edgework theories, sensations are not sought per se: sensation-seeking is linked to self-enhancement (Lyng, 2014). Self-enhancement can be defined as 'coming closer to an ideal self' (Raggiotto & Scarpi, 2021, p.231). It is a coming closer of the perceived self to the actual self, obtained by 'reaching personal limits (…) and pushing them

forward' (ibid.). It reflects a psychologically rewarding process of negotiating and extending one's limits. Typically, it is achieved through successfully confronting increasing challenges. It often makes individuals perceive themselves as legitimate members of a small elite. Coherently, it was related to concepts such as ideal self, self-fulfillment, independence, and self-realization (for a review, see Raggiotto & Scarpi, 2020, 2021; Raggiotto, Scarpi, & Mason, 2019). Specifically, edgework individuals channel sensation-seeking to reduce the gap between the self that one currently is and a better self they would ideally like to be (Sedikides & Gregg, 2008).

Lyng (2014) theorized that this process leads edgework individuals to perform incremental efforts that help them reach and extend their limits. Raggiotto & Scarpi (2021) have recently documented this phenomenon for action sports athletes. Recent research has suggested it might apply also to eSports (e.g., Shay, 2017; Keller et al., 2021). In this vein, recent studies have found that self-enhancement is a key driver of participation in competitive videogames (Sepehr & Head, 2018), and eSports players might seek sensations to emphasize "their pursuit of self-improvement" (Seo, 2016, p. 5). Accordingly, we posit that:

H1: eSports players' sensation-seeking has a positive impact on self-enhancement.

Edgework, Virtual edgework, and Well-being

The literature usually identifies subjective and psychological well-being, though it is debated whether they represent two different constructs or just two different perspectives of the same construct (Chen et al., 2013). Regardless of the stance taken, scholars agree that subjective and psychological well-being are interrelated (Gallagher et al., 2009). Furthermore, there is agreement that both relate to personal growth, life satisfaction, and life meaningfulness (McGregor & Little 1998). However, the majority of recent studies tend to agree that subjective and psychological well-being are separate constructs (Anglim et al., 2020). In particular, the former focuses on more hedonic aspects (Scarpi, 2021), such as pursuing happiness and satisfying life, and involves a global evaluation of well-being (Chen et al., 2013). Instead, psychological well-being focuses on the

fulfillment of potential, self-acceptance, and thriving in the face of challenges (Ryff, 1989; Anglim et al., 2020). It seems, therefore, less related to the topic of the present research, that -accordingly- focuses on subjective well-being.

Extensive evidence suggests that self-enhancement can produce beneficial effects (e.g., Marshall & Brown, 2008; Taylor & Brown, 1988). Self-enhancement can help individuals cope with adversities (e.g., Yan & Bonanno, 2015) and promotes a positive mindset which denotes individuals with "action orientation, a sense of mastery, and stress resistance" (Dufner et al., 2019, p. 50). Accordingly, individuals feeling self-enhancement are likely to experience better mental health and higher well-being. Furthermore, key components of self-enhancement are a sense of achievement and empowerment (Schwartz, 1992). Both enhance individual well-being by boosting how close individuals perceive they can connect with and enact the true self (Kaplan & Maehr, 1999; Kifer et al., 2013).

So far, edgework theory has been mostly, if not solely, applied to physical contexts and rarely addressed well-being specifically. Whether virtual edgework translates into higher well-being is still unknown. Electronic and virtual environments offer a prime avenue for the first investigation in this regard since they provide actual experiences comparable to their physical counterparts (Felnhofer et al., 2015; Pizzi et al., 2019). In this vein, prior research seems to support the link between individual engagement in virtual gaming environments and well-being (e.g., Halbrook et al., 2019); specifically, evidence from neuroscience would support the link between virtual edgework and players' well-being: intense experiences and emotions, such as in competitive videogames (Kätsyri et al., 2013), activate the neuropsychological reward mechanisms that release dopamine in individuals (A. D. Abraham, Neve, & Lattal, 2013). Based on these considerations, we advance:

H2: Self-enhancement has a positive impact on eSports players' well-being.

The Role of Perceived Control and Privacy Perception

Perceived control refers to the perception of how able and skillful one is when doing an activity (Marikyan et al., 2022). Works on videogames have adapted this concept to capture users' perception of how skillful a player is at a game (Park et al., 2014). Perceived control is relevant in technology-mediated environments (e.g., Abraham et al., 2019; Marikyan et al., 2022), and in edgework theory (Lyng, 2014) because, by pushing their limits, edgework individuals intrinsically test their ability to stay in control of the challenges (Brymer & Houge-Mackenzie, 2016). Consistently, scholars of edgework have highlighted that sensation-seeking individuals engage in a great deal of physical, mental, and technical training as a way to build skills and control (Lyng, 2014; Raggiotto et al., 2019). Control provides individuals with the mindset to succeed at difficult activities (Lyng, 2014), boosting feelings of self-enhancement when ordeals are overcome (Lyng & Matthews, 2007).

Scholars have recently suggested that perceived control might also play a crucial role in eSports players' experience (Shay, 2017). For instance, by influencing situational dynamics (e.g., unlocking new parts of the game world, changing the attitude of AI-controlled characters) according to the player's specific skills. Notably, a key feature of esports gaming platforms is that they offer players many opportunities to exert control over the virtual gaming environment (like, for instance, constantly adding new customization possibilities for players' gaming avatars, e.g., Böffel et al., 2022). In this vein, scholars have found that perceptions of control are a determinant of enjoying (Klimmt, Hartmann, & Frey, 2007) and playing eSports (Klimmt & Hartmann, 2006), just as they are for players of physical sports (Brymer & Schweitzer, 2017). Accordingly, we posit that, just as perceived control seems to enhance self-enhancement in players of offline games, it should do for eSports players. Thus:

H3: eSports players' perceived control positively moderates the relationship between sensation-seeking and self-enhancement, with higher levels of perceived control leading to higher self-enhancement.

Finally, almost any kind of digital interaction implies that consumers provide personal information, potentially raising privacy concerns (Pizzi & Scarpi, 2020; Rodríguez-Priego, Porcu, & Kitchen, 2022). Privacy is a key issue wherever digital technologies are involved (Scarpi, Pizzi, Matta, 2022), and eSports are no exception. Data are central for the entire industry, being the primary component to sustain the creation of experiences for passive and active participants (Pizzo et al., 2022). For instance, gaming platforms, backed by automated technologies (e.g., artificial intelligence), can collect real-time data about gamers' and teams' performance. These data are essential to feed statistics and metrics about matches and build up narratives for esports viewers. Further, esports platforms need to manage many other data, like data on payments and transactions of players and viewers (e.g., to purchase subscriptions, add-ins, and customizations). Access to these data poses unique challenges and threats to privacy and cybersecurity (e.g., data usage, storage, and sharing with third parties, like partnering sponsors; Esports Insider, 2021; Lopez et al., 2021). Sometimes these data are acquired with the awareness of the customer, and other times - more worryingly- without it (Scarpi et al., 2022).

Recent literature on privacy issues in digital technologies has shown that privacy concerns can reduce consumers' enjoyment, fun, hedonism, and playfulness (see Maseeh et al. 2021 for a metanalysis and Aboulnasr, Tran, & Park, 2022 for a review). Based on these considerations, we advance for similarity that privacy concerns will have a depressing effect also on players' perceived well-being. Thus:

H4: eSports players' privacy concerns negatively moderate the relationship between self-enhancement and well-being, with higher privacy concerns leading to lower well-being.

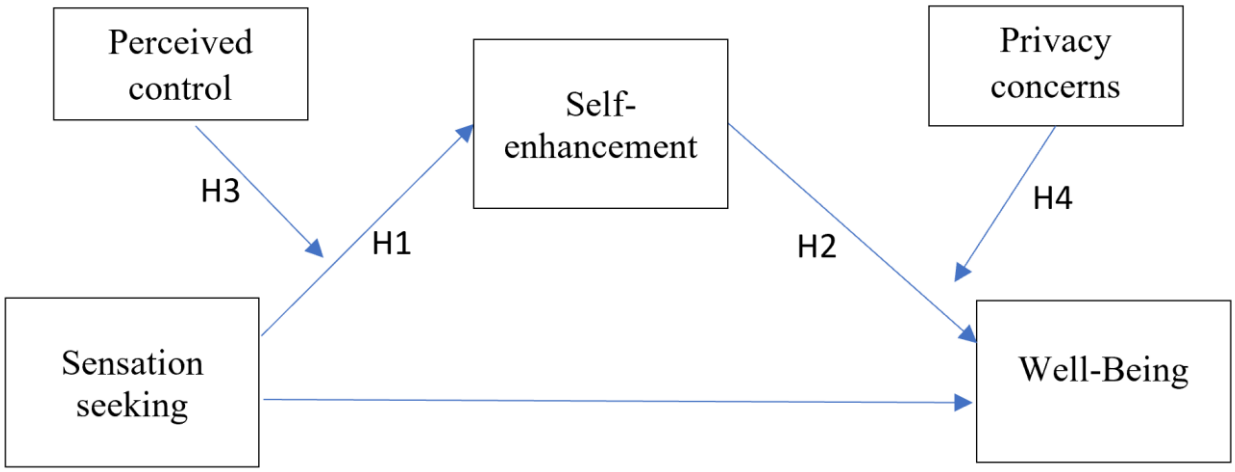
Theoretical Model

The research hypotheses translate the psychological literature on sensation-seeking, perceived control, self-enhancement, and privacy concerns to the domain of eSports to better understand players' well-being. Essentially, we hypothesize that sensation-seeking leads eSports players to

develop stronger feelings of self-enhancement, particularly when they perceive that they can control situational risks and challenges. Finally, self-enhancement leads to higher well-being when players perceive that their personal data will be managed safely and respectfully.

In summary, we developed the multiple moderated mediation model presented in Figure 1, where (1) self-enhancement mediates the relationship between sensation-seeking and well-being; (2) perceived control moderates the relationship between sensation-seeking and self-enhancement, and (3) privacy concerns moderate the relationship between self-enhancement and well-being.

Figure 1. Theoretical framework



METHOD

Participants and Measures

The present research addresses non-professional eSports players. In recent times, digital sports have become professionalized, and for some individuals, playing is a career (Griffiths, 2017). However, only a minority of players are professionals. Non-professional gamers constitute the bulk of esports users (Abbas et al., 2019; Rea, 2019). While spectators participate passively, non-professional players actively participate in eSports competitions. However, non-professional players differ from

professional players (Ma, Wu, & Wu, 2013) because they do not make a living from eSports activities and sponsorships.

Professional e-Sports players can earn lots of money, and they "play for competition, rather than for fun and/or relaxation and define gaming as their job" (Banyai et al., 2019, p.352). Instead, non-professional gamers play for recreation or relaxation, not for a living: in contrast to pro-gamers, eSports players are not paid stars who make a living from eSports activities and sponsorships. Thus, professional esports players are driven by profit rather than the desire for well-being and self-enhancement.

We recruited 280 European eSports players from a panel held by a market research company that ensured they reflected the representativeness of the target population. Respondents received an invitation to complete an online questionnaire that asked them to think about their latest eSports experience. The questionnaire asked respondents about their sensation-seeking (Shoham, Rose, & Khale, 2000), their feelings of self-enhancement related to the eSports experience (Shoham et al., 2000), and how much they perceived themselves as in control of the game while playing (Cavazza, Lugrin, & Buehner, 2007; Lyons et al., 2014). Then, respondents were asked about their privacy concerns (Pizzi & Scarpi, 2020) and their subjective well-being (Diener et al., 2009). All survey items were measured using 7-point Likert scales. Finally, respondents were asked about their age, gender, and length of time playing eSports. The items are reported in table A.1 in the Appendix.

Cronbach's alphas for the scales ranged between .82 and .95 (see Table A.1). A factor analysis using maximum likelihood and varimax rotation with AMOS 18 showed that items load on to six factors, explaining over 70% of the variance (Hair & Lukas, 2014), with $\chi 2/df = 1.68$, RMSEA = .05, and CFI = .90, ensuring measurement adequacy (Byrne, 2013).

Procedure

Using the PROCESS macro for SPSS (Hayes, 2018; Model 21), we ran a multiple moderated mediation analysis to test the theoretical model illustrated in Fig. 1. Based on the CFA results, we

used the mean composite scores on the items for each construct in the moderated mediation model (Hayes, 2018).

Perceived control was entered as a moderator of the relationship between sensation-seeking and self-enhancement. Self-enhancement was entered as a mediator of the relationship between sensation-seeking and well-being. Privacy concerns were entered as a moderator of the relationship between self-enhancement and well-being. Well-being was the dependent variable (Fig. 1).

The analysis assessed (1) the effects of sensation-seeking on well-being (both directly and indirectly, through self-enhancement), (2) the effect of sensation-seeking on self-enhancement (as moderated by perceived control), (3) the effect of self-enhancement on well-being (as moderated by privacy concerns).

The statistical significance of the direct and indirect effects was evaluated through 10,000 bootstrap samples to create bias-corrected confidence intervals (CIs; 95%) with heteroscedasticity-consistent SEs (Hayes, 2018).

RESULTS

Moderated Mediation Analysis

The index of moderated mediation was significant (Effect = -.04, 95% CI [-.12, -.01]) as the 95% CI interval did not include zero (Hayes, 2018). The data show that sensation-seeking led to higher feelings of self-enhancement (Effect = .73, p = .01), providing support for Hypothesis 1. Furthermore, as advanced in Hypothesis 3, perceived control significantly moderated the effect of sensation-seeking on self-enhancement (Effect = .11, p = .04). This finding suggests that when eSports players develop skills in gaming and perceive that they are in control of the game world, they feel better about themselves. Indeed, there were clear differences in self-enhancement between individuals with higher and lower levels of control (effects at the values of the moderator: Low = .17, 95% CI [.05, .28]; High = .28, 95% CI [.13, .42]).

Self-enhancement positively affected well-being (Effect = .27, p = .01), as advanced in Hypothesis 2. Furthermore, as advanced in Hypothesis 4, privacy concerns significantly moderated the effect of self-enhancement on well-being (Effect = .33, p = .01). This finding suggests that when eSports players feel better about themselves while playing and, at the same time, perceive that their privacy is protected, there are more likely to achieve subjective well-being. Indeed, there were clear differences in well-being between individuals with higher and lower levels of privacy perceptions, the impact nearly doubling for low versus high privacy perceptions (effects at the values of the moderator: Low = .27, 95% CI [.11, .44]; High = .61, 95% CI [.42, .79]).

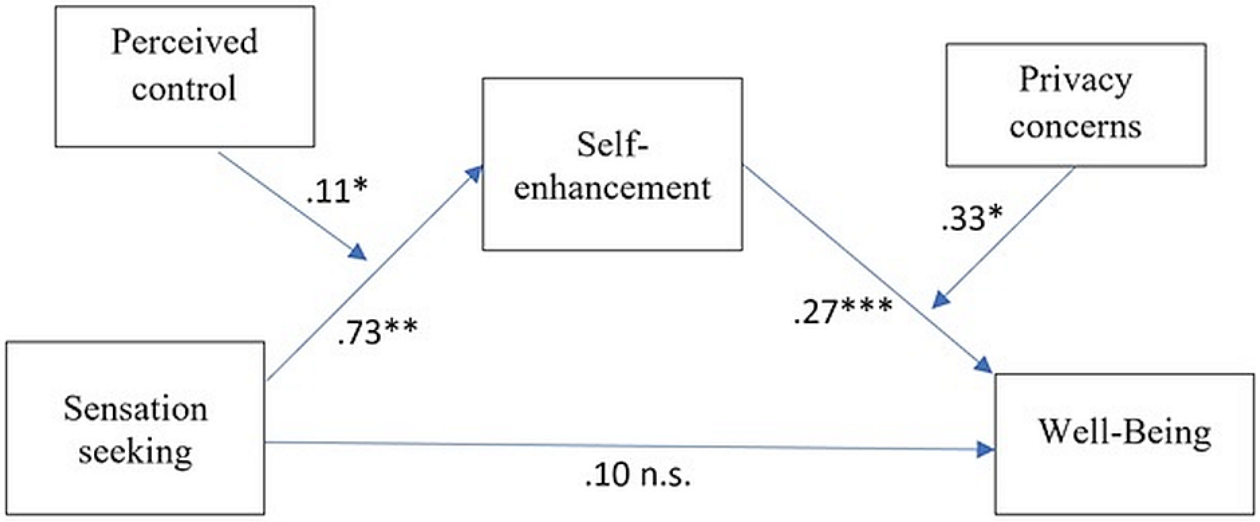
Additionally, well-being was not directly impacted by sensation-seeking (Effect = .10, p = .10), suggesting that self-enhancement fully mediates the relationship between sensation seeking and well-being. Consistently with the above patterns, we found that players who reached feelings of self-enhancement under conditions of high perceived control and privacy expressed the highest well-being. The results of the model estimation are summarized in Table 2 and shown in Figure 2.

Table 2. Full model: moderated mediation analysis

Hypothesis		Coeff.	se	*t*	*p*	LLCI	ULCI
H1	Sensation-seeking on self-enhancement	0.73	0.26	2.76	0.01	0.21	1.24
H2	Self-enhancement on wellbeing	0.27	0.08	3.21	0.01	0.10	0.44
H3	Moderation of perceived control	0.11	0.05	2.10	0.04	0.01	0.22
H4	Moderation of privacy concerns	0.33	0.12	2.68	0.01	0.09	0.58
Direct effect: Sensation-seeking on wellbeing		0.10	0.06	1.62	0.11	-0.02	0.23

Note. LLCI = lower limit 95% confidence interval; ULCI = upper limit 95% confidence interval

Fig. 2. The model with estimates



Summary of the Results

We found support for Hypotheses 1 to 4 and showed that eSports players' need for sensations and self-enhancement, coupled with their perceptions of control and privacy, help drive players' subjective well-being. Nonetheless, sensation-seeking had no direct impact on well-being. Rather, it was affected by self-enhancement: Higher self-enhancement—which stems from quenching the thirst for sensation through playing—is enhanced by higher perceived control over the task undertaken. In turn, feelings of self-enhancement led to well-being under the condition that players' privacy concerns were addressed.

DISCUSSION

This research has targeted eSports, addressing the impact of interacting with this type of technology on players' subjective well-being. Our contribution combined the perspective of marketing, psychology, privacy, sports, and the literature on well-being, addressing an underrepresented population group such as eSports players. We based our contribution and hypotheses on the

372 theoretical foundations of virtual edgework theory to insights for scholars and practitioners and focus
373 on the consequences of consumer–technology interactions in terms of consumer well-being.
374 The extant marketing literature features few insights into eSports, especially about active
375 players rather than spectators, let alone about subjective well-being. This research provides the first
376 investigation of eSports players' subjective well-being to the best of the authors' knowledge. By
377 adopting the theoretical lenses of virtual edgework theory and leveraging a panel of hundreds of
378 eSports players, this research developed and tested a unique theoretical conceptualization that
379 uncovered some of eSports players' psychological drivers. Furthermore, this research is the first to
380 address eSports players' privacy concerns in influencing their well-being.
381 Findings of the present study validate previous research suggesting that esports consumption
382 and sports consumption present similarities (e.g., Funk et al., 2018; Pizzo et al., 2018), which are
383 rooted in the conceptual similarities between traditional sports and esports (e.g., the competitive
384 element and the organizational structure, Hallmann & Giel, 2018). Furthermore, the contributions of
385 the present paper partially align with the results of extant research by suggesting that, under certain
386 conditions, engagement in virtual environments can exert beneficial effects on individual well-
387 being. The study goes one step further by a) extending such insights to a specific gaming domain
388 (eSports) and b) providing insights into the psychological mechanisms through which eSports
389 participation can exert positive psychological effects on participants.
390 Furthermore, the present study is among the first to explain how privacy concerns may
391 impact the subjective well-being of eSports active players. Investigating players' privacy
392 perceptions appears a particularly valuable addition in the attempt to develop a broader
393 understanding of the behavior of eSports participants: as gaming experiences become more and
394 more immersive, interactive, and customized, they also become more and more demanding in terms
395 of personal data of players, exposing them to several potential risks concerning their privacy (e.g.,
396 due to accidental data leakages). Our findings help marketers effectively design and promote
397 eSport-themed products and events, caring for players' well-being. For academics, our results may

inspire novel research questions about eSports activities and – more generally – about subjective well-being in computer-mediated environments (Marikyan, Papagiannidis, & Alamanos, 2020; Papagiannidis & Marikyan, 2020).

Theoretical Implications

From a theoretical perspective, this research addresses a gap in the literature about subjective well-being. On the whole, we know little about the virtual edgework's relationship with well-being. To fill this gap, we applied edgework theory to the domain of eSports, leveraging the notion of virtual edgework to assess the degree to which computer-mediated competitive activities stimulate feelings of well-being.

We shed light on the moderating roles of perceived control in channeling sensation-seeking into feelings of self-enhancement. Then, we showed that self-enhancement plays an important role in driving well-being. Specifically, we show that sensation-seeking can exist and reach high levels in virtual gaming worlds, just as it can in physical contexts. Then, we demonstrate that sensation-seeking translates into feelings of self-enhancement, and even more so if individuals feel in control. In turn, self-enhancement from playing eSports develops into well-being, so that eSports experiences may be a source of positive psychological sensations for participants, leaving players better off, especially when their privacy concerns are low.

Finally, we highlighted the importance of privacy concerns in the transformation process of self-enhancement into well-being. A significant moderation represents an advancement to the current debate on eSports. It shows that the strength with which positive outcomes, such as improving the view of the self and feeling better, depends upon the extent to which players perceive their privacy is safely managed while playing. This way, we supplement previous studies that focused on eSports and gaming behavior but did not account for players' perceptions of the privacy-related risks connected to gaming platforms and services.

All in all, marketing studies of edgework are recent in the physical context and represent a frontier in virtual contexts. Thus, we are among the first to use and test the theoretical assumption of virtual edgework theory. Furthermore, we develop a complex set of mediation and moderation relationships, pushing forward current knowledge. In addition, we are the first to address well-being in connection with virtual edgework and empirically test it on eSports players. Previous studies suggested that video games can foster real-world psychosocial benefits (Granic et al., 2014). We add and demonstrate that eSports concretely offer players the opportunity to seek sensations and feel better about themselves, ultimately leading them to construe a (more) positive view of the self and feel well.

Managerial Implications

Results inform practitioners about the drivers that can channel eSports' participation into positive outcomes such as well-being. Our evidence shows that gamers' well-being stems from the interplay of sensation-seeking, self-enhancement, and perceived control, which can be -at least partly- affected by practitioners' actions.

Thus, our findings suggest that eSports events should emphasize participants' control perceptions to help players' well-being. For instance, events could provide key information about the best-performing gamers, best practices, technical information about average training hours, electronic equipment, etc. Also, game developers can enhance perceptions of control by providing a clear and responsive interface, information about the game dynamics, and a relatively glitch-free experience. Our findings may also raise policymakers' awareness of esports' potential in supporting public programs to reinforce subjective well-being (e.g., for disabled people; British Esports Association, 2021). Similarly, eSports have proven to be a key platform supporting the development of soft skills (like relational skills) and valuable professional skills (e.g., relevant for STEM careers, Microsoft, 2022). Accordingly, esports managers should be aware that emphasizing

the association between control and skill in players' minds may further reinforce esports psychosocial benefits.

Finally, eSports' massive participation (and more in general, online gaming) makes privacy issues compelling for the entire industry (e.g., Esports Insider, 2021) and sponsorship dynamics Our findings suggest managers should not underestimate players' concerns about privacy. On the one hand, concern has been expressed about players' actual perception of privacy-related issues in esports (e.g., due to the presence of many underage players). On the other hand, recent reports suggest that esports players are often denoted by relevant skills related to mastering technologies, including privacy-related issues. Our results align with this latter view: accordingly, eSports practitioners and policymakers should first consider enhancements to the gaming experience by looking at the toll required on gamers in terms of personal data sharing. Caring for privacy and communicating about privacy to gamers might be crucial for ensuring their well-being. For instance, the PlayStation website addresses gamers clarifying what Sony exactly does to preserve gamers' privacy (PlayStation, 2020).

CONCLUSIONS

Esports are nowadays a global mainstream phenomenon. Active participation in esports has seen impressive growth in the last years, sustained by the constant technological evolution and, ultimately, boosted by the recent pandemic (Hong et al., 2022), and is expected to grow even further, pushed by younger future generations (Newzoo, 2022). Thus, marketing and consumer studies on esports have seen remarkable growth in recent years. However, the specific nature of esports is such that both practitioners and academics agree in considering them a different domain from video and online gaming. From an academic perspective, this encourages scholars to develop specific theoretical lenses to understand the drivers, motivations, and psychological dynamics of individuals that engage in competitive gaming, overcoming the fragmentation that characterizes

current esports literature (Cranmer et al., 2021). The present research contributes to the debate on esports active participation by elaborating on the conceptual similarities between esports and traditional sports and the specificities of the esports gaming experience. We identify potential pathways through which eSports can promote players' well-being, proposing that eSports participation can produce beneficial psychological effects on players. Furthermore, we show the effects on well-being are driven by context-specific factors logically comparable to those of extreme sports (Raggiotto & Scarpi, 2020, 2021), so that virtual edgework theory is a valid interpretative key for understanding Esports players' behavior and perceptions.

LIMITATIONS AND FUTURE RESEARCH

The present research on eSports and well-being is not meant to be conclusive. First, it did not address the origin of sensation-seeking in gamers: Does it stem from psychological motivations, or is it a psychological trait (Yasin et al., 2020; Porcu & Francisco, 2020)? We welcome future research in this direction.

Second, future research could explore boundary conditions associated with well-being in digital environments. Our operationalization incorporated one mediator (self-enhancement) and two moderators (perceived control and privacy concerns). Additional research could explore other interacting variables, perhaps by drawing from theoretical perspectives other than edgework theory.

Third, research on privacy suggested that social and identity motives might lead consumers that are concerned by privacy issues to behave paradoxically (e.g., to disclose personal information to online services easily), leading to the "privacy paradox" problem (Bandara et al., 2020). In this sense, future research could explore how such trade-offs affect well-being, understanding how gamers are willing to give up their personal information in exchange for psychologically rewarding sensations.

REFERENCES

Abbas, B. K., Jasim, I. A., & Nsaif, W. S. (2019). A Comparative Study of the Growth of Electronic Sports in the World and the Important Global E-Sports Achievements. International *Journal of Computer Science and Mobile Computing*, 8(1), 144–153.

Aboulnasr, K., Tran, G. A., & Park, T. (2022). Personal information disclosure on social networking sites. *Psychology & Marketing*. In press.

Abraham, A. D., Neve, K. A., & Lattal, K. M. (2013). Neurobiology of Learning and Memory Dopamine and extinction : A convergence of theory with fear and reward circuitry. *Neurobiology of Learning and Memory*, 108, 65–77.

Abraham, M., Niessen, C., Schnabel, C., Lorek, K., Grimm, V., Möslein, K., & Wrede, M. (2019). Electronic monitoring at work: The role of attitudes, functions, and perceived control for the acceptance of tracking technologies. *Human Resource Management Journal*, 29(4), 657–675.

Anglim, J., Horwood, S., Smillie, L. D., Marrero, R. J., & Wood, J. K. (2020). Predicting psychological and subjective well-being from personality: A meta-analysis. P*sychological Bulletin*, 146(4), 279.

Bandara, R., Fernando, M., & Akter, S. (2020). Explicating the privacy paradox: A qualitative inquiry of online shopping consumers. *Journal of Retailing and Consumer Services*, 52.

Bányai, F., Griffiths, M. D., Király, O., & Demetrovics, Z. (2019). The Psychology of Esports: A Systematic Literature Review. *Journal of Gambling Studies*, 35(2), 351–365.

Bertschy, M., Mühlbacher, H., & Desbordes, M. (2020). Esports extension of a football brand: stakeholder co-creation in action? *European Sport Management Quarterly*, 20(1), 47–68.

Böffel, C., Würger, S., Müsseler, J., & Schlittmeier, S. J. (2022). Character Customization With Cosmetic Microtransactions in Games: Subjective Experience and Objective Performance. *Frontiers in Psychology*, 12, 770139.

British Esports Association. (2021). Computers do not discriminate – Mental health and disability in esports with Daniel Bingley. https://britishesports.org/news/computers-do-not-discriminate-mental-health-and-disability-in-esports-with-daniel-bingley/

Brymer, E., & Houge Mackenzie, S. (2016). Psychology and the extreme sport experience. In F. Feletti (Ed.), *Extreme Sports Medicine* (pp. 3–13). Springer.

Brymer, E., & Schweitzer, R. D. (2017). Evoking the ineffable: The phenomenology of extreme sports. *Psychology of Consciousness: Theory, Research, and Practice*, 4(1), 63–74.

Byrne, B. M. (2013). *Structural Equation Modeling With AMOS* (Vol. 22). Psychology Press.

Cavazza, M., Lugrin, J.-L., & Buehner, M. (2007). Causal Perception in Virtual Reality and its Implications for Presence Factors. *Presence: Teleoperators and Virtual Environments*, 16(6), 623–642.

Chen, F. F., Jing, Y., Hayes, A., & Lee, J. M. (2013). Two concepts or two approaches? A bifactor analysis of psychological and subjective well-being. *Journal of Happiness Studies*, 14(3), 1033-1068.

Chen, V. H. H., Wilhelm, C., & Joeckel, S. (2019). Relating video game exposure, sensation seeking, aggression and socioeconomic factors to school performance. *Behaviour and Information Technology*, 1–13.

Chicchi Giglioli, I. A., de Juan Ripoll, C., Parra, E., & Alcañiz Raya, M. (2021). Are 3D virtual environments better than 2D interfaces in serious games performance? An explorative study for the assessment of executive functions. *Applied Neuropsychology: Adult*, 28(2), 148–157.

Cohen, R., Baluch, B., & Duffy, L. J. (2018). Defining Extreme Sport: Conceptions and Misconceptions. *Frontiers in Psychology*, 9(OCT), 1974.

Cranmer, E. E., Han, D. I. D., van Gisbergen, M., & Jung, T. (2021). Esports matrix: Structuring the esports research agenda. *Computers in Human Behavior*, 117, 106671.

Cunningham, G. B., Fairley, S., Ferkins, L., Kerwin, S., Lock, D., Shaw, S., & Wicker, P. (2018). eSport: Construct specifications and implications for sport management. *Sport management Review*, 21(1), 1-6.

Cuesta-Valino, P., Gutiérrez-Rodríguez, P., & Loranca-Valle, C. (2022). Sponsorship image and value creation in E-sports. *Journal of Business Research*, 145, 198-209.

Diener, E., Wirtz, D., Biswas-Diener, R., Tov, W., Kim-Prieto, C., Choi, D., & Oishi, S. (2009). New Measures of Well-Being. In E. Diener (Ed.), *Assessing Well-Being* (pp. 247–266).

Dufner, M., Gebauer, J. E., Sedikides, C., & Denissen, J. J. A. (2019). Self-Enhancement and Psychological Adjustment: A Meta-Analytic Review. In *Personality and Social Psychology Review* (23,1, 48–72). SAGE Publications Inc.

Esports Insider. (2021). Playing with privacy? Privacy and cybersecurity considerations in esports. https://esportsinsider.com/2021/06/playing-with-privacy-privacy-and-cybersecurity-considerations-in-esports/

Farman, J. (2010). Hypermediating the Game Interface: The Alienation Effect in Violent Videogames and the Problem of Serious Play. *Communication Quarterly*, 58(1), 96–109.

Felnhofer, A., Kothgassner, Oswald D Schmidt, M., Heinzle, A.-K., Beutl, L., Hlavacs, H., & Kryspin-Exner, I. (2015). Is virtual reality emotionally arousing? Investigating five emotion inducing virtual park scenarios. *International Journal of Human-Computer Studies*, 82, 48–56.

Funk, D. C., Pizzo, A. D., & Baker, B. J. (2018). eSport management: Embracing eSport education and research opportunities. *Sport Management Review*, 21(1), 7–13.

Gallagher, M. W., Lopez, S. J., & Preacher, K. J. (2009). The hierarchical structure of well-being. *Journal of Personality*, 77(4), 1025-1050.

Granic, I., Lobel, A., & Engels, R. C. M. E. (2014). The benefits of playing video games. *American Psychologist*, 69(1), 66–78.

Griffiths, M. (1999). Violent video games and aggression. *Aggression and Violent Behavior*, 4(2), 203–212.

Griffiths, M. D. (2017). The psychosocial impact of professional gambling, professional video gaming & eSports. *Casino & Gaming International*, *28*, 59–63.

Hair, J. F., & Lukas, B. (2014). Marketing research (Vol. 1). McGraw-Hill.

Halbrook, Y. J., O'Donnell, A. T., & Msetfi, R. M. (2019). When and How Video Games Can Be Good: A Review of the Positive Effects of Video Games on Well-Being. *Perspectives on Psychological Science*, 14(6), 1096–1104.

Hallmann, K., & Giel, T. (2018). eSports–Competitive sports or recreational activity?. *Sport Management Review*, 21(1), 14-20.

Hamari, J., & Sjöblom, M. (2017). What is eSports and why do people watch it?. *Internet Research*.

Hart, M. (2017). Being naked on the internet: young people's selfies as intimate edgework. *Journal of Youth Studies*, 20(3), 301–315.

Hayes, A. F. (2018). *Introduction to Mediation, Moderation, and Conditional Process Analysis Methodology in the Social Sciences*. Guilford Press. www.guilford.com/MSS

Hong, H. J. (2022). eSports: the need for a structured support system for players. *European Sport Management Quarterly*, 1-24.

Hong, J. C., Juan, H. C., & Hung, W. C. (2022). The role of family intimacy in playing collaborative e-sports with a Switch device to predict the experience of flow and anxiety during COVID-19 lockdown. *Computers in Human Behavior*, 132, 107244.

Jang, W. W., & Byon, K. K. (2020). Antecedents of esports gameplay intention: Genre as a moderator. *Computers in Human Behavior*, 109, 106336.

Jansz, J., & Tanis, M. (2007). Appeal of Playing Online First Person Shooter Games. *CyberPsychology & Behavior*, 10(1), 133–136.

Jenny, S. E., Manning, R. D., Keiper, M. C., & Olrich, T. W. (2017). Virtual(ly) Athletes: Where eSports Fit Within the Definition of "Sport." *Quest*, 69(1), 1–18.

Kaplan, A., & Maehr, M. L. (1999). Achievement Goals and Student Well-Being. *Contemporary Educational Psychology*, 24(4), 330–358.

602 Kätsyri, J., Hari, R., Ravaja, N., & Nummenmaa, L. (2013). Just watching the game ain't enough:
603 striatal fMRI reward responses to successes and failures in a video game during active and
604 vicarious playing. *Frontiers in Human Neuroscience*, 7, 278.
605 Keller, L., Bieleke, M., & Wolff, W. (2021). Bursting balloons - comparison of risk taking between
606 extreme sports, esports, and the general public. *Current Psychology*.
607 Kelly, S. J., Derrington, S., & Star, S. (2022). Governance challenges in esports: a best practice
608 framework for addressing integrity and well-being issues. *International Journal of Sport Policy*
609 *and Politics*, 14(1), 151–168.
610 Kifer, Y., Heller, D., Perunovic, W. Q. E., & Galinsky, A. D. (2013). The Good Life of the
611 Powerful. *Psychological Science*, 24(3), 280–288.
612 Klimmt, C., & Hartmann, T. (2006). Effectance, self-efficacy, and the motivation to play video
613 games. *Playing Video Games: Motives, Responses, and Consequences*, 153–168.
614 Klimmt, C., Hartmann, T., & Frey, A. (2007). Effectance and Control as Determinants of Video
615 Game Enjoyment. *CyberPsychology & Behavior*, 10(6), 845–848.
616 Lopez, C., Pizzo, A. D., Gupta, K., Kennedy, H., & Funk, D. C. (2021). Corporate growth strategies
617 in an era of digitalization: A network analysis of the national basketball association's 2K league
618 sponsors. *Journal of Business Research*, 133, 208-217.
619 on spectating motives and points of attachment. *Computers in Human Behavior*, 127, 107055.
620 Lyng, S. (1990). A Social Psychological Analysis of Voluntary Risk Taking. *The American Journal*
621 *of Sociology*, 95(4), 851–886.
622 Lyng, S. (2014). Action and edgework. *European Journal of Social Theory*, 17(4), 443–460.
623 Lyng, S., & Matthews, R. (2007). Risk, edgework, and masculinities. In K. Hannah-Moffat & P.
624 O'Malley (Eds.), *Gendered Risks* (pp. 75–97). Routledge.
625 Lyons, E. J., Tate, D. F., Ward, D. S., Ribisl, K. M., Bowling, J. M., & Kalyanaraman, S. (2014).
626 Engagement, enjoyment, and energy expenditure during active video game play. *Health*
627 *Psychology*, 33(2), 174–181.

Ma, H., Wu, Y., Wu, X. (2013). Research on Essential Difference of E-Sport and Online Game. In: Du, W. (Ed.) *Informatics and Management Science V. Lecture Notes in Electrical Engineering*, vol. 208 (pp. 615–621). Springer, London.

Macey, J., & Hamari, J. (2018). Investigating relationships between video gaming, spectating esports, and gambling. *Computers in Human Behavior*, 80, 344–353.

Macey, J., Tyrväinen, V., Pirkkalainen, H., & Hamari, J. (2022). Does esports spectating influence game consumption?. *Behaviour & Information Technology*, 41(1), 181-197.

Marikyan, D., Papagiannidis, S., & Alamanos, E. (2020). Cognitive dissonance in technology adoption: a study of smart home users. *Information Systems Frontiers*, 1-23.

Marikyan, D., Papagiannidis, S., Rana, O. F., & Ranjan, R. (2022). Blockchain adoption: A study of cognitive factors underpinning decision making. *Computers in Human Behavior*, 131, 107207.

Marshall, M. A., & Brown, J. D. (2008). On the psychological benefits of self-enhancement. In E.C. Chang (Ed.), *Self-criticism and self-enhancement: Theory, research, and clinical implications*. (pp. 19–35). American Psychological Association.

Maseeh, H. I., Jebarajakirthy, C., Pentecost, R., Arli, D., Weaven, S., & Ashaduzzaman, M. (2021). Privacy concerns in e-commerce: A multilevel meta-analysis. *Psychology & Marketing*, 38(10), 1779–1798.

Miah (2022). Esports is the future of all sports – here's why. https://theconversation.com/esports-is-the-future-of-all-sports-heres-why-121335

McGregor, I., & Little, B. R. (1998). Personal projects, happiness, and meaning: on doing well and being yourself. *Journal of Personality and Social Psychology*, 74(2), 494.

McKinsey (2020). https://www.mckinsey.com

Microsoft (2022). Esports: More than just a game. https://education.microsoft.com/en-us/course/1a787891/overview

Newzoo (2022). http://newzoo.com/.

Ortiz de Gortari, A. B., & Griffiths, M. D. (2017). *Beyond the Boundaries of the Game: The Interplay Between In-Game Phenomena, Structural Characteristics of Video Games, and Game Transfer Phenomena. In Boundaries of Self and Reality Online: Implications of Digitally Constructed Realities* (pp. 97–121). Elsevier.

Papagiannidis, S., & Marikyan, D. (2020). Smart offices: A productivity and well-being perspective. *International Journal of Information Management*, 51, 102027.

Park, E., Baek, S., Ohm, J., & Chang, H. J. (2014). Determinants of player acceptance of mobile social network games: An application of extended technology acceptance model. *Telematics and Informatics*, 31(1), 3–15.

Pizzi, G., & Scarpi, D. (2020). Privacy threats with retail technologies: A consumer perspective. *Journal of Retailing and Consumer Services*, 56, 102160.

Pizzi, G., Scarpi, D., Pichierri, M., & Vannucci, V. (2019). Virtual reality, real reactions?: Comparing consumers' perceptions and shopping orientation across physical and virtual-reality retail stores. *Computers in Human Behavior*, 96, 1–12

Pizzo, A. D., Baker, B. J., Na, S., Lee, M. A., Kim, D., & Funk, D. C. (2018). eSport vs Sport: A Comparison of Spectator Motives. *Sport Marketing Quarterly*, 27(2), 45–60.

Pizzo, A. D., Kunkel, T., Jones, G. J., Baker, B. J., & Funk, D. C. (2022). The strategic advantage of mature-stage firms: Digitalization and the diversification of professional sport into esports. *Journal of Business Research*, 139, 257-266.

PlayStation. (2020). Privacy Information for Young Players. https://www.playstation.com/en-us/legal/privacy-information-for-young-players/

Porcu, L., & Francisco, L. C. (2020). The impact of customer personality and online brand community engagement on intention to forward company and users generated content: palestinian banking industry a case. *Economic Research-Ekonomska Istraživanja*, 33:1, 1985-2006.

678 Qian, T. Y., Matz, R., Luo, L., & Xu, C. (2022). Gamification for value creation and viewer
679 engagement in gamified livestreaming services: The moderating role of gender in esports.
680 *Journal of Business Research*, 145, 482-494.
681 Raggiotto, F., & Scarpi, D. (2020). Living on the edge: Psychological drivers of athletes' intention
682 to re-patronage extreme sporting events. *Sport Management Review*, 23(2), 229-241.
683 Raggiotto, F., & Scarpi, D. (2021). This must be the place: A destination-loyalty model for extreme
684 sporting events. *Tourism Management*, 83, 104254.
685 Raggiotto, F., Scarpi, D., & Mason, M. C. (2019). Faster! More! Better! Drivers of upgrading
686 among participants in extreme sports events. *Journal of Business Research*, 102, 1–11.
687 Rea, S. C. (2019). Chronotopes and social types in south Korean digital gaming. *Signs and Society*,
688 7(1), 115–136.
689 Rodríguez-Priego, N., Porcu, L., & Kitchen, P. J. (2022). Sharing but caring: Location based mobile
690 applications (LBMA) and privacy protection motivation. *Journal of Business Research*, 140,
691 546–555.
692 Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological
693 well-being. *Journal of Personality and Social Psychology*, 57(6), 1069–1081.
694 Scarpi, D. (2021). A construal-level approach to hedonic and utilitarian shopping orientation.
695 *Marketing Letters*, 32(2), 261–271.
696 Scarpi D., Pizzi G., & Matta S. (2022). Digital Technologies and Privacy: State of the Art and
697 Research Directions. *Psychology & Marketing*. Forthcoming
698 Schwartz, S. H. (1992). Universals in the Content and Structure of Values: Theoretical Advances
699 and Empirical Tests in 20 Countries. *Advances in Experimental Social Psychology*, 25(C), 1–65.
700 Sedikides, C., & Gregg, A. P. (2008). Self-enhancement: Food for thought. *Perspectives on*
701 *Psychological Science*, 3(2), 102–116.
702 Seo, Y. (2013). Electronic sports: A new marketing landscape of the experience economy. *Journal*
703 *of Marketing Management*, 29(13-14), 1542-1560.

Seo, Y. (2016). Professionalized consumption and identity transformations in the field of eSports. *Journal of Business Research*, 69(1), 264-272.

Sepehr, S., & Head, M. (2018). Understanding the role of competition in video gameplay satisfaction. *Information & Management*, 55(4), 407–421.

Shay, H. (2017). Virtual Edgework: Negotiating Risk in Role-Playing Gaming. *Journal of Contemporary Ethnography*, 46(2), 203–229.

Shoham, A., Rose, G. M., & Kahle, L. R. (2000). Practitioners of risky sports: A quantitative examination. *Journal of Business Research*, 47(3), 237–251.

Sjöblom, M., Törhönen, M., Hamari, J., & Macey, J. (2017). Content structure is king: An empirical study on gratifications, game genres and content type on Twitch. *Computers in Human Behavior*, 73, 161–171.

Sjöblom, M., Macey, J., & Hamari, J. (2020). Digital athletics in analogue stadiums: Comparing gratifications for engagement between live attendance and online esports spectating. *Internet Research*, 30(3), 713-735.

Statista. (2021). eSports market revenue worldwide from 2019 to 2024. https://www.statista.com/statistics/490522/global-esports-market-revenue/

Ströbel, T., & Germelmann, C. C. (2020). Exploring new routes within brand research in sport management: directions and methodological approaches. *European Sport Management Quarterly*, 20(1), 1–9.

Taylor, S. E., & Brown, J. D. (1988). Illusion and Well-Being: A Social Psychological Perspective on Mental Health. *Psychological Bulletin*, 103(2), 193–210.

The Esports Observer. (2019). EO Report. https://esportsobserver.com/

Wagner, M. G. (2006, June). On the Scientific Relevance of eSports. *International conference on internet computing* (pp. 437-442).

Weiss, T., & Schiele, S. (2013). Virtual worlds in competitive contexts: Analyzing eSports consumer needs. *Electronic Markets*, 23(4), 307-316.

Witkowski, E. (2012). On the Digital Playing Field. *Games and Culture*, *7*(5), 349–374.

Yan, O. H., & Bonanno, G. A. (2015). How self-enhancers adapt well to loss: the mediational role of loneliness and social functioning. *Journal of Positive Psychology*, 10(4), 370–382.

Yasin, M., Porcu, L., Abusharbeh, M. T., & Liébana-Cabanillas, F. (2020). The impact of customer personality and online brand community engagement on intention to forward company and users generated content: palestinian banking industry a case. *Economic Research-Ekonomska Istraživanja*, 33(1), 1985–2006.

Yu, B., Brison, N. T., & Bennett, G. (2022). Why do women watch esports? A social role perspective

Zhai, Z. W., Hoff, R. A., Howell, J. C., Wampler, J., Krishnan-Sarin, S., & Potenza, M. N. (2020). Differences in associations between problematic video-gaming, video-gaming duration, and weapon-related and physically violent behaviors in adolescents. *Journal of Psychiatric Research*, 121, 47–55.

APPENDIX

Table A.1. Questionnaire Items

Construct	**α**	**Construct**	**α**
Sensation seeking (Shoham et al., 2000)	*.84*	**Perceived control (Cavazza et al., 2007; Lyons et al., 2014)**	*.83*
I like challenges when playing eSports.		My training and skills make me feel in control.	
I like very thrilling experiences when playing eSports.		The game environment is responsive to actions that I initiated/performed	
I like feeling the adrenaline flowing when playing eSports.		I am able to anticipate what would happen next in response to the actions that I performed	
I prefer things who are excitingly unpredictable when playing eSports		I can concentrate on the assigned tasks or required activities rather than on the mechanisms used to perform such tasks or activities	
Every time I play it is an adventure.		I feel able to control events	
Self-enhancement (Shoham et al., 2000)	*.82*	**Subjective Well-being (Diener et al., 2009)**	*.95*
eSports have changed my perspective		I lead a purposeful and meaningful life	
eSports hscelp me become better		I am engaged and interested in my daily activities	
After playing eSports, I am a better person than I was before		I am competent and capable in the activities that are important to me	
After playing eSports, I think more highly of me because of that		I am a good person and live a good life	
		I am optimistic about my future	
Privacy concerns (Pizzi & Scarpi, 2020)	*.88*		
I think my benefits gained from the playing this game can offset the risk of my information disclosure.			
The value I gain from using this game is worth the information I give away			
The risks of information disclosure will be greater than the benefits gained from the use of this game. (R)			
I believe that the game has adequate security features to protect my privacy			
I feel like my privacy would be protected at this gameplay			
I would feel safe in my playing experiences with this game			
I would feel comfortable sharing my information with this game			