When Following Digital Influencers on Social Media and Buying their Products Used Shapes Consumption

Abstract

While social influencers as streamers promote and endorse brands in social media, we do not know how following the influencer can shape the consumer's shopping behavior. Twitch.tv is a social media and a live streaming platform for players and gamers. Social influencers work in Twitch.tv aiming influence consumer shopping behavior. Drawing on Social Identity Theory and Endorsement Theory, the authors propose a theoretical framework that consumers following an influencer on social media and buying products used by him/her both moderate the impact of brand recall, trust, and involvement on the total spent in game monthly. We collected data through social media by posting our questionnaire at the Twitch.tv with 270 gamers. The results showed that following the influencer in social media strengthens the main effect of trust and brand recall on total spent in game monthly. Moreover, the greater the number of products bought after seeing an influencer using them, the greater the main effect of trust and involvement on total spent in game monthly. The theoretical reason behind the moderating effect of following the endorsers is because the consumers that buy trustworthy products used by the influencer do so to modify their self-concept and develop relationships with social media celebrities.
Key-words: social, influencer, endorser,

1 Introduction

Social media influencers work endorsing products, equipment, and brands on the internet and represent a new form of celebrity endorsement. Marketing professionals and advertising companies are looking to invest money on Social media influencers to affect consumer's shopping behavior. Companies finished 2018 spending $7.9 billion on Facebook, Instagram, YouTube and Twitch.tv for this kind of marketing (Ito, 2018). Moreover, Rakuten Marketing "showed that British marketers working on influencer programs were willing to pay celebrities on Facebook up to, or more than, £75,000 for a single post giving a shoutout to their brand" (Siegel, 2018).

In social media, Twitch.tv is a live streaming platform for players, gamers, and influencers that involves professional players, fans, and streamers playing games such as League of Legends, Dota 2, Counter-strike, Fortnite and so forth. Twitch.tv has "more than 15 million daily viewers and 140 million unique monthly visitors" (Shanebaker, 2019). *Ninja* is the top Social Media influencer on the Twitch.tv with approximately 15 million of followers, 60 hours/week streaming games and an average of over 50,000 viewers per week. The top 10 Social Media influencers in the Twitch.tv have accumulated more than 70 million of followers (Paterson, 2019).

Despite the role of influencers in promoting products, developing trends, shaping consumption and distributing games, shows, talks and movies, some gaps remain without investigation in this new social media channel – Twitch.tv. First, while there is a growing interest on social media influencers (Casaló, Flavián & Ibánez-Sánchez, 2018), we do not know how following the influencer can shape the followers' shopping behavior. We define the influencers as individuals that promote and endorse brands in the Twitch.tv and by following them in social media; consumers can receive news from products, latest brands, feedbacks from game's test, discover technical features from equipment, and so forth. Drawing on Endorsement Literature (McCracken, 1989; Choi & Rifon, 2012; Kapitan & Silvera, 2016), we argue that by following the influencers in the Twitch.tv, consumers obtain confidence, expertise and knowledge according to the arguments presented by the social media celebrity. "Expertise and knowledge about a product category or a social environment are essential qualifications that define" the influence in the context of social identity (Langner, Hennigs & Wiedmann, 2013, p.36). Thus, following the influencer in the social media moderates the

main effect of brand recall, involvement with advertising, and trust on total spent in games monthly.

Second, in online streaming, influencers suggest products for consumers buying. Buying the products that the influencer uses means that consumers are up-to-date with tendencies and identify themselves with their favorite celebrity. We define the number of products bought as the volume of products purchased by the consumer based on influencer's use. Evidence is lacking about how the number of products bought based on influencer's suggestions can increase the total spent in game monthly. Using on Social Identity Theory (Lam, Ahearne & Schillewaert, 2010), we propose that the greater that volume of products purchased, the greater the impact of brand recall, involvement with advertised advertising and the trust in total spent in game monthly. The theoretical logic behind this assumption is because consumers buy the products advertised for targeting social identities to support their identities (Biddle et al., 2015), and shaping their self-concept similar to the social media influencer.

The present paper draws on Endorsement Theory and Drawing on Social Identity Theory to explain the role of the influencer in increasing gamers' spent monthly in games, equipment, and brands. Despite previous research presented evidence about the endorsement effectiveness model (Choi & Rifon, 2012), earlier literature has been largely neglected the role of influencers in social media and streaming platforms (Biddle et al., 2015). In that context, Twitch.tv appears as a new streaming platform, in which teenagers and adults play a huge amount of hours and are exposing to different advertising endorsements. Moreover, previous literature either has been investigating the endorsement effect using traditional platforms, such as magazines, TV, radio, etc. (Knoll & Matthes, 2017) or using adults as sample size (Amos, Holmes, & Strutton, 2008), rejecting streaming platforms (e.g. Twitch.tv, Youtube gaming, Hitbox.tv, Mirrat.tv) and teenagers as sample size. The author proposes a theoretical framework that consumers following an influencer on social media and buying products used by him/her both moderate the influence of brand recall, trust, and involvement on the total spent in game monthly. In so doing, we aim to inspire forthcoming surveys into influencer's effectiveness in both social and streaming media platforms.

In the next chapter, we develop the theoretical background and hypotheses based on Endorsement Theory and Drawing on Social Identity Theory. Next, we collected data through twitch.tv with 270 gamers, ranging from 9 to 18 years old. Then, we analyzed the main effect and moderating hypotheses. The results showed support for our assumptions and confirm that consumers buy trustworthy products used by the influencer in order to modify their self-concept. In addition, data support the role of influencer in increasing gamers' spent monthly in games, equipment, and brands based on the cognitive (informational), affective (emotional) and conative (desire) aspects that Endorsement effectiveness model shapes the consumer behavior (Grewal et al., 1997).

2 Theoretical Background

2.1. Predictors: Trust, Involvement and Brand Recall

Trust, involvement, and brand recall are well-established constructs in marketing. Advertising and consumer behavior literature has been presenting solid evidence that trust, involvement, and brand recall explain buying intention, shopping behavior, consumer attitude and firm outcomes. Someone can find meta-analysis generalizing the effects of trust (Geyskens, Steenkamp & Kumar, 1998), involvement (Lewin & Donthu, 2005), and brand recall (Schmidt & Eisend, 2015) and explaining the theoretical reasons for the associations.

In this research, we define *trust* as the degree of confidence in the products used by the influencer on Twitch.tv (Touré-Tillery & McGill, 2015; Morgan & Hunt, 1994). Trust in product advertising should influence consumers' shopping behavior because gamers believe they are in safe hands and with few concerns about a purchase (Bleiler & Eisenbeiss, 2015). Earlier evidence has been supporting the main effect of trust on customer attitudes, intentions, and behavior (Swan, et al., 1999; Geyskens, Steenkamp, & Kumar, 1998). The theoretical logic behind the main effect of trust is that consumers wish to rely on products used by a third party that they have confidence (Moorman,

Zaltman, and Deshpandé 1992, p. 315). We expand this logic to the social media environment, proposing the moderating role of consumers following an influencer on social media and buying products used by him/her.

According to Zaichkowsky (1986), we describe *involvement* as the degree of importance in the advertising showed during online transmissions at Twitch.tv. Involvement in the advertising should boost consumer's shopping behavior because there is a greater level of cognitive "processing that occurs during the exposure to the advertising" managed by the influencer (Andrews, Durvasula & Akhter, 1990, p. 30). The empirical investigation has been supporting the main effect of involvement on customer behavior (Costley, 1988). Empirical research suggests that the effects of involvement on "attitude change depended on the aspect of message recipients' self-concept that was activated to create involvement" (Johnson & Eagly, 1989, p.290). We expand this main effect and propose a moderating role of consumers following an influencer and buying products used by him/her.

We define *brand recall* as the retrieve of the brand's equipment promoted by the influencer across Twitch.tv online transmissions (Alba & Chattopadhyay, 1986). Drawing on a "memory-based choice in which not all the options are available in front of the consumer", brands well-positioned at the individuals' mind "improve consumer's ability to retrieve brands, leading to a choice within the category" (Nedungadi, Chattopadhyay & Muthukrishnan, 2001 p. 192). By promoting the brand's equipment in an online transmission, the influencer increases the consumers' awareness toward the product and their ability to recover that brand in a consideration set (Alba & Chattopadhyay, 1985), influencing shopping behavior.

After explaining these three well-established constructs in marketing and consumer behavior literature, we hypothesize the moderating effects of following the influencer in social media and buying the products that the influencer used. We do not create hypotheses about the main effects of trust, involvement, and brand recall on total spent in game monthly because they are well-recognized constructs, instead, we go direct to the arguments that explain the moderating effects.

2.2. Endorsement Effectiveness Model

Endorsement effectiveness model (Lavidge & Steiner, 1961) suggests that the influence of an endorser is based on the cognitive (informational and factual aspects and the rational component of advertising), affective (emotional aspects and sensitive feelings that induce to a favorable attitude) and conative ("conative function is to stimulate desire and cause consumers to buy the sponsored brand") (Grewal et al., 1997, p.2). We associate these three elements to involvement, affect and brand recall, respectively. We relate cognitive with involvement based on earlier literature (Buchholz & Smith, 1991) that supports the cognitive aspect of involvement for processing information and taking decision-making (Soni, 2017). Petty and Cacioppo (1979) presented that involvement is the element that increases persuasion by enhancing message-relevant cognitive responses.

We associate affect with trust based on previous literature (Dowell, Morrison & Heffernan 2015). Trust has the affective component of creating confidence in the endorsement, based on the feelings that the streamer is suggesting the best brands and equipment for buying (Okazaki, Katsukura & Nishiyama, 2007). Trust is associate with affect based on social-psychological literature (Milne & Boza, 1999) and sociological literature (Soh, Reid & King, 2009). The first is based on psychological development, personality trait and interpersonal relationships (Cho, Huh & Faber, 2014). The second is drawing on perceived credibility and benevolence (Morgan & Hunt, 1994).

In order to explain the effect of the second moderator, we use social identity theory. Consumers by having a high involvement with the celebrity experience a parasocial interaction (Lim & Kim, 2011), which refers to psychological relationship with influencer and reveals a sense of feeling in social media strategies (Labrecque, 2014). Next, the endorsement effectiveness happens when there is congruence between the celebrity image and consumer ideal self (Choi and Rifon, 2012). The theoretical rationality is using influencers as celebrities to create eloquent self-concept-

related connections with consumers (Dwivedi, Johnson & McDonald 2015). In the end, brand-recall refers to the conative intention of remembering and buying a brand. The brand helps consumers because it builds a favorable self-identity (Escalas & Bettman, 2009a, b).

2.3. Moderators: Following the influencer in social media and Buying the products that the influencer used

We define 'following the influencer in social media' as the consumer who follows the streamer across multiple social media platforms. That is a dummy variable in which the consumer uses his/her social media to follow the influencer's posts, opinions, videos, etc (Choi & Rifon, 2012). Following the influencer in social media is a condition that happens in addition to following in the Twitch.tv and starts from the consumer's intention to track the influencer across different and complementary platforms (Kapitan & Silvera, 2016). We elaborate our moderating hypothesis based on Endorsement Theory (McCracken, 1989).

The second moderator is 'buying the products that the influencer used. We refer to this variable as a past decision that the consumer made the decision and bought products advertised by the influencer. That past decision could indicate that the consumer was influenced by streamer's word-of-mouth and use (Biddle et al., 2015). We draw on Social Identity Theory for elaborating the arguments for the moderating role (Lam, Ahearne & Schillewaert, 2010) because consumers buy the products advertised for developing their self-concept and increasing social identities toward online friends (Knoll & Matthes, 2017).

3. Hypotheses

3.1. Endorsement Effectiveness Model

Basing on the Endorsement effectiveness model (Lavidge & Steiner, 1961), the influencer increases the affective status by promoting emotional interaction with the followers using texts, hashtags, location check-in, and other information (Kapitan & Silvera, 2016). In that context, by following the influencer that promotes emotional interaction, consumers augment the main effect of confidence in the products used by the influencer (Touré-Tillery & McGill, 2015; Morgan & Hunt, 1994), generating greater monthly spent on products. Moreover, by following the influencer that induces emotional and affective aspects of brands with specific keywords and hashtags (Till & Busler, 2000), consumers' assurance for spending his/her money is greater (Choi & Rifon, 2012), amplifying the main effect of trust on total spent in game monthly (Choi & Rifon, 2012). Thus,

> ***H_{1a}:*** *Following the influencer on social media amplifies the main effect of trust in the advertising showed in Twitch.tv on monthly spend on products.*

Drawing on the cognitive dimension of the Endorsement effectiveness model (Lavidge & Steiner, 1961), the influencer uses his/her recognition and expertise to influence consumer's cognition by endorsing a brand (McCracken, 1989). Using a Twitch.tv, the influencer can present rational arguments for buying a brand and technical aspects for using it. These cognitive arguments are in positively related to high involved consumers who process meticulous information from advertising (Grewal et al., 1997), and look to reduce the cognitive dissonance in the decision-making process (Andrews, Durvasula & Akhter, 1990). In that condition, high-involved consumers demand logical information to elaborate a decision-making process (Zaichkowsky, 1986) and by following an influencer on social media, they can receive the cognitive and technical information from the streamer (Costley, 1988), intensifying the main effect of involvement in the advertising showed in Twitch.tv on monthly spend on products. Therefore,

> ***H_{1b}:*** *Following the influencer on social media amplifies the main effect of involvement in the advertising showed in Twitch.tv on monthly spend on products.*

The endorsement effectiveness model suggests a conative element that celebrity endorsement

can use (Grewal et al., 1997). Conative is an attitudinal variable that is strongly related to purchasing intention. When following the influencer on social media, consumers have a positive attitude toward a brand, which stimulates desire and causes consumers to buy the sponsored brand because there is a congruence between celebrity image and consumer ideal self (Choi & Rifon, 2012). That positive attitude from influencer-consumer congruence should strengthen the main effect of brand recall on total spent in game monthly. Moreover, by following the influencer on social media consumers have more awareness toward the product (Alba & Chattopadhyay, 1985) and retrieve more brands when deciding to buy (Nedungadi, Chattopadhyay & Muthukrishnan, 2001), intensifying the impact of brand recall on total spent in game monthly. Hence,

H_{1c}: *Following the influencer on social media amplifies the main effect of brand recall on monthly spend on products.*

3.2. Social Identity Theory

Social identity helps to explain how an individual's feeling of fitting into a specific social group shapes the self-concept. In our paper, we use social identity theory for explaining why consumers would like to have a congruent self-concept with the influencer (Stets & Burke, 2000). We refer to the individual's feeling of fitting into a Twitch.tv social group by buying the products used by the influencer and being similar in terms of the equipment used by the ideal group. The decision making of buying more products that the influencer uses helps to shape the consumer's self-concept because consumers would like to have possessing characteristics and desires similar to the influencer (Lam et al., 2010). Previous research has been supporting the idea that social influencers develop followers' identity (Langner, Hennigs & Wiedmann, 2013), but earlier investigation did not study it on social media.

We hypothesize that buying products used by the influencer moderates the main effect of trust. Drawing on Social Identity Theory, consumers buy trustworthy products used by the influencer in order to modify their self-concept because "tend to develop relationships with celebrities, merely known from the media, just as they would do with real life persons" (Knoll & Matthes, 2017, p. 58). Moreover, consumers have more trust on the advertising advertised by celebrities to reinforce self-concept and be similar to them (Lam et al., 2010). As consumers would be comparable to real life influencers (Dibble, Hartmann, & Rosaen, 2016), they buy the same products used, amplifying the effect of trust (a self-confidence element) into a favorable attitude toward spending. In that context, the more frequently consumers buy products used by the influencer, they fell more trust that translates into a greater volume of monthly spending. Henceforth,

> ***H_{2a}:*** *Buying products used by the influencer amplifies the main effect of trust on monthly spend on products*

Next, we believe that individuals change their behaviors because they modify their self-identity based on the celebrity (Tajfel, & Turner, 1979) in order to be accepted in the social group that they belong. For example, when buying products used by the influencer, consumers experience cognitive reasons that they are having a similar identity to the influencer, generating a congruent self-identity (Choi & Rifon, 2012). The consumer's personal identity is shaped because there is a parasocial interaction with the celebrity (Dibble, Hartmann, & Rosaen, 2016) and this parasocial relationship strengthens the involvement with the advertised brand showed during online transmissions (Labrecque, 2014). That self-identity with the influencer built by buying products used should augment the impact of involvement created by the relationship on monthly spend on products. Hence,

> ***H_{2b}:*** *Buying products used by the influencer moderates the main effect of involvement on monthly spend on products*

The process of buying products used by the influencer should amplify the main effect of brand

recall on monthly spending because the previous decision-making developed brand awareness for the product is based on self-identity with the endorser. When consumers elicit a brand name from memory (Keller, 1993), they used the memory-based choice model to be aware that this brand has the same identity of themselves (Nedungadi, Chattopadhyay & Muthukrishnan, 2001). The congruent identification between the consumer and influencer shapes the follower's identity. In that sense, consumers have a greater awareness to retrieve brands in the consideration set (Alba & Chattopadhyay, 1985) that have the same identity, and shape their identity similar to the influencer (Madhavaram, Badrinarayanan & McDonald, 2005). Therefore, the brand recall has a stronger effect on monthly spend on monthly spend when consumers bought products used by the influencer

H_{2c}: *Buying products used by the influencer moderates the main effect of brand recall on monthly spend on products*

4. Research Design

4.1. Data Collection. We collected data through the internet by posting our questionnaire at the twitch.tv. Our main goal was to analyze the gamers' behave at Twitch.tv, which works as a platform for gamers, streamers and other audiences talk about games with more than 42,000 channels and 3 million streamers per month. These teenagers and adults consumers play PS4, Xbox, PC, and other consoles. We created an online questionnaire and posted it in the Twitch.tv. Our focus was to find consumers that followed specific influencers and bought their products. We collected data with 270 gamers (97% male) and 34% of our sample has age ranging from 9 to 18 years.

4.2. Questionnaire. We prefer to use a single item (*vs*. multiple item scale) because it has some advantages. First, a single item reduces the time in collecting data and simplifies the questions' presentation for teenagers (Bergkvist, 2015). For example, in our sample, we had individuals with 9 years old and a single-item scale diminishes the time in collecting data with these teenagers when they are playing and interacting with each other. Second, according to the psychometric test of Sarstedt et al., (2016), the use of single item has discriminant and reliable performance. Third, when using well-established constructs in the marketing literature, such as trust, involvement, and brand recall, the use of a single-item scale increases research's predictive validity. The use of a single item is supported by Bergkvist and Rossiter (2007), Sarstedt et al., (2016), Rossiter (2002), Bergkvist (2015) and Diamantopoulos et al., (2012).

4.3. Measurement and Variables. Our dependent variable is the total that the consumer spent per month on products and equipment. We measured this variable in Brazilian $ reais, representing the monetary value spent on products, equipment, and other utilities. We based this metric on Stilley, Inman, and Wakefild (2010). We used three independent variables. First, we measured *trust* in the products advertised by Twitch.tv using a scale ranging from 1=low to 7=very high. Based on Moorman, Zaltman, and Deshpandé (1992), trust assessed how consumers rely on the advertising shown in this specific social media.

Second, we evaluated the advertising *involvement* as the relevance of the advertising presented in the Twitch.tv, according to the influencers' online transmission, ranging from 1=low to 7=very high. That variable measured the degree of importance in the advertising showed in Twitch.tv (Zaichkowsky, 1986). Third, we measured *brand recall* as how well the consumers remember the brand of the equipment used by the influencer, ranging from 1=low to 7=very high. Brand recall refers to the degree of remembrance in the consideration set without marketing influence and is in agreement with Alba and Chattopadhyay (1985).

4.4. Moderators. We use two moderators. The first one measured how the gamer followed the influencer on social media beyond following in the Twitch.tv, using a dummy variable (yes = 75%). We based our measure according to Jin and Phua (2014) that analyzed following celebrities' tweets about brands. The second moderator is the number of products bought after seeing an influencer using them (ration scale). We based on Schouten, Janssen and Verspaget (2020) to create our metric. This latter variable indicated that by using the products, consumers might buy products from the

celebrities. The average and maximum number of products bought after seeing an influencer using them was 1.09 and 10, respectively.

4.5. Covariates. We measured additional variables to analyze the gamers' attitude and control our results. We assessed the number of influencer that the consumer follows in Twitch.tv according to De Veirman, Cauberghe & Hudders, (2017), and hours watching Twitch.tv per day as open questions (continuous scale), based on Carlson and Lee (2015). We measured the way that gamers watch Twitch.tv (e.g. notebook, desktop, etc.), the period that they watched TV (e.g. morning, dawn, night, etc.) and equipment used for playing games (e.g. Xbox, PS4, PC, etc.) as nominal variables.

5 Results

The results showed that gamers had an average of 20 years (*SD* = 3.98), spent $93.00 per month in products, games and equipment (*SD* = 177.00), and spent until this research a sum of $2,091.00 in games and $3,295.00 in products, games and equipment (*SD* = 2,849.00 and *SD* = 3,295.00 respectively). The average of hours per day watching Twitch.tv was 4.53 (*SD* = 2.90). Gamers watched Twitch.tv in different channels, such as desktop (57%), notebook (21%), cellphone (20%) and PS4/Xbox (1%), used different platforms for playing their games (Desktop = 65%; Notebook = 27%; Cellphone = 2% and PS4/Xbox = 5%) and purchased the products according to influencer's word-of-mouth at the Twitch.tv (yes = 41%).

We did exploratory analyses with nominal variables to comprehend the gamers' behavior. ANOVA test showed that neither there was difference in $ reais spent per month in products, according to the way that gamers watch Twitch.tv ($F(3,270)=3.43$; $p<.07$; Notebook = $65; Desktop=$106; Cell-phone =$88 and Console =$20), nor there was difference in the period that they watch TV ($F(3,270)=.04$; p=NS; Overnight = $98; Evening = $90; Afternoon = $88 and Night = $93).

However, the ANOVA test presented that there was significant variance in $ reais spent per month in products, according the way that they play the game. This finding means that consumers spent more money per month in products when playing in desktop ($F(3,270)=4.20$; $p<.01$; $M_{notebook}$= $66; $M_{desktop}$ = 108; $M_{cellphone}$ = 26 and $M_{Console}$ = $78. Gamers who followed influencers on social media purchased the products advertised in the Twitch.tv (χ^2 = 27.7 (1); $p<.001$). Table 1 shows additional descriptive information from the variables, such as average and standard deviation and, correlation matrix.

Table 1 about here

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6 Hypotheses Test

We tested the hypotheses using multiple linear regression. Because variables had different scales, we standardized them to normalize their coefficients. According to Kopalle and Lehmann (2006), standardization reduces multicollinearity and inaccuracy. The first regression model presented effects without interaction and the second model (our focus) showed the hypotheses test with the moderating effects (see Table 2).

Table 2 about here

Initially, we are interested in seeing how following the influencer on social media moderates and amplifies the main effects of our independent variables. The results showed that the consumer following the influencer on social media augmented the impact of trust on monthly expenses (β = .28; $p<.05$), supporting H_{1a}. This result was expected and happened because trust has the emotional element of confidence that connects consumers to the influencers. Moreover, trusting in the products advertised by the influencer is related to the affective element of the endorsement effectiveness model (Kapitan & Silvera, 2016).

Data showed that the following influencer on social media fortified the main effect of brand recall on money spent monthly, supporting H1c (β = .24; p<.08). That logic corroborated the conative element that the celebrity endorsement process provokes followers (Grewal et al., 1997). In addition, by following the influencer on social media consumers have more awareness of the product (Alba & Chattopadhyay, 1985), influencing the way that brand recall explains monthly spend on products. The outcomes did not support the moderating effect of following the influencer on social media in the relationship between involvement and money spent monthly, rejecting H1b (β = -.08; p<.55).

Next, we were interested in testing how the number of products bought after seeing an influencer using them intensified the main effects of the independent variables. Note, that this second moderator was a continuous variable that shows the volume of products bought after seeing an influencer using them. According to the findings, the greater the number of products bought after seeing an influencer using them, the greater the main effect of trust and involvement on monthly expenses (β = .13; p<.06 and β = .12; p<.06, respectively). This finding happened because trustworthy products used by the celebrity reinforces more confidence in the self-concept (Knoll & Matthes, 2017) and consumers would be similar to real-life influencers (Dibble, Hartmann, & Rosaen, 2016). That rationality is drawing on social identity theory because it helps to shape the consumer's self-concept and to have possessing characteristics and desires similar to the influencer (Lam et al., 2010).

Another finding deals with consumers eliciting a brand name from memory (Keller, 1993). We believe that buying products used by the influencer moderates the main effect of brand recall on monthly spend on products based on the awareness that the brand has in shaping follower's identity (Nedungadi, Chattopadhyay & Muthukrishnan, 2001). Moreover, we believe that this moderating effect happened because by buying products used by the influencer, the consumers experience cognitive reasons emphasize similar self-identity based on the celebrity (Tajfel, & Turner, 1979). The outcomes did not support the moderating effect, rejecting H2c (β = .02; p<.72).

8 Conclusions

8.1. Theoretical Applications

We expanded previous literature on celebrity endorsement by applying its arguments on the social media environment and analyzing the role of influencer on twitch.tv. Our findings initially show that following the influencer on social media increases product spending. This finding supports the role of celebrity influencer in buying behavior. Companies, brands, and products should exercise caution and choose celebrities with backgrounds and behaviors consistent with company ethics. This main effect happens because by following the influencer on social media gamers have a parasocial interaction with the celebrity (Dibble, Hartmann, & Rosaen, 2016) and develop their social identity by matching the self with celebrity image (Choi & Rifon, 2012)

Second, our new finding supports the moderating effect of following the influencer based on Endorsement Effectiveness Model (Lavidge & Steiner, 1961). The theoretical reason is that trust, involvement and brand-recall have similarities with the affective (sensitive consumer feeling), cognitive (involvement with rational components of advertising) and conative (brand intention of buying the sponsored brand) (Grewal et al., 1997). When these three predictors interact with following the influencer, consumers augment their levels of confidence, involvement and brand memory, generating greater monthly spending on products (Choi & Rifon, 2012).

Third, our findings show that the process of buying celebrity products is a new element in amplifying the effects of brand trust, engagement, and recall. By buying products, consumers wish to develop a social identity that their self-concept is similar to the celebrity and is supported by a social group (Stets & Burke, 2000). The more an individual buys a brand used by the influencer, the effects of brand trust, engagement, and recall become even stronger in the brand recall because social influencers develop followers' identify (Langner, Hennigs & Wiedmann, 2013), who want relationships with celebrities (Knoll & Matthes, 2017, p. 58).

8.2. Limitations and Further Research

The research did not analyze other social media channels and how these different platforms influence the effects here discussed. Further research might test and compare the magnitude of effects using Youtube Gaming, Hitbox.tv, SmashCast.tv, and Mirrat.tv. In addition, virtual communities that play professionally can promote different perspectives for influencers and gamers. By using professional championships, pro-gamers can have a high level of trust in the gamers, generating different effects. Future research might investigate the theoretical model using pro-communities, such as Call of Duty World League and Call of Duty Pro League, Counter-Strike: Global Offensive Major Championships, eSports World Convention, FIFA eWorld Cup and others. Further research can also analyze the dark side of influencers by analyzing the negative valence of comments and expressions used by celebrities. This perspective can reduce the buying intention and generate negative consequences for firms and brands (Jin and Pua 2014).

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Table 1
Descriptive Statistics and Pearson Correlation

Variables	**M**	**SD**	**Min**	**Max**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Age (years)	20.4	3.98	9	34	1								
Total Spent in game monthly ($)	93.4	177	0	2,000.00	.10	1							
Past expenses spent in game	2,091.00	2,849.00	0	20,000.00	.19	.33	1						
Past expenses spent in equipment	3,295.00	4,420.00	0	35,900.00	.24	.47	.42	1					
Number of equipment bought	1.09	1.56	0	10	.07	.32	.15	.26	1				
Hours watching Twitch.tv per day	4.53	2.90	0	16	-.07	.16	.06	-.02	.11	1			
Number of influencers followed in Twitch.tv	8.89	11.2	1	151	.04	.04	.06	.03	.02	.11	1		
Trust in the products advertised in Twitch.tv	5.31	1.68	1	7	-.11	.08	-.10	-.09	.16	.06	.00	1	
Involvement in the add advertised in Twitch.tv	4.56	2.08	1	7	-.15	.05	-.13	-.11	.03	.06	-.07	.42	1
Brand recall advertised in Twitch.tv	3.91	2.05	1	7	.02	.18	.03	.21	.43	.14	.04	.26	.11

Note. Correlations above $r = .12$ module are significant at $p<.05$; $n = 270$

Table 2
Regression Analysis and Estimates

Predictor	Estimate	Sig	Estimate	Sig	Estimate	Sig	Estimate	Sig
	Follow Influencer in SM				**Number of products bought**			
Intercept	.12	.741	-.05	.899	-.01	.969	-.02	.934
Main Effect								
Gamer Gender (1 =male)	-.12	.738	-.14	.708	.01	.968	-.04	.907
Gamer's Age	.11†	.068	.10†	.081	.10†	.089	.11*	.040
Brand recall	.17***	.00	-.03	.792	.03	.632	.07	.230
Involvement with add Twitch.tv	.04	.53	.12	.350	.04	.448	.09†	.108
Trust in the add advertised in Twitch.tv	.02	.63	-.17	.153	.00	.918	.02	.711
Follow Influencer in Social Media (1=yes)			.19	.182				
Hours watching Twitch.tv					.13*	.020	.10†	.070
Influencer's Number of products bought					.28**	.001	.16**	.042
Influencer's Number of products bought ✻ Hours watching Twitch.tv							.25***	.001
Moderator: followed the influencer								
H_{1a}: Follow Influencer in SM ✻ Trust			.28*	.055				
H_{1b}: Follow Influencer in SM ✻ Involvement			-.08	.557				
H_{1c}: Follow Influencer in SM ✻ Brand recall			.24†	.088				
Moderator: Number of products bought								
H_{2a}: Influencer's Number of products bought ✻ Trust							.13†	.064
H_{2b}: Influencer's Number of products bought ✻ Involvement							.12†	.060
H_{2c}: Influencer's Number of products bought ✻ Brand recall							.02	.729
R^2 adjusted	.03		.05		.11		.20	
Akaike Information Criterion	766		765		744		719	
Root Mean Square Error	.97		.95		.92		.87	

Note. † p<.10 * p<.05; ** p<.01; *** p<.001; Software Jamovi; SM = social media; no collinearity was found according to VIF; estimates are unstandardized; variables are mean centered for estimating interactions; sig = significance; SM = social media;