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# Discovering the dark side of brand attachment: Impulsive buying, obsessive-compulsive buying and trash talking

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## ABSTRACT

Although brand attachment has positive effects on favorable consumer behavior, recent studies have advocated that brand attachment may have dark sides which stimulate some harmful behaviors. Nevertheless, research on the dark side of brand attachment is scant. This study investigates the effect of brand attachment on two negative behaviors (compulsive buying and trash talking). The survey findings show that the three components of brand attachment - passion, prominence, and anxiety - are positively related to impulsive and obsessive-compulsive buying. In turn, consumers who exhibit obsessive-compulsive buying are more likely to practice trash talking. Furthermore, consumer age moderates the relationship between brand passion, brand anxiety and compulsive buying. The research adds to the body of knowledge of consumer-brand relationship, particularly on the dark side of brand attachment. The findings contribute to the creation and deployment of altruistic customer relationship programs and regulations.

## 1. Introduction

The dark side of branding, particularly in the realm of consumer-brand relationships, has been a topic of interest in recent research. For example, the dark side of brand community (Liao et al., 2019), brand engagement (Okazaki et al., 2019), brand identification (Merk & Michel, 2019), brand loyalty (Riquelme et al., 2019), and so forth. This is because the efforts of brand attachment for strengthening consumer-brand relationships could act like a double-edged sword. Consumer-brand attachment could lead to favorable behavior (i.e. brand loyalty), but it could also lead to detrimental outcomes. For example, Riquelme et al. (2019) showed that for retailers with good reputation, brand loyalty amplifies the negative consequences of price unfairness. In another study, Okazaki et al. (2019) found that brand engagement stimulates compulsive buying. Although this topic is of high interest, there is only a limited number of studies that focus on the dark side of brands. Nevertheless, further research is called to examine the effect of positive feelings (i.e. brand identification) on different components of compulsive buying and other harmful behavior (Merk & Michel, 2019; Okazaki et al. 2019). Thus, this study examines the effect of brand attachment on two harmful behaviors: compulsive buying and trash

talking. In addition, the present study examines whether consumer age acts as moderating variable.

Compulsive buying refers to the extent to which a consumer displays a lack of control by impulsively and excessively purchasing products from a particular brand (Ridgway et al., 2008). Kukar-Kinney et al. (2012) found that compulsive buyers, compared to non-compulsive buyers, are more brand conscious and prestige-sensitive. Compulsive shoppers are more likely to make purchases because they want to impress others, and are highly influenced by the brand of the product (Lejoyeux et al., 2007). Lo and Harvey (2011) suggested that compulsive buyers are more likely to select luxury brands, particularly for fashionable products. Roberts et al. (2019) worried about the harm to people's well-being and call for increased attention to the study of compulsive buying. Müller et al. (2019) advocated that the widespread and growth of buying-shopping disorder require additional attention, since efforts to stop it have been futile.

Trash talking is defined as a form of negative communication (i.e. verbally discrediting), aimed at rival brands, to positively differentiate their brand from rival brands (Hickman & Ward, 2007). Trash talking has been associated with many negative outcomes that harm the individual. For instance, previous studies showed that trash talking is related

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to bullying, aggression, fighting and so forth (c.f. Wyatt, 2010; Rafferty & Vander Ven, 2014). ‘Brand bullying’ aims those who cannot afford the latest brands and fashions, which could potentially lead to exclusion by peers and bullying cases. Rafferty and Vander Ven (2014) noted that the development of highly innovative technologies facilitates and stimulates social media trash talking.

This study sheds light on understanding whether the three components of brand attachment - brand passion, brand prominence and brand anxiety - predict impulsive and obsessive-compulsive buying, which in turn influence trash talking. This is important because many researchers have pointed out that negative feelings toward brands are bad for the brand and positive feelings are good for the brand (e.g. Dessart et al., 2020; Hegner et al., 2017; Fournier & Alvarez, 2013). Nevertheless, these authors show that strong affection toward a brand reinforce the relationship between brand obsession and brand hatred. Furthermore, the study adds to the body of knowledge of the dark side of consumer-brand relationships in determining which age group might have higher tendency to conduct harmful behaviors. The findings are beneficial not only for marketers - understanding when they should build stronger relationships and how to manage these relationships so that it will not turn into adverse outcomes - but also for policy makers in creating regulations that will protect consumers.

### 1.1. Brand attachment

There are two complementing concepts of brand attachment – attachment strength and attachment styles. Park et al.’s (2010) and Thomson et al.’s (2005) conceptualization of brand attachment covered attachment strength. According to Mende and Bolton (2011), attachment styles (i.e. attachment anxiety and avoidance) are different, but complement attachment strength. Following these authors (e.g. Thomson et al., 2005; Park et al., 2010; Mende & Bolton, 2011), brand attachment is defined here as a multidimensional construct including brand passion, brand prominence and brand anxiety - reflecting both affective and cognitive bonds between the consumer and the brand.

Brand passion and brand prominence represent attachment strength, whereas brand anxiety represents attachment styles. This study focuses on attachment anxiety to represent attachment styles because of the focal behaviors of interest (i.e. compulsive buying and trash talking) following Impett and Gordon (2010), who showed that attachment anxiety is associated with a greater frequency of sacrifice and more willingness to sacrifice, particularly for self-focused goals. Brand passion refers to the extent to which a consumer displays positive feelings (i.e. passion, delight and captivation) toward a brand (Malär et al., 2011), whereas brand prominence refers to the extent that a brand is embedded in a consumer’s ‘thoughts’ and ‘feelings’ (Park et al., 2010). Brand anxiety refers to the extent to which a consumer displays anxiety (e.g. excessive need for approval) toward a particular brand (Mende & Bolton, 2011).

### 1.2. Compulsive buying

Compulsive buying is a preoccupation on repetitive and uncontrolled buying that includes two forms of behavior: impulsive buying and obsessive-compulsive buying (Ridgway et al., 2008; Japutra et al., 2019). Impulsive buying is defined as unplanned buying being led by quick decision-making (spontaneously, unreflectively, immediately and kinetically) and subjective bias for immediate possession (Rook & Fisher, 1995; Kacen & Lee, 2002; Japutra et al., 2019). Meanwhile, obsessive-compulsive buying is defined as an uncontrolled urge to buy repetitively and to reduce anxiety (Ridgway et al., 2008). In a way, obsessive-compulsive buying represents obsessions (e.g. preoccupation) and compulsion to buy. Previous study has noted that compulsive buying has a positive correlation with facets of impulsivity: urgency, lack of perseverance and lack of premeditation (Billieux et al., 2008). Thus, the two forms of compulsive buying behavior, impulsive and

obsessive-compulsive buying, are also positively correlated. Since obsessive-compulsive buying includes uncontrollable urge, while impulsive buying only includes spontaneity, we argue that obsessive-compulsive buying is a stronger form of compulsive buying.

Compulsive buying is a growing issue that needs to be addressed because of its negative consequences to people’s lives (c.f. Maraz et al., 2016; Müller et al., 2019), such as increased credit card debts and depressive symptoms (Joireman et al., 2010; Mueller et al. 2011; Japutra & Song, 2020). Gallagher et al. (2017) found that consumers exhibit post-purchase guilt and regret due to their compulsive buying. Fenton-O’Creevy et al. (2018) showed that impulsive buying, a subset of compulsive buying, is associated with greater risk of financial harm. Recent studies argue that compulsive buying is linked to a poor quality of life, such as familial discord and work impairment (Müller et al., 2019).

### 1.3. Trash talking

Trash talking refers to negative communications about rival brands, which is different from negative word-of-mouth (WOM) (Hickman & Ward, 2007). Negative WOM is a form of negative communication aimed at the brand because of consumers’ unsatisfactory experiences, whereas trash talking is aimed at rival brands due to consumers’ intention to discredit one option in favor of another. Trash talking is considered a different type of brand loyalty: oppositional brand loyalty (e.g. Japutra et al., 2018a). Oppositional brand loyalty refers to negative attitudes and behaviors toward rival brands as a result of strong loyalty to a particular brand. Consumers verbally discredit alternative brands in order to gain an edge to justify their own choice (Marticotte et al., 2016).

Previous studies note that there are two types of trash talking: internal and external trash talking (Hickman & Ward, 2007; Japutra et al., 2018a). Internal trash talking refers to a situation where the negative communication about other brands occurs with other people who are using the same brand, whereas external trash talking refers to a situation where the negative communication about other brands occurs with other people who are not using the same brand. Consumers conduct internal trash talking because they would like to rate their brand as better than rival brands, whereas they conduct external trash talking because they would like to defend the brand and their choice or damage a rival brand (Hickman & Ward, 2007).

### 1.4. The research model and hypothesis development

Based on attachment theory, we explicate the dark side of brand attachment by proposing that brand attachment leads to compulsive buying, which in turn influences trash talking (see Fig. 1). Attachment theory posits that individuals have the desire to build strong bonding, encompassing feelings toward others to serve their basic human needs (Bowlby, 1980). Attachment theory claims that a strong connection will encourage individuals to invest in resources or sacrifice resources for the sake of the relationship partner (e.g. Impett & Gordon, 2010; Japutra et al., 2018a). Researchers argue that individuals are able to build a strong bonding with brands through three attachment components: brand passion, brand prominence and brand anxiety (e.g. Thomson et al., 2005; Park et al., 2010; Mende & Bolton, 2011).

Many companies aim to improve the three aspects of brand attachment in order to establish strong bonding with consumers. However, strong brand attachment may not always result in favorable consumer behaviors. We propose that having a strong passion, high prominence, and anxiety influence compulsive buying – impulsive and obsessive-compulsive buying (H1a-H1b, H2a-H2b & H3a-H3b). The conceptual framework postulates that trash talking is a negative outcome of impulsive (H4a, H4b) and obsessive-compulsive buying (H5a & H5b).

Finally, the research model suggests that consumer age moderates the relationships between the three components of brand attachment (i.e. brand passion) and compulsive brand buying (H6a-H6f). Consumer

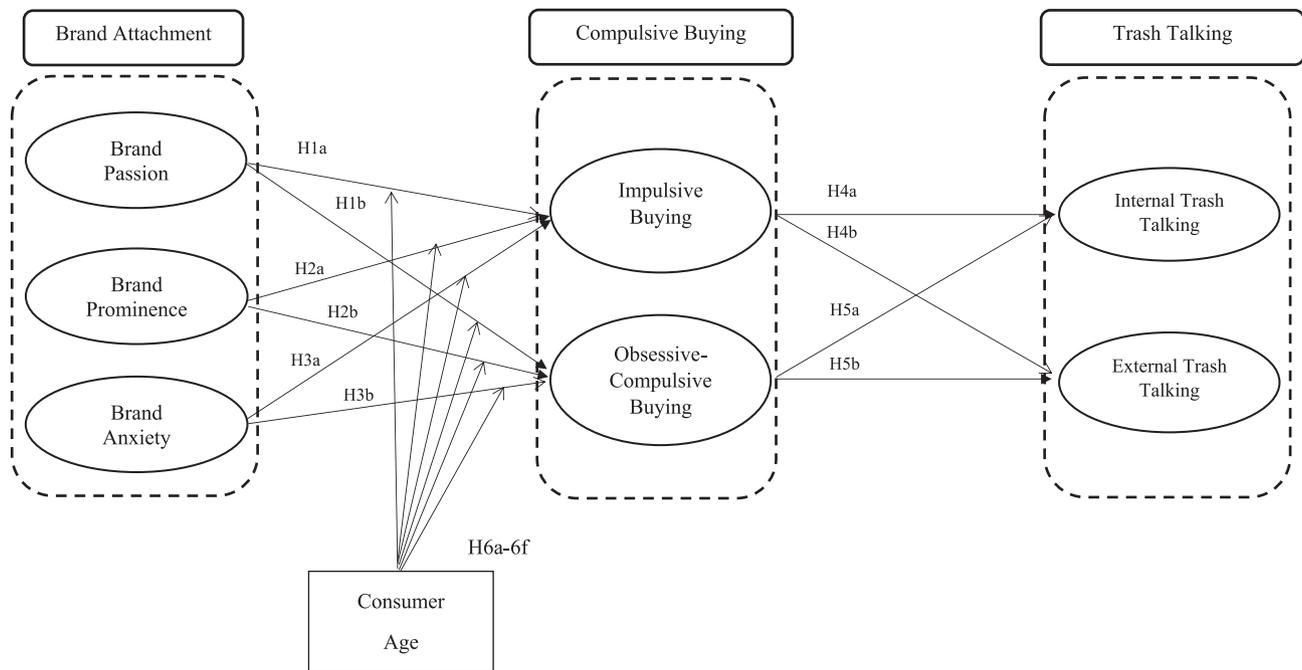


Fig. 1. Research Model.

age is a powerful demographic variable for consumer segmentation and has been regarded as an important moderator when examining relationships between various consumer behaviors (Huaman-Ramirez & Merunka, 2019; Khan et al., 2020). Recent studies show that age moderates the relationships between salient constructs (e.g. engagement, experience) and various consumer behavior (e.g. Japutra et al., 2021; Rather & Hollebeek, 2021). Previous work suggests that younger consumers may be more vulnerable toward excessive consumerism and compulsive buying (Kyrios et al., 2020). While older people are less susceptible to compulsive buying (Adamczyk et al., 2020).

## 2. Hypothesis development

### 2.1. Brand passion and compulsive brand buying

Passion is defined as the longing to unite with another individual (Hatfield & Walster, 1978). Nevertheless, passion is not always directed toward another person; it is quite possible to develop it toward a brand, a specific activity or a community (Vallerand et al., 2003). According to Swimberghe et al. (2014) brand passion is the extent to which an individual is emotionally attached to a brand that they value, put importance on and desire. Previously, brand passion has been shown to influence loyalty (Hemsley-Brown & Alnawas, 2016).

Brand passion can be harmonious or obsessive (Vallerand et al. 2003). The difference between the two lies in the internalization of the brand into the individual's own identity. "Harmonious brand passion results from autonomous internalization of the brand into the one's identity, whereas obsessive brand passion results from controlled internalization of brand into the one's identity" (Swimberghe et al., 2014, p. 2569). Harmonious brand passion occurs when consumers like the brand, desire to obtain it and spend resources without feeling obliged to do so based on any conscious (social, external) pressures. Obsessive brand passion occurs when consumers develop strong bonds with the brand and desire to obtain it relentlessly because it is part of their identity (i.e. who they are). Swimberghe et al. (2014) showed that harmonious passion drives positive word-of-mouth and willingness to pay a premium price, whereas obsessive passion drives willingness to pay premium price and brand evangelism.

Consumers become obsessed with the brand due to the

internationalization process originated from intrapersonal and or interpersonal pressures (i.e. social acceptance, low self-esteem). Hence, obsessive brand passion dominates the consumer's life (Vallerand et al. 2003). Previous studies showed that obsessive passion predicts addiction and dependence toward an object (Schellenberg et al., 2013; Stoeber, et al., 2011; Donahue et al., 2009; Ratelle et al., 2004). It seems that one could start with feelings of delight toward the brand and become passionate about the brand. For example, individuals might feel delighted with Prada because adopting it helped them to reach their desired social identity. Due to this, the individual becomes more passionate about using and purchasing Prada. Then, they become captivated with the brand showing obsessiveness. When this occurs, they might exhibit compulsive buying toward Prada. However, we also acknowledge that compulsive buying disorder may have been developed much earlier than brand use and brand passion triggers this process.

Building on the above argument and the previous research conducted in various contexts, obsessive passion could result in negative emotions (e.g. distressed) and behaviors (e.g. craving, online game addiction, aggressive behavior), when facing passion-related preventions or obstacles (Schellenberg, Bailis, & Crocker, 2013; Stoeber et al., 2011; Donahue et al., 2009). Similarly, Ratelle et al. (2004) found that obsessive passion is associated with compulsive gambling and negative consequences associated with gambling dependence. Nevertheless, previous studies show that both harmonious passion and obsessive passion groups did more online shopping than those in the low passion group (Wang & Yang, 2008). Thus, we argue that when consumers have higher degrees of internalization (autonomous or controlled) with a brand (e.g. consumer-brand identification), they are more willing to spend resources on the brand. They will feel more delighted, involved and willing to endorse or defend it. On the contrary, they will feel negative emotions when they are not able to purchase the brand.

Passion leads to addiction and dependence (Schellenberg, Bailis & Crocker, 2013; Stoeber, et al., 2011; Donahue et al., 2009; Ratelle et al., 2004). Previous research also shows that addiction is associated with poor impulse control (Lee et al., 2012). Thus, individuals who are passionate about a brand might develop addiction and dependence toward the brand. When they become addictive, it is more likely that they impulsively buy products from that particular brand. Thus, we

hypothesize that:

H1a: Brand passion is positively related to impulsive buying.

Similarly, passion could result in negative emotions (e.g. distress) (Schellenberg, Bailis, & Crocker, 2013; Stoeber et al., 2011; Donahue et al., 2009). Motivated by the urge to reduce anxiety, consumers will increase their intense interaction with brands and purchase them excessively. Thus, we hypothesize that:

H1b: Brand passion is positively related to obsessive–compulsive buying.

## 2.2. Brand prominence and compulsive buying

Park et al. (2010) stated that brand prominence is an important component of brand attachment. They defined brand prominence as the perceived ease and frequency of the bond with which brand related feelings and thoughts are brought to the mind that connects the brand to the self. Cheah et al. (2015) find that consumer inner-thoughts and feelings associated with luxury brand benefits increase willingness to buy. Higher brand prominence leads to greater intensity to approach the brand, as well as greater brand purchase and need share – money spent on the brand over total amount of money spent per month for groceries and eating out (Park et al., 2013).

Park et al. (2013) argue that a brand that is highly self-relevant is accessible in memory (i.e. prominent). Thus, consumers are more likely to be attached to brands that they feel are associated with their self or social identity (Sacramento & Flight, 2015; Japutra et al., 2019). Hence, when the brands help people to achieve their desired self-related goals (ideal or social), they would evoke instant positive feelings and memories. This is because the brand is able to provide socially desirable signals related to the consumer's self-identity needs, social roles in the society, and achievement vanity (Han et al. 2010; Cheah et al., 2015). In turn, this may trigger a sudden, persistent and powerful urge to buy impulsively for individuals. Thus, we hypothesize that:

H2a: Brand prominence is positively related to impulsive buying.

Individuals have self-enhancement motives, where they are striving to reduce the tension between actual and ideal-self in order to obtain their self-related goals through purchasing a brand (Park et al., 2013; Cheah et al., 2015; Japutra et al., 2019). We argue that people conduct compulsive buying of those prominent brands to reduce that tension in order to improve their self-esteem and gain level of happiness. Thus, we hypothesize that:

H2b: Brand prominence is positively related to obsessive–compulsive buying.

## 2.3. Brand anxiety and compulsive buying

Bartholomew and Horowitz (1991) established that attachment styles guide individuals in their interpersonal relationships. Not only do individuals develop attachment styles toward other people, but they also use these to guide their relationships with companies or brands. Attachment styles are conceptualized into two dimensions, attachment anxiety and attachment avoidance (Mende & Bolton, 2011). Attachment anxiety is the degree to which a consumer displays excessive need for approval, fears of rejection and abandonment, and worries that the company/brand might not be available for them. Attachment avoidance is the degree to which a consumer displays an excessive need for self-reliance, fears depending on the company/brand and strives for emotional and cognitive distance from the company/brand.

Although attachment styles are conceptualized into anxiety and avoidance, the present study focuses on anxiety because previous studies have noted that anxiety is highly related to compulsive behavior. Valence et al. (1988) state that compulsive buyers are generally more anxious than the average person. Roberts and Jones (2001) show that anxiety regarding money positively influences compulsive buying. Previous studies show that consumer anxiety increases the tendency to buy compulsively (Weinstein et al., 2015; Darrat et al., 2016). Recently,

Harnish et al. (2018) showed that compulsive buying is strongly linked to power and anxiety. They argue that individuals compulsively buy in order to achieve greater social status and to reduce anxiety. Although these studies examine individuals' anxiety toward their interpersonal relationships, anxiety could also occur when interacting with companies (Mende & Bolton, 2011). Previous studies have shown that anxiety is related to impulsivity (e.g. Van den Bergh et al., 2005; Taylor et al., 2008). It is noted that a core feature of anxiety, anxious apprehension, includes excessive worry that advance difficulties tolerating uncertainty (Van den Bergh et al., 2005). These authors continued their argument that individuals respond to uncertainty by acting or performing impulsively. In the same manner, we argue that when individuals have high brand anxiety, in order to reduce the uncertainty, they tend to conduct impulsive buying. Thus, we hypothesize that:

H3a: Brand anxiety is positively related to impulsive buying.

In the same vein, we argue that brand anxiety is related to obsessive–compulsive brand buying, because consumers keep purchasing from the brand in order to satisfy their inner psychological and social needs. They continue purchasing in order to get closer to the brand, while reducing their anxiety level. Thus, we hypothesize that:

H3b: Brand anxiety is positively related to obsessive–compulsive buying.

## 2.4. Compulsive brand buying and trash talking

Trash talking could be a potential problem for the brand, as well as for consumers. Yagil (2017) argued that consumer misbehavior generally causes problems for the firm, employees and other consumers. Although trash talking is aimed at rival brands, it could potentially harm the brand. Ewing et al. (2013) find that this verbal aggression could easily turn to physical aggression. They used the rivalry between Ford and Holden as a context of their study and showed that trash talking occurred between the two brands. In their study, they mentioned a case where Holden cars were vandalized throughout New South Wales and the police were at a loss to explain why this occurred. Some Ford drivers carried out the vandalism. This shows that the brand reputation suffered because of some perceived individuals who drove a Ford as vandals.

Hickman and Ward (2007) noted that trash talking occurs among clubs (e.g. Apple club, PC club) when members of the club indulged in comparing their computer brand to rival to the rival's disadvantage. Similarly, while examining consumer-to-consumer conflicts in the social media (i.e. brand fan pages), Dineva et al. (2017) noted that trash talking occurred in the Adidas brand fan page toward Nike's football apparel promotional video – “Back to slavery? Smfh!!!!!! Dislike!!!!!! I would have never agreed to this.” This is an example of internal trash talking, since the statement was aimed toward Nike on the Adidas brand fan page. Another instance is when individuals shamed Costa Coffee for not paying taxes, while some people accused or defended Starbucks (Costa's rival) for not paying taxes. In Dineva et al.'s study, it is clear that there were several instances where some people appeared in the brand fan pages to devalue the brands. For example, an individual stated her preference to other retailers (e.g. Ocado, Asda) in a Tesco brand fan page. Another individual insulted Costa in their brand fan page and stated the rival – “Fuck you COSTA. CAFE NERO FTW. Costa staff are rude.”.

Nevertheless, to substantiate more that trash talking (internal and external) exists among consumer-to-consumer space; the present study conducted an investigation. We followed Dineva et al.'s (2017) approach of observing the brand fan pages and observed official brand accounts on YouTube. However, on top of the official brand accounts, we also observed several other neutral forums (not associated to a single brand) such as the GSM Arena forum. While Samsung was introducing their new product (i.e. Samsung Galaxy Note 20 and Galaxy Buds), several people posted mockery comments. For example, “Samsung be like: Introducing, Galaxy Beans”, and “It is made by the Kidney used for buying the phone”. These are examples of external trash talking. Several

other people defended by responding to that comment and trashing Apple, such as, “We don’t need Apple fans here” and “Apple be like: Introducing the air hairdryer”. In addition, in that particular video, there were comments that hounded rivals (e.g. Apple and Huawei), such as, “Huawei: We made best phones! Samsung: Huawei, watch this video (smiley)” and “iPhone user: I should dislike this video for no reason”. These are many examples of internal trash talking.

Trash talking also exists in a neutral social media place (i.e. GSM Arena forum). In the comment box for a thread about Apple iPhone 11 review, an individual stated “Oppo Find X2 Pro & Xiaomi Mi 10 Ultra is much better than this overheating, throttling mess and the design is UGLY with that fat NOTCH. Only Diehard iOS Fans and materialistic Girls will buy this overpriced piece of \*\*\*\*\*”. In another thread about the Apple iPhone, 12 Pro Max Review, an individual trashed Apple’s rival, “Did I even mentioned Apple products?? That was for all smartphones. I’ll label any Android with battery life as garbage”.

Trash talking occurs because consumers would like to favor and defend the brand as well as defend their choice vigorously (Hickman & Ward, 2007; Marticotte et al., 2016). According to Gallagher et al. (2017), compulsive buying prompts consumers’ regret, which in turn influences consumer dissatisfaction, switching and complaining behavior. Based on previous research (e.g. Japutra et al., 2018b), this study proposes that compulsive buying could have other negative consequences, such as trash talking. Recent research shows that brand attachment predicts compulsive buying because the strong bond enhances the willingness to invest more resources toward the brand (Japutra et al., 2019; Lim et al., 2020). Consumers purchase brands compulsively to satisfy their self-identification needs (Japutra et al., 2018a). Consumers denigrate competing brands (trash talking) to defend their self-concept (Japutra et al., 2018b). Impulsive and obsessive-compulsive consumers purchase excessively brands that promote their social identity (Japutra et al., 2019). Then, it is more likely for these consumers to conduct trash talking, since they defend their favorite brand, self-identity, reduce anxiety and aggression (Craig, 1998). Thus, we hypothesize that:

H4a: Impulsive buying is positively related to internal trash talking.

H4b: Impulsive buying is positively related to external trash talking.

H5a: Obsessive-compulsive buying is positively related to internal trash talking.

H5b: Obsessive-compulsive buying is positively related to external trash talking.

### 2.5. The moderating effect of consumer age

Research shows that age plays a salient role in explaining various consumer behaviors (Japutra et al., 2021; Rather & Hollebeek, 2021). Roschk et al. (2013) showed that older people are less outcome-oriented, thus they place more importance on interactional justice rather than distributive and procedural justice. In another study, age was found to moderate the relationship between positive emotions and loyalty, particularly for younger people loyalty is being guided by their emotions (Loureiro & Roschk, 2014). That particular study also showed that for younger people, graphic design (e.g. architecture, decoration, and colors) matter in building loyalty.

This study examines the moderating effect of age toward compulsive buying. A previous study showed that consumers in Generation Y, compared to others (i.e. Silent, Baby Boomers and Generation X), are the most likely to complain after service failure, but also most likely to repurchase after service recovery (Soares et al., 2017). Koran et al. (2006) noted that compulsive buyers among their respondents were younger. Their findings echo Dittmar’s (2005) study that younger individuals were more prone to compulsive buying due to their materialistic value. In a recent study, Adamczyk et al. (2020) indicated that younger people are more susceptible to compulsive buying compared to older people. Similarly, in another study, Kyrios et al. (2020) showed that younger people are more likely to exhibit excessive buying. They

argue that this might be due to materialistic values, with greater access to credit and the online shopping revolution.

We argue that materialism is not the only reason. Emotions also play a role in predicting compulsive buying, whether it is impulsive or obsessive-compulsive buying. Consumers who exhibit strong emotional attachment to brands are more likely to spend their personal resources (e.g., money or time) to purchase from the brands (Park et al., 2010; Park et al., 2013; Japutra et al., 2018b). According to Wang and Yang (2008), passionate young consumers are more likely to spend time on the Internet, which is related to addiction and compulsion behavior. Similarly, the present study argues that younger consumers who are passionate about the brand are more likely to exhibit stronger attachment and compulsion to those brands because they spent a lot of time for and with the brand (e.g., browsing the brand’s website frequently).

Although younger consumers elicit more emotions such as passion, they are also less able (anxious) in controlling their emotions. This heightened the probability that they will compulsively buy. According to Thomson (2006), consumers who are strongly attached to a brand are more likely to exhibit separation anxiety. Thus, in order to minimize this separation anxiety, consumers tend to excessively purchase the brand’s products. By doing this, they will feel that they are more proximate to the brand. Previous studies have argued that insecurely attached individuals (highly anxious) tend to display more worldview defense (Mikulincer & Florian, 2000). Older people do not engage in worldview defense as much as younger people (Maxfield et al., 2007). Thus, younger people exhibit more anxiety compared to older people that induce impulsive and obsessive-compulsive buying.

We argue that this is also the case for the relationship between brand prominence and compulsive brand buying (impulsive and obsessive-compulsive). Younger consumers tend to search and shop more (Sorice et al., 2005). When they search more, they increase their interactions with the brands, which results in a higher intention to purchase their preferred brands. Likewise, when they have frequent interaction with the brands because of their past purchase experiences, their interactions with brands will increase. Thus, we hypothesize that:

H6a-H6f: The relationships between brand passion and impulsive buying (H6a), brand passion and obsessive-compulsive buying (H6b), brand prominence and impulsive buying (H6c), brand prominence and obsessive-compulsive buying (H6d), brand anxiety and impulsive buying (H6e), brand anxiety and obsessive-compulsive buying (H6f), are stronger for younger consumers.

## 3. Methodology

### 3.1. Approach and sample

An online questionnaire was developed in order to collect data and test the research hypotheses. At the beginning, respondents were asked to think of a brand before responding the survey questions. They were asked to respond to the brand related questions with regards to the brand that they have chosen. Then they responded to demographic questions.

The questionnaire was distributed to the UK respondents through an online platform (Survey Monkey). To reach different respondents, the link to the survey was posted through various means (web board, social media and direct email) several times over the period of two months. After removing incomplete answers and missing values, 416 questionnaires were used for the data analysis. Sixty-two per cent of the respondents were women. Twenty-one per cent of the participants were in the age group of 16–24, 17% of the participants were in the age group of 25–34, 18% were in the age group of 35–44, 18% were in the age group of 45–54, and the rest were in the age group of 65 and over. Thirty-eight per cent of the participants were in the income bracket of £10,000 to £19,999, 40% were in the income bracket of £20,000 to £59,999 and 22% were in the income bracket of £60,000 and above.

### 3.2. Measures

All of the measures were taken from previous studies (see Table 1). These scales are established measurements that are used in many previous and recent studies due to their reliability and validity across different samples and context. Brand passion was measured using three items (Malär et al., 2011). Brand prominence was measured by four items following Park et al. (2010). Following Mende and Bolton (2011), brand anxiety was measured with three items. Impulsive buying and obsessive–compulsive buying were measured using three items, each adapted from Ridgway et al. (2008). Finally, internal and external trash talking were measured using three items each adapted from previous studies (Hickman and Ward, 2007).

### 3.3. Reliability and validity of the measures

This study utilized Partial Least Square-Structural Equation Modeling (PLS-SEM) to test the research model. Using Smart PLS 3.0.,

**Table 1**  
Measurement items and the factor loading (FL).

Construct	Items	FL
<b>Brand Attachment</b>		
<b>Brand Passion</b>	<b>My feelings toward the brand can be characterized by:</b>	
(1 = strongly disagree to 7 = strongly agree)	Passion.	0.91
	Delight.	0.82
	Captivation.	0.89
<b>Brand Prominence</b>	To what extent are your thoughts and feelings toward [this brand] often automatic, coming to mind seemingly on their own.	0.87
(0 = not at all to 10 = completely)	To what extent do your thoughts and feelings toward [this brand] come to you naturally and instantly.	0.90
	To what extent does the word this brand automatically evoke many good thoughts about the past, present, and future.	0.80
	To what extent do you have many thoughts about this brand.	0.87
<b>Brand Anxiety</b>	[This brand] changes how it treats me for no apparent reason.	0.79
(1 = strongly disagree to 7 = strongly agree)	I worry that [this brand] doesn't really like me as a consumer.	0.82
	I worry that [this brand] doesn't care about me as much as I care about [this brand].	0.80
<b>Compulsive Buying</b>		
<b>Impulsive Buying (IB)</b>	I buy things from this brand that I don't need.	0.89
(1 = not very likely to 7 = very likely)	I buy things from this brand that I did not plan to buy.	0.88
	I consider myself an impulse purchaser for this brand.	0.90
<b>Obsessive-Compulsive Buying (OCB)</b>	My closet has unopened shopping bags of this brand in it.	0.72
(1 = not very likely to 7 = very likely)	Others might consider me a shopaholic for this brand.	0.86
	Much of my life centers around buying things from this brand.	0.83
<b>Trash Talking</b>		
<b>Internal Trash Talking</b>	With other users of this brand, I talk about how negative we feel about competing brands.	0.88
(1 = strongly disagree to 7 = strongly agree)	With other users of this brand, I talk about competing brands being inferior.	0.93
	With other users of this brand, I say negative things about competing brands.	0.89
<b>External Trash Talking</b>	I talk about how negative I feel about competing brands to other people.	0.91
(1 = strongly disagree to 7 = strongly agree)	I talk about how inferior competing brands compare to this brand to other people.	0.94
	I say negative things about competing brands to other people.	0.93
<b>Consumer Age</b>		
1 = 16–24, 2 = 25–34, 3 = 35–44, 4 = 45–54, 5 = 55–64, 6 = 65 and over		1.00

we tested the model following a two-stage approach. This approach consists of building and evaluating the outer and inner model (Hair et al., 2019). Through the PLS-SEM algorithm, the outer model was evaluated to assess the reliability and validity of the measures.

Reliability was assessed using Cronbach's Alpha (CA) and the Composite Reliability (CR) score, where reliability is achieved when the CA value exceeds 0.70 (Hair et al., 2019) and CR value exceeds 0.60 (Bagozzi & Yi, 1988). All of the CA and CR scores exceeded these thresholds, indicating that the constructs were reliable. Convergent validity is achieved if the Average Variance Extracted (AVE) value exceeds 0.50 (Fornell & Larcker, 1981). All of the AVE scores were above this threshold, indicating that convergent validity was achieved. Discriminant validity is achieved if the AVE value is above the squared Inter-Correlation (IC) (Fornell & Larcker, 1981). The AVE scores were above the squared IC scores, indicating that discriminant validity is achieved. Table 2 displays the descriptive statistics, reliability, IC and the AVE scores.

Further analysis was conducted to check for discriminant validity of the measurements. Hair et al. (2019) suggested that discriminant validity should be checked using the heterotrait-monotrait (HTMT) ratio. HTMT scores above 0.90 indicate that the constructs are conceptually similar. The results show that the HTMT ratio scores were all below the threshold. Thus, it is safe to state that discriminant validity was achieved (see Table 3).

Next, we checked for the potential common-method variance problem, using Harman's single factor test, following Podsakoff et al. (2003). Common-method variance does not pose a problem, if the results of the factor analysis do not provide a single factor solution and the first factor does not account for over 50% of the total variance. The results show that the unrotated factor solution revealed four factors with Eigen values > 1. The result accounts for 69.29% of the total variance, where the first factor accounts for 33.95% of the total variance, indicating that common-method variance does not pose a significant problem.

### 3.4. Hypotheses testing

Through a bootstrapping procedure (5,000 subsamples), the inner model was evaluated to test the research hypotheses. In order to test the research model, which also accounts for the moderation effects, we tested using two steps. The first step only accounts for the main effects, whereas the second step accounts for the main and interaction effects. Table 4 shows results of the hypotheses testing.

The first model explains ( $R^2$ ), as many as 16%, 25%, 9% and 16% of the variance in impulsive buying, obsessive–compulsive buying, internal trash talking and external trash talking respectively. In order to obtain the  $Q^2$  scores, a blindfolding procedure was conducted with the omission distance (D) value set to 7. It is recommended that the value of D should be between 5 and 10 (Chin, 1998). The  $Q^2$  scores were 0.12 for impulsive buying, 0.15 for obsessive–compulsive buying, 0.07 for internal trash talking and 0.14 for external trash talking. It is important to assess the collinearity of the predictor constructs before assessing the structural relationships in order not to bias the regression results (Hair et al., 2019). Collinearity was checked through the variance inflation factor (VIF) between the constructs. According to Hair et al. (2019), VIF scores above 5 are indicative of probable collinearity issues. The VIF scores range from 1.06 to 2.10, suggesting that collinearity did not pose an issue for this study.

The results do not support H1a ( $\beta = 0.07, p > 0.05$ ). Brand passion does not influence impulsive buying. However, the results support H1b ( $\beta = 0.11, p < 0.01$ ), which states that brand passion positively affects obsessive–compulsive buying. H2a ( $\beta = 0.20, p < 0.001$ ) and H2b ( $\beta = 0.24, p < 0.001$ ) are also supported; brand prominence positively affects compulsive brand buying. The findings supported both H3a ( $\beta = 0.11, p < 0.05$ ) and H3b ( $\beta = 0.21, p < 0.001$ ); stronger brand anxiety leads to a higher tendency to compulsively buy; whether it is impulsive or obsessive–compulsive buying. The results do not support H4a ( $\beta = -0.07, p >$

**Table 2**  
Descriptive statistics, reliabilities, correlations and validities.

	Mean	SD	CA	CR	1	2	3	4	5	6	7	8
1. Brand Passion	2.55	1.26	0.84	0.91	<b>0.76</b>							
2. Brand Prominence	5.26	2.48	0.88	0.92	0.54	<b>0.74</b>						
3. Brand Anxiety	4.25	1.51	0.70	0.84	0.16	0.07	<b>0.64</b>					
4. Impulsive Buying	2.66	1.73	0.87	0.92	0.24	0.28	0.18	<b>0.79</b>				
5. Obsessive-Compulsive Buying	2.20	1.41	0.72	0.85	0.32	0.34	0.29	0.72	<b>0.65</b>			
6. Internal Trash Talking	3.41	1.63	0.88	0.93	0.28	0.33	0.27	0.18	0.29	<b>0.81</b>		
7. External Trash Talking	2.95	1.63	0.92	0.95	0.26	0.31	0.34	0.22	0.39	0.79	<b>0.86</b>	
8. Consumer Age	3.23	1.67	1.00	1.00	-0.21	-0.12	-0.21	-0.30	-0.31	-0.15	-0.22	<b>1.00</b>

Note: The diagonal values in bold indicate the average variances extracted (AVE). The scores in the lower diagonal indicate inter-construct correlations (IC). CA: Cronbach's Alpha; CR: Composite Reliability.

**Table 3**  
HTMT Ratio.

	1	2	3	4	5	6	7	8
1. Brand Passion								
2. Brand Prominence	0.62							
3. Brand Anxiety	0.19	0.12						
4. Impulsive Buying	0.28	0.30	0.22					
5. Obsessive-Compulsive Buying	0.40	0.40	0.41	0.89				
6. Internal Trash Talking	0.32	0.36	0.33	0.20	0.37			
7. External Trash Talking	0.29	0.32	0.42	0.24	0.48	0.88		
8. Consumer Age	0.23	0.11	0.25	0.32	0.37	0.16	0.23	

Note: HTMT = Heterotrait-Monotrait.

0.05), but do support H4b ( $\beta = -0.12, p < 0.05$ ). However, the direction is not as expected. There is a negative relationship between impulsive buying and external trash talking. Those who engage in impulsive buying may be in control of their behavior (e.g. external trash talking). Finally, the results support both H5a ( $\beta = 0.35, p < 0.001$ ) and H5b ( $\beta = 0.48, p < 0.001$ ). Obsessive-compulsive buying positively affects internal and external trash talking.

In the second step, to test the moderating effects of age group, the interaction effects were checked. The  $R^2$  of impulsive buying and obsessive-compulsive buying increased from 16% to 19% and 25% to 29%, respectively. The results support H6a ( $\beta = -0.12, p < 0.05$ ) and H6b ( $\beta = -0.09, p < 0.05$ ). Thus, consumer age moderates the relationships between brand passion and compulsive brand buying. These results offer explanation to the non-significant relationship of H1a. For younger people, brand passion increases the tendency to conduct impulsive buying. However, the findings do not support H6c ( $\beta = 0.03, p > 0.05$ ) and H6d ( $\beta = 0.01, p > 0.05$ ). Therefore, the age group does not moderate the relationships between brand prominence and compulsive buying. The results support H6e ( $\beta = -0.10, p < 0.05$ ) and H6f ( $\beta = -0.19, p < 0.001$ ). Age group moderates the relationships between brand anxiety and compulsive brand buying.

3.5. Post-hoc analysis

Additional analysis was conducted to test the mediating effects of impulsive buying and obsessive-compulsive buying, as shown on Table 5. In order to test the mediating effects, direct paths were drawn from brand passion, brand prominence and brand anxiety to internal and external trash talking. As a result, the  $R^2$  of internal trash talking increased from 9% to 19%, whereas the  $R^2$  of external trash talking increased from 16% to 26%.

The results show that impulsive buying did not mediate the effect of brand passion, brand anxiety and brand prominence on internal trash talking, because the indirect effects of those relationships through impulsive buying were not statistically significant (i.e. see Table 5; the

**Table 4**  
Result of Structural Equation Analyses.

Hypothesis	Relationship	Main Effects Only		Main Effects and Interaction	
		$\beta$	t-value	$\beta$	t-value
H1a	Brand Passion → Impulsive Buying	0.07	1.27 <sup>ns</sup>	0.08	1.42 <sup>ns</sup>
H1b	Brand Passion → Obsessive-Compulsive Buying	0.11	2.34 <sup>**</sup>	0.12	2.55 <sup>**</sup>
H2a	Brand Prominence → Impulsive Buying	0.20	3.88 <sup>***</sup>	0.20	3.76 <sup>***</sup>
H2b	Brand Prominence → Obsessive-Compulsive Buying	0.24	5.39 <sup>***</sup>	0.24	5.33 <sup>***</sup>
H3a	Brand Anxiety → Impulsive Buying	0.11	2.22 <sup>*</sup>	0.08	1.77 <sup>*</sup>
H3b	Brand Anxiety → Obsessive-Compulsive Buying	0.21	4.48 <sup>***</sup>	0.17	3.93 <sup>***</sup>
H4a	Impulsive Buying → Internal Trash Talking	-0.07	-1.00 <sup>ns</sup>	-0.07	1.00 <sup>ns</sup>
H4b	Impulsive Buying → External Trash Talking	-0.12	-1.77 <sup>*</sup>	-0.12	1.76 <sup>*</sup>
H5a	Obsessive-Compulsive Buying → Internal Trash Talking	0.35	5.45 <sup>***</sup>	0.35	5.25 <sup>***</sup>
H5b	Obsessive-Compulsive Buying → External Trash Talking	0.48	7.34 <sup>***</sup>	0.48	7.28 <sup>***</sup>
	Consumer Age → Impulsive Buying	-0.24	-5.29 <sup>***</sup>	-0.24	-5.33 <sup>***</sup>
	Consumer Age → Obsessive-Compulsive Buying	-0.22	-5.06 <sup>***</sup>	-0.21	-4.76 <sup>***</sup>
H6a	Consumer Age*Brand Passion → Impulsive Buying			-0.12	-2.18 <sup>*</sup>
H6b	Consumer Age*Brand Passion → Obsessive-Compulsive Buying			-0.09	-1.80 <sup>*</sup>
H6c	Consumer Age*Brand Prominence → Impulsive Buying			0.03	0.47 <sup>ns</sup>
H6d	Consumer Age*Brand Prominence → Obsessive-Compulsive Buying			0.01	0.31 <sup>ns</sup>
H6e	Consumer Age*Brand Anxiety → Impulsive Buying			-0.10	-2.29 <sup>*</sup>
H6f	Consumer Age*Brand Anxiety → Obsessive-Compulsive Buying			-0.19	-4.32 <sup>***</sup>
Variance Explained ( $R^2$ )					
Impulsive Buying		0.16		0.19	
Obsessive-Compulsive Buying		0.25		0.29	
Internal Trash Talking		0.09		0.09	
External Trash Talking		0.16		0.16	

Note: <sup>ns</sup>: not significant, <sup>\*\*\*</sup> $p < 0.001$ ; <sup>\*\*</sup> $p < 0.01$ ; <sup>\*</sup> $p < 0.05$ .

**Table 5**  
Mediating effects.

Relationships	Indirect Effect	Bias-Corrected Confidence Interval 95%		Direct Effect	
		Lower Bound	Upper Bound		
		Brand Passion → Impulsive Buying → Internal Trash Talking	-0.01		
Brand Passion → Obsessive-Compulsive Buying → Internal Trash Talking	0.02	0.003	0.054	0.09 <sup>ns</sup>	Full Mediation (Indirect-only)
Brand Passion → Impulsive Buying → External Trash Talking	-0.01	-0.036	0.002	0.04 <sup>ns</sup>	No Mediation (No-effect)
Brand Passion → Obsessive-Compulsive Buying → External Trash Talking	0.04	0.008	0.081	0.04 <sup>ns</sup>	Full Mediation (Indirect-only)
Brand Prominence → Impulsive Buying → Internal Trash Talking	-0.01	-0.049	0.010	0.23 <sup>***</sup>	No Mediation (Direct-only)
Brand Prominence → Obsessive-Compulsive Buying → Internal Trash Talking	0.04	0.014	0.085	0.23 <sup>***</sup>	Partial Mediation (Complementary)
Brand Prominence → Impulsive Buying → External Trash Talking	-0.02	-0.061	-0.001	0.19 <sup>***</sup>	Partial Mediation (Competitive)
Brand Prominence → Obsessive-Compulsive Buying → External Trash Talking	0.08	0.041	0.132	0.19 <sup>***</sup>	Partial Mediation (Complementary)
Brand Anxiety → Impulsive Buying → Internal Trash Talking	-0.01	-0.025	0.003	0.20 <sup>***</sup>	No Mediation (Direct-only)
Brand Anxiety → Obsessive-Compulsive Buying → Internal Trash Talking	0.03	0.009	0.065	0.20 <sup>***</sup>	Partial Mediation (Complementary)
	0.01	-0.035	0.001	0.25 <sup>***</sup>	

**Table 5 (continued)**

Relationships	Indirect Effect	Bias-Corrected Confidence Interval 95%		Direct Effect	
		Lower Bound	Upper Bound		
		Brand Anxiety → Impulsive Buying → External Trash Talking			
Brand Anxiety → Obsessive-Compulsive Buying → External Trash Talking	0.06	0.026	0.102	0.25 <sup>***</sup>	Partial Mediation (Complementary)

Note: <sup>ns</sup>: not significant, \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ ; The types of mediation in the bracket are based on Zhao et al. (2010).

bias-corrected confidence interval scores include zero). Similarly, impulsive buying did not mediate the effects of brand passion and brand anxiety on external trash talking, because the indirect effects from brand passion and brand anxiety to external trash talking via impulsive buying were not statistically significant (the bias-corrected confidence interval scores include zero).

Meanwhile, the results show that obsessive-compulsive buying mediates the effects of brand passion on internal and external trash talking (i.e. Table 5: the bias-corrected confidence interval scores exclude zero). Since there were no statistically significant direct effects of brand passion on internal ( $\beta = 0.09, p > 0.05$ ) and external trash talking ( $\beta = 0.04, p > 0.05$ ), the mediation can be categorized as indirect-only mediation (Zhao et al., 2010). Furthermore, obsessive-compulsive buying mediates the relationships between brand prominence, internal trash talking and external trash talking. These mediation effects can be categorized as complementary mediation (Zhao et al., 2010), since the direct effects of brand prominence on internal trash talking ( $\beta = 0.23, p < 0.001$ ) and brand prominence on external trash talking ( $\beta = 0.19, p < 0.001$ ) were statistically significant. Finally, the findings show that obsessive-compulsive buying mediates the effects of brand anxiety on internal and external trash talking. Since the direct effects from brand anxiety to internal ( $\beta = 0.20, p < 0.001$ ) and external trash talking ( $\beta = 0.25, p < 0.001$ ) were statistically significant, the mediation can be categorized as complementary mediation (Zhao et al., 2010).

#### 4. Discussion

##### 4.1. Theoretical contribution

This study highlights several contributions to the body of knowledge of consumer-brand relationships, offering insights to the dark side of brand attachment. Particularly, the present study provides that strong brand attachment could lead to negative behaviors, such as compulsive brand buying and trash talking, which could harm consumers and the brand. This study responds to the call to investigate whether positive feelings can stimulate bad and harmful behaviors (Riquelme et al., 2019; Merk & Michel, 2019; Okazaki et al., 2019). This suggests that companies should be more careful in managing the consumer-brand relationships and managers should devise different strategies for different types of consumers, particularly for consumers who are more prone to these harmful behaviors.

Our results show that people who are highly passionate about a brand are more likely to conduct obsessive-compulsive buying. Thus, strong brand passion motivates individuals to purchase excessively from brands. Also, when brands are highly embedded in consumers' thoughts

and feelings (i.e. high in prominence), they are also more likely to engage with impulsive and obsessive–compulsive buying. Our results reveal the same results for brand anxiety, that strong consumers' anxiety toward brands also leads to impulse and obsessive–compulsive buying. Hence these findings add to the marketing literature, and show that creating strong attachment toward a brand can turn the consumer into a vulnerable consumer, which reveals that excessive 'love' could turn into something bad. The findings expanded Okazaki et al.'s (2019) study which confirmed the effect of brand engagement on compulsive buying, as this present study confirms the effect of three attachment components on two different types of compulsive buying. However, it should be noted that our findings show that strong passion does not always lead to impulsive buying.

The results do not support the relationship between impulsive buying and internal trash talking. These findings show that obsessive–compulsive buying leads to higher internal and external trash talking. This adds to the marketing literature about which component of compulsive buying is more harmful. It is apparent that out of the two types of compulsive buying, obsessive–compulsive is more detrimental than impulsive buying. Consumers who buy obsessive-compulsively tend to undermine rival brands inside and outside of the group. We believe that they do this because they wish to defend their favorite brand (Marticotte et al., 2016).

The present study shows that age moderates the relationships between brand passion, brand anxiety and compulsive buying. These findings show that younger consumers are more likely to exhibit stronger passion and higher anxiety, leading to compulsive buying. However, higher passion toward a brand induces impulsive buying only for younger people. These findings show that younger consumers are more prone to these behaviors compared to older people. This finding about the moderating influence of age in the relationship between brand attachment and compulsive buying responds to the call from Merk and Michel (2019). This is another key finding, highlighting younger consumers, compared to older people, tend to induce impulsive buying and obsessive–compulsive buying because they are more likely to be passionate and anxious. Independent *t*-test analyses show that younger people have higher level of passion ( $M_{\text{younger}} = 4.50$  and  $M_{\text{older}} = 3.93$ ;  $t = 3.87$ ,  $p < 0.001$ ) and anxiety ( $M_{\text{younger}} = 2.74$  and  $M_{\text{older}} = 2.30$ ;  $t = 3.67$ ,  $p < 0.001$ ). One explanation is because older people tend to endure a decrease in information processing ability that limits their reactions (Homburg & Giering, 2001). They also may be more confident and have greater experience, which limits their anxiety.

Finally, the findings show that obsessive–compulsive buying fully mediates the relationship between brand passion, internal trash talking and external trash talking. Similarly, obsessive–compulsive buying partially mediates the relationship between brand prominence, brand anxiety and trash talking. Impulsive buying only mediates the relationship between brand prominence and external trash talking. These are interesting findings, because they show that obsessive–compulsive behavior is more adverse compared to impulsive buying. Moreover, these results show that there is a greater inclination to conduct trash talking when consumers have excessively put resources to the brands. An interesting finding is that there is a competitive mediation of impulsive buying on the relationship between brand prominence and external trash talking. Meanwhile impulsive buying did not mediate the relationships between brand passion and external trash talking as well as brand anxiety and external trash talking. These findings highlight the mechanism in which brand attachment leads to trash talking through compulsive buying.

Through the mediation analysis, the results show that brand prominence and brand anxiety, but not brand passion, have direct effects to internal and external trash talking. Highly passionate consumers do not embark in trash talking, unless they have done obsessive–compulsive brand buying. It is different for consumers who have high brand prominence and anxiety. For these consumers, it is highly likely they will embark on trash talking to defend their choice and brand (Hickman

& Ward, 2007).

#### 4.2. Managerial implication

As we have discussed, managers would like to encourage their consumers to keep buying their products by creating strong relationships with them. Nevertheless, there must be caution. Managers should be careful in developing strong attachment with their consumers (increasing passion and prominence), as there could be impulsive and obsessive–compulsive buying. In order to do this, managers should avoid excessive communication that targets a consumer's self- or social identity. Over exaggeration or over claim that the brand could help them in achieving an impossible ideal-self (e.g. overly skinny models) should not be used in the campaigns. Moreover, policy makers should regulate these excessive claims of companies in their marketing communications. Companies should actively manage these consumers so that their passion will not turn into obsession and harm the brand. Companies should also support non-profit organizations that help consumers to reduce their buying-shopping disorder. Marketers could also work together with policy makers in creating social events to advocate responsible consumption. For instance, they could hold a session helping consumers to arrange their financial planning for household consumption. Additionally, policy makers could devise a campaign of negative outcomes as a result of compulsive buying (e.g. being socially excommunicated due to high debts).

Managers should also give more attention to building and handling relationships with anxious consumers (a facet of strong attachment). Extant research has argued that anxious consumers are difficult to satisfy and are more demanding, because they think that they have invested a lot in the brand (Mende & Bolton, 2011; Japutra et al., 2018a). Managers could prioritize these consumers by sending personal apologies. Anxious consumers tend to be receptive to social reward, compared to financial reward (Mende & Bolton, 2011). By handling these consumers early on, managers could avoid future problems (e.g. boycotting or trash talking).

Our findings show that compulsive buying mediates the relationship between brand attachment and trash talking. Although companies would like to have their consumers as advocates, it should be noted that advocating brands by trashing other brands would not be preferable. It is important to distinguish brand advocates from brand trash talkers. Marketers could also use a different communication strategy for this group of people, such as monitoring social media and sending warnings about trash talking and compulsive buying. Similarly, in order to reduce the potency of conflicts in the virtual world, policy makers could develop regulations that ensure the owners of the forums to create clear guidelines in the management of the people within those forums (e.g. removing postings using foul language). In order to reduce trash talking, marketers should avoid promoting excessive rivalry with other brands, to avoid future problems that might harm the brand (e.g. Dineva et al., 2017). Consumers who exhibit compulsive behaviors usually endure anger and envy (Desarbo & Edwards, 1996), which might lead to trash talking (Yip et al., 2018). Marketers should try to reduce these two behaviors by reducing marketing activities, which promote envy.

The findings here show that younger consumers are more vulnerable to compulsive buying. Brand managers should put forward the notion of ethical consumption. They should tone down their overly exaggerated associations or claims for their brands, particularly for younger consumers. Rather, managers should start paying more attention toward consumers' well-being, and developing customer-centric propositions not based on only brand hype. When facing problems from the consumers, managers could always start with younger consumers compared to older consumers. Remember that anxious consumers are more demanding and prefer social rewards. Thus, managers could use more customized approaches for these younger consumers, rather than offering financial rewards all the time. For instance, managers could invite these younger consumers to attend special brand events. These findings

can also be useful for policy makers seeking to prevent excessive consumerism. They could adopt communication channels that are suitable for younger consumers. For instance, rather than using TV ads, they could start using video sharing websites, such as YouTube or TikTok.

#### 4.3. Limitations and further study

Even though the present study offers insightful findings, there are several limitations. First, the data was collected from British respondents. Thus, the generalizability aspect of the research potentially is limited and needs testing in different cultures. This study only utilized single cross-sectional data. It would be very interesting to gather insights from longitudinal data.

As stated at the very beginning of this study, only attachment anxiety was included in the model to represent attachment styles. It is known that attachment styles consist of attachment anxiety and attachment avoidance (Mende & Bolton, 2011). Attachment avoidance was not included in the study, which focuses on investigating the drivers of negative behaviors such as compulsive brand buying and trash talking. Individuals who are high in attachment avoidance tend to distance themselves from the companies or brands (Mende & Bolton, 2011; Japutra et al., 2018a). However, this study did not account for the interaction between attachment anxiety and avoidance. Previous studies have noted that the interaction between the two creates fearful consumers (Johnson et al., 2012; Japutra et al., 2018a). These studies have also contended that fearful consumers tend to conduct negative behaviors (e.g. hatred, trash talking). Thus, future studies should include the interaction between attachment anxiety and avoidance in the model.

We measured brand passion, without discerning whether it is harmonious or obsessive. Previous studies have differentiated brand passion into two different types: harmonious and obsessive (Vallerand et al., 2003; Swimberghe et al., 2014). However, in the present study, we measured brand passion through three items (i.e. passion, delight and captivation). We argue that obsessive brand passion is being represented by these three items, particularly captivation. Nevertheless, future studies should measure harmonious and obsessive brand passion using a dedicated scale. We also argue that harmonious passion and obsessive passion might be a continuum. Previous studies have shown that harmonious and obsessive passion are positively correlated (e.g. Forest et al., 2011). People might start with developing harmonious passion, which in turn could become obsessive passion in the future. Thus, future research should consider harmonious passion as a predictor of obsessive passion.

This study proposed that the dimensions of brand attachment positively influence both impulsive and obsessive-compulsive buying. The findings support the hypotheses. Nevertheless, it should be noted that the findings show that the three dimensions of brand attachment are stronger predictors of obsessive-compulsive buying than impulsive buying. Future studies should confirm these findings in different contexts and cultures. While examining the moderating role of age, the present study found that age is a stronger moderator for the relationship between passion and impulsive buying, as well as the relationship between anxiety and obsessive-compulsive buying. So it is worth investigating other moderators that could influence the relationships between brand attachment, impulsive buying, and obsessive-compulsive buying. For example, Horváth and Adgüzel (2018) found that different types of shopping motivation (e.g., gratification seeking, adventure shopping, etc.) drive compulsive buying. Moreover, it is also interesting to examine the mediators to these relationships. For example, Darrat et al. (2016) showed that escapism mediates the relationship between anxiety and compulsive buying.

Our moderating analysis shows that age moderates the relationships. Particularly, we found that younger consumers are more prone to these harmful behaviors (e.g., impulsive and obsessive-compulsive buying). It is evident that the relationships between brand passion and brand anxiety with impulsive and compulsive buying are stronger for younger

people. Nevertheless, we do not know why, apart from suggesting that younger people have higher passion and greater anxiety. Future studies could investigate why younger consumers are more prone to these behaviors compared to older consumers.

This study only accounts for the moderation effect of a demographic factor (consumer age) on compulsive buying. Future research could account for psychological factors; for instance, negative anger, envy, hate and deserving. Thus, it might be worthwhile including these factors to understand even more about compulsive buying and its negative outcomes. Finally, future research should investigate the tipping point of when a consumer turns into a compulsive buyer from a high frequency purchaser, as well as a trash talker from a brand advocate.

#### CRediT authorship contribution statement

**Arnold Japutra:** Conceptualization, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. **Yuksel Ekinci:** Conceptualization, Methodology, Supervision, Writing – review & editing. **Lyndon Simkin:** Supervision, Writing – review & editing.

#### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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