

Determinants of Impulsive and Obsessive Buying Behavior: A Moderation and Mediation Analysis

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Abstract

This research seeks to investigate the factors that make young adults materialistic and the outcomes of their materialistic approach. The study focuses on mediating the role of materialism between the contextual factors (celebrity endorsement and peer influence) and compulsive buying (impulsive and obsessive buying) is the focus of the study. It also looks at the moderating role of the use of social media. The data was collected from undergraduate university students residing in the Punjab province of Pakistan. The structural modelling technique was used to analyze the data. The study results show that materialistic young adults are more involved in impulsive and obsessive buying than others. The results also confirm the findings of previous researches conducted in other cultures. It also confirms that materialism mediates the relationship between sociological factors (celebrity endorsement and peer influence) and compulsive buying behaviour (impulsive and obsessive buying behaviour). Moreover, it proves the moderating role of social media use in determining and affecting these relationships. This research provides guidelines for the researchers, policy-makers, and managers.

Keywords: Celebrity endorsement ; peer influence; materials; social media use ; impulsive buying; obsessive buying.

JEL Classification: Z00

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1. Introduction

Scholars studying marketing psychology have paid a lot of attention to compulsive purchase behaviour (Inglehart & Baker, 2000; Chan et al., 2006). Over fifty million Americans are affected by compulsive shopping (Dittmar & Drury, 2000). There is widespread concern that younger generations, particularly in wealthy and developing countries, are growing materialistic (Parker et al., 2004). In 2003, 32 million 12-year to 19-year old youngsters in the United States spent a total of \$175 billion (Mangleburg et al., 2004); and the young generation, today, has four times greater number of gadgets than the era of 20 to 30 years ago. Young people in the United Kingdom, aged 16 to 18, scored strongly on the compulsive shopping scale, stating that it was difficult to refrain from purchasing new items they did not need (Phau & Woo, 2008). Materialism is linked to self-doubt, insecurity, low school achievement, and juvenile criminality; thus, researchers and educators should pay attention to this phenomenon (Deci & Ryan, 1995; Chang & Arkin, 2002). Previous research has expanded our knowledge of the main determinants of impulsive buying (Jalees, 2009). However, most of the studies on impulsive purchases have been conducted in Western countries, and there are minimal research experiments in third-world countries such as Pakistan. According to the studies, economic growth positively impacts pulsive purchases (Kacen & Lee, 2002). Pakistan's economic situation is improving as its GDP continues to rise to 4.8%, reaching 5.79 percent in the fiscal year 2018, the highest level in 13 years, and the current GDP growth is recorded as 4.8% in 2021 (Hafeez & Fasih, 2018). As a result, it is crucial to look into impulsive purchasing in Pakistan. Furthermore, Ali et al. (2012) found that Pakistani people's materialistic thinking grows. Materialistic persons measure their success by the worth of their belongings (Richins & Dawson, 1992). As a result, individuals are more likely to make impulsive purchases (Tatzel, 2002).

Impulsive shopping is considered a common occurrence, and impulsive purchases account for a major share of consumer behaviour (Habib & Qayyum, 2018). Depending on the nature of the products, roughly 40 to 80 percent of consumer purchases are attributable to impulse purchases (Amos et al., 2014). Impulse purchases account for 80 percent of luxury product sales, 62 percent of supermarket sales, and 30-50 percent of retail and fast food store sales (Ruvio & Belk, 2013). Impulsive purchasing is defined as a strong, uncontrollable and impulsive need for instant possession of goods and services with minimal consideration of the repercussions of the purchase (Aragoncillo & Orus, 2018). Since human beings frequently act on impulse, unexpected shifts in consumer purchasing behaviour occur (a sudden urge). Urges have been discovered to be significant motivating elements with the ability to influence humans to act in specific ways. In terms of reactions, they are characterised by impulsive responses to immediate situations.

The impulses have several important characteristics; they are abrupt, strong, last for a brief time and dissipate after the stressor or threat is processed (Telci, 2013). Furthermore, primary impulses in humans are mainly physiological urges. In contrast, the secondary urges are heavily influenced by our social environment and inspirations, such as purchasing commodities that are desired or considered a symbol of social status in a culture (Kang & Park-Poaps, 2010). To some extent, it can be seen in the circumstances involving socially problematic behaviour. Likewise, any form of mental or physical disorder, such as Obsessive-Compulsive Disorder (OCD), may also be referred to in this regard (Pan et al., 2015).

Nonetheless, urges have diverse impacts, and they differ from person to person. Some people have low cravings but are unable to resist them. On the other hand, others may have the ability to regulate or manage their behavioural patterns and refuse to comply with even the powerful cravings. People with weak controlling abilities are more likely to engage in uncontrollable behaviour, which is CBB. There are positive and socially recognized drives and harmful urges that are socially criticized, regardless of a person's ability. However, the unconscious behavioural patterns that have been organized by human evolution are still at work, and they can be harmful to the social fabric at times (demographics of an area). With 9 percent of youths, in the United States, owning a smartphone and 45 percent claiming to be always connected online, social media has become ingrained in the daily lives of young people (Anderson & Jiang, 2018). The exponential expansion of social media, which individuals choose to access via mobile devices, has marked the current period. People use multiple platforms, and social media has managed to find a central role in our daily lives (Dwivedi et al., 2019). 93 percent of businesses have used social media in their marketing plans. It generates a lot of advertising revenue that is expected to grow by 28.4% through 2022 (Dwivedi et al., 2019). One of the most important aspects of social media is personalised advertising (PAD). PAD has a huge impact on users' purchasing decisions.

According to Zafar et al. (2019), the environment on social media encourages users to buy impulsively. Social comparison theory (Festinger, 1954) states that when objective means are unavailable, people are motivated to evaluate themselves by comparing themselves to other consumers. The researchers broaden the idea to include a comparison of material objects in determining an individual's social status. Media and social influence are likely to interplay and have parallel effects on the younger generation (Chen et al., 2006; Valente, 1996). The major goal of the investigation is to identify the impact of social influences (peer influences, and celebrity endorsement) on impulsive and obsessive buying behaviour of consumers with mediation (materialism and moderation; social media use). The current research adds to the existing body of knowledge, in numerous ways, to fill this research gap. As a first step, we provide an existing theoretical paradigm to explain why Pakistani youth is so materialistic. Secondly, by putting the conceptual model through its paces, and validating it with a variety of causes and effects of materialism, among young people, we widen the breadth of the literature. The third point of discussion is materialism and impulsivity as plausible mediators between social factors and young adults' compulsive shopping behaviour.

2. Literature review

2.1 *Materialism*

Many alternative definitions of materialism have emerged as a result of years-long research. According to Belk (1985), Materialism is defined as a person's value system for worldly possessions. Materialism is defined as a person's internal desire to receive and spend. The persons' importance to worldly possessions is called materialism (Hollander et al., 1986). Materialism refers to a person's attitude toward possessions and achievements to obtain the most desired position in society (Richens & Dawson, 1992). Materialism has been attacked on social, religious, and philosophical grounds (Belk et al., 1982). Materialism, as a dimension of personality characteristics, creates a distinction between the individuals who depend on possession as the main component of the entity and those for whom ownership is of secondary importance (Belk, 1984). As a foundation for this notion, the definition of materialism is the people's attitudes toward possession and the value they place on acquiring material goods. Materialistic persons use their material possessions to improve their social relationships with others (Rindfleisch et al., 1997). The three dimensions of materialism are envy, possessiveness, and a non-negotiate attitude (Belk, 1984). Materialistic people are less satisfied and happy with their lives than non-materialistic ones (Ryan & Dziurawiec, 2001). Materialists value psychological and social aspects less than others (Kasser, 2003).

According to Belk (1988), Material things are widely used by young people to express their extended self; it makes materialism a common practice. The term "materialism" is defined as "the degree to which individuals aspire to engage in the development and preservation of the self through the acquisition and use of objects, services, and experience" (Shrum et al., 2013). The materialism value scale technique is used in this study to measure materialism. The scale has three dimensions: success, happiness, and centrality. Success is determined by what you have. Materialistic young adults are continually compelled to make lavish purchases because their key life goals are to accumulate wealth and material stuff. Happiness is the belief that owning many expensive things makes you happy. Centrality relates to possession, which is important in the materialists' lives. They use high-end things to convey social standing, prestige, and wealth. Both external and internal variables influence young people's materialistic behaviour (Kasser & Kanner, 2004).

2.2 *Peer Influence and Materialism*

According to a survey about youth, there is a strong link between peer contact, peer pressure vulnerability, and materialism (Chan & Fang, 2007; Chan & Prendergast, 2007). Peers have more effect than parents do in developing materialistic behaviour (Chaplin & John, 2010). Peer group influence leads to high levels of materialism, possibly because peer acceptance is regarded as the best approach for gaining confidence and intimate connection

with one's peers in a specific community (Isaksen & Roper, 2012). According to the comprehensive social assessment hypothesis, people build their social position by comparing themselves to others through their material possessions (Motl et al., 2001). Materialism among young adults is exacerbated by peer pressure (Benmoyal-Bouzaglo & Moschis, 2010). In most cases, peers are thought to be more influential than parents in encouraging the adoption of materialistic ideals. Surprisingly, there is no evidence that peer-materialism causes young age materialism to rise. On the other hand, Peers are more likely to pass down values than their parents are. When the teenagers and youngsters discuss consumption with their friends (e.g., what cool brands are there in the markets, what is in and out, how much they spend on a pair of sneakers, etc.) and observe their peers' acquisitive tendencies, they are more likely to imitate such behaviour and want the same things the formers want or have. We explore how peers' materialism increases the adolescents' self-esteem, which in turn drives materialism, in contradiction to this viewpoint. Materialism is both a coping mechanism for dealing with challenges and a symptom of underlying insecurity (Kasser, 2003).

H1: Peer Influence has a Significant Impact on Materialism

2.3 Celebrity Endorsement

According to celebrity studies, celebrities reflect and represent key aspects of capitalism, such as individualism, consumerism, and materialism. Celebrity-related scripts and photographs circulate widely in the media frequently focus on their successful, happy, and glamorous lives (Giles & Maltby, 2004). This means that it is not only the customers' materialism that influenced their reactions to celebrity-supported companies (e.g., Under Armour endorsed by Michael Phelps, Puma recommended by Rihanna, Chanel endorsed by Blake Lively, etc.), the celebrity-founded and owned product lines/brands also do that (For example, Jessica Simpson's product lines, Paris Hilton's brands, JLo by Jennifer Lopez, and so on.). Customers' levels of fashion participation are also influenced by materialistic incentives (O'cass & Frost, 2002). Fashion engagement, or a consumer's interest in clothing and fashion, is an important component of his lifestyle that influences his purchase decisions and behaviour (Naderi, 2013; Nam et al., 2007). Celebrity worship is a common occurrence among teens and young consumers worldwide (Yue & Cheung, 2000). According to a recent estimate, celebrities are utilised as spokespersons in about 20% of all advertising worldwide (Shimp & Andrews, 2013).

According to Shimp and Andrews (2013), in the United States, celebrities regularly feature in television and print advertising. Celebrity endorsement is particularly widespread in Japan, with over 70% of all advertisements using local or foreign celebrities (Praet, 2008). Celebrities are generally seen as trustworthy providers of information by consumers (Atkin & Block, 1983). Using celebrities as product spokespersons in advertising attracts new clients and encourages materialism (McCracken, 1989; Petty et al., 1983). Young people are

particularly drawn to celebrity endorsements (Yue & Cheung, 2000). According to Lafferty and Goldsmith (1999), young people prefer products that are promoted by movie stars and sports stars (Chan & Prendergast, 2007, 2008; Chan & Zhang, 2007). In addition to their classmates, young people may compare themselves to celebrities. Celebrity messaging has become a part of a person's social reality building (Alperstein, 1991). As a result, celebrity worship may have a tremendous impact on their followers' values, attitudes, and behaviour (Arratia & Schultze, 1991). As a result, the materialists see celebrity status as a sign of success, and they try to portray luxury consumption as a reflection of a successful life (Sharda & Bhat, 2018).

H2: Celebrity Endorsement has Significant Impact on Materialism

2.4 *Impulsive and obsessive buying behaviour*

CB is compulsive purchasing which has been linked to a variety of psychiatric problems and other impulsive actions. CB has been linked to anxiety, mood, substance misuse, obsessive hoarding, and eating disorders studies (Christenson et al., 1994; O'cass & Frost, 2002). CB has also been linked to various personality problems (Schlosser et al., 1994). According to studies, CB has been linked to avoidant, obsessive-compulsive, and borderline personality disorders (Leibinger et al., 2009). Due to time and quantity limitations, these triggers caused panic or terror among the inhabitants, resulting in an impulsive and obsessive purchase. Obsessive-compulsive shopping is a major component of the disease spectrum that contributes to low life satisfaction and excessive use of credit, according to Harnish et al. (2019). As compulsive purchasers aren't interested in the things they buy, the act of purchasing, rather than the products obtained, appears to ease obsessive buyers' moods and states (O'guinn & Faber, 1989). Compulsive buying is typically classified as either an addiction or a psychological illness (Hartston, 2012), an affective disorder (Lejoyeux et al., 1995), and a mood disorder (Kesebir et al., 2012), or an obsessive-compulsive disorder (Hollander, 1993).

Compulsive buying, on the other hand, maybe influenced by dispositional variables. Examples, anxiety (Williams & Grisham, 2012), depression (Cullen et al., 2010; Mueller et al., 2011), materialism (Dittmar, 2005; Mueller et al., 2011; Rose, 2007), decision-making difficulties (Kyrios et al., 2004), impulsivity (Billieux et al., 2008; Black et al., 2012), narcissism (Rose, 2007), and Perfectionism has been connected to compulsive shopping and has been shown to predict it (for a review on comorbidity rates see Aboujaoude, 2014). CBB (compulsive purchasing behaviour) is a compulsive activity in which a person shops as a coping mechanism for feelings of emptiness or as an escape from uncomfortable situations or negative feelings (O'guinn & Faber, 1989; Raab et al., 2011). According to a study, when these clients indulge in the habit, they prefer things that are related to their attractiveness. CBB is a form of an obsessive eating disorder.

According to a previous study, different compulsive spending habits may have common causes, development patterns, and results, as well as being comorbid (e.g., Christenson et al., 1994; Faber et al., 1995; McElroy et al., 1994). Ridgway et al. (2008). Obsessive buying, for example, is defined as the need to purchase specific brands of clothing or other items. Furthermore, a previous study has revealed that obsessive purchasers are motivated to engage in obsessive buying by frequent and continual thoughts, intrusive feelings, and images, all of which lead individuals to engage in obsessive buying with the primary purpose of decreasing anxiety and suffering (Roberts & DeVecchio, 2000). Another consumer behaviour outcome examined in this study is obsessive buying. According to Japutra et al. (2019), uncontrollable cravings to engage in dangerous acts characterise impulse-control disorder, whereas concern or anxiety characterise the obsessive-compulsive disorder. Obsessive buying is a natural urge that is accompanied by apprehension about shopping and a desire to make repeated purchases to relieve stress or tension. Obsessive-compulsive disorder (OCD) is defined by intrusive thoughts (obsessions) and routines (compulsions) performed to relieve worry or suffering (American Psychiatric Association, 2013).

H3: Materialism has a significant impact on Impulsive Buying behaviour

H4: Materialism has a significant impact on obsessive buying behaviour

2.5 *Materialism as Mediator*

This research aimed to see if materialism acted as a buffer between specific sociological situations and shopping addiction. Theoretical support for materialism's mediating effect on compulsive behaviour has come from a variety of studies (Nga et al., 2011; Rose, 2007). (Gallagher et al., 2017) looked at materialism as a mediator between the relationship of gender, family, peer influence and compulsive buying. Obsessive shopping was investigated as a probable predictor of materialism. Sociological factors such as peer pressure, celebrity endorsements in the media, and television advertising have all been related to materialism and compulsive shopping in adulthood (Lindstrom & Jeffries, 2004; Manchanda et al., 2010). Based on the available literature, we claim that materialism mediates the association between celebrity endorsement, peer influence, and obsessive behaviour.

H5: Materialism mediates the relationship between peer influence and impulsive buying behaviour

H6: Materialism mediates the relationship between Celebrity Endorsement and impulsive buying behaviour

H7: Materialism mediates the relationship between peer influence and Obsessive buying behaviour

H8: Materialism mediates the relationship between Celebrity Endorsement and Obsessive buying behaviour

2.6 *Social Media Use*

Because of the widespread usage of smartphones and the quick expansion of social media, billions of people can now share and post anything on social media sites (i.e., Facebook, Instagram, Twitter, etc.) (Prentice et al., 2020; Islam et al., 2021). Many studies have indicated that consumers' use of social media influences their decision-making processes and motivates them to modify their preferences (Barger et al., 2016). Social media gives internet users the ability to access information in real-time, besides fostering relationships with other people even in times when they cannot interact face-to-face due to pandemics. In this extraordinary situation, it's no surprise that social media usage has exploded. Social media consumption has risen due to COVID-19's widespread distribution, according to a recent global poll done in important nations such as China, the United States, Spain, and Italy, with 40% of online users engaging in excessive social media use (Watson et al., 2020). Every day, millions of posts on routine life events appear on social media.

2.7 *Social Media as Moderator*

Among all forms of advertising, social media has had a significant impact on young people. Not only the younger generation but even adults regard social media as the most adaptable and appropriate medium for advertising these days, rather than television or other forms of media. According to Adobe Digital Insights' (ADI) State of Digital Advertising 2018 report, this is in stark contrast to older age groups, who overwhelmingly cite television as their most relevant channel. By increasing the number of young influencers available for purchase via online marketing, social media is growing in popularity. Social media's impact has expanded beyond advertising. According to a survey done last year, the youth trusts recommendations made on social media more than those that reach them through television advertisements.

Additionally, a recent survey indicates that social media dialogues account for almost 12% of consumer transactions in India. While the elderly are still reliant on television and banner commercials, adolescents are exposing themselves to numerous social media websites where they are constantly bombarded with advertisements. These commercials are critical in persuading children to make purchases because materialism is the primary component that generates a buying desire. Social media is a significant contributor to the materialistic mindset among youth. All prominent social media platforms have a technique of promoting a particular post and quickly increasing its popularity. These metrics play a significant part in determining one's own and others' worth. We anticipate a large number of likes whenever we post something on Facebook, Instagram, or Twitter, regardless of the fact whether the post is about sending a social message or taking a selfie. This demonstrates that we evaluate our self-worth on the behaviour of others and their preferences or dislikes. We are beginning to equate the value of online connections with that of in-person interactions, using the number

of Retweets or likes we receive as a gauge of our worth. As a result, the more we receive, the higher our self-esteem is, for we can consider ourselves to be popular.

H9: Social media use Moderates the relationship between peer influence and materialism

H10: Social media use Moderates the relationship between celebrity endorsement and materialism

2.8 SOR framework

The SOR model has been widely adopted and used in consumer behaviour research (Liu & Cao, 2016; Islam et al., 2018). According to the SOR model, various components of the environment function as stimuli (S), when combined, modify people's inner states and cause them to act as organisms (O) that in turn cause them to exhibit behavioural reactions (R). The model has received empirical support from a large body of literature Vieira et al. (2018). This concept was proposed with a retail scenario in mind. The environmental stimulus in this paradigm is atmospheric cues, and the two major states of emotion are Organism and shopping at the store as responses. Environmental stimuli have a considerable impact on the consumer's internal states; and, according to the SOR model application, consumers' environmental stimuli also derive from all invaders. In the framework developed by (Zheng et al., 2019), Ambient, design and social cues are among the stimuli. The SOR model was used in this study to clarify the links between external inputs, organism state, and specific outcomes. The current study used the SOR model as the environmental stimulus, with social influence (celebrity and peer influence) and social media use as the social stimuli (S). As materialism in the Organism (O). The comments (R) alluded to obsessive shopping (impulsive and obsessive buying behaviour).

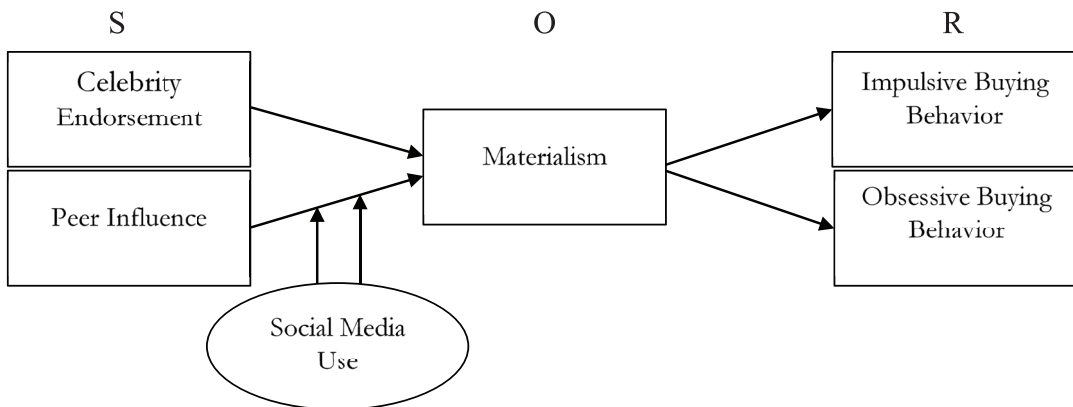


Figure 1: SOR Model

3. Methodology

In the context of Pakistani consumers, there is little evidence in the consumer behaviour and marketing literature about the relationship between the antecedents of materialism and compulsive buying behaviour among young adults. Based on recent literature, for this investigation, we proposed the following conceptual model: Among young adults; (1) materialism is a major predictor of compulsive buying behaviour, (2) materialism serves as a strong mediator between the indicated contextual factors and compulsive buying behaviour, (3) Celebrity endorsement and peer influence are important predictors of materialism, and (4) social media serve as a moderator between the relationship of celebrity endorsement and peer influence with materialism.

3.1 Measurement development

This study's questionnaire is based on previous research. Six items were used to assess materialism Richins and Dawson (1992). Four items from Sheldon et al. (2004), the Celebrity Endorsement Survey, were used to assess celebrity endorsement. Three items were used to assess the influence of peers from Mangleburg and Bristol (1998). four items were used to assess consumers' impulsive buying behaviour by Ridgway et al. (2008). Obsessive buying will be assessed by using the 4 items from Ridgway et al. (2008). Social media use was measured by using 10 items from (DeVellis et al., 2003). Therefore, the entire questionnaire was made up of elements derived from previous research. The factors we chose and included in our conceptual model are some of the ones that have been linked to materialism and compulsive shopping in young people. A quantitative approach was used to collect data. All items were assessed using a five-point Likert scale ranging from "strongly disagree" to "strongly agree. Because English is the primary language of instruction in Pakistan's colleges, content validity was not an issue because all of the things were created in English (Islam et al., 2018; Rasool et al., 2012).

3.2 Data collection

Undergraduate university students were provided with the data. 450 people responded (227 male and 223 female). The survey method was employed to improve the data's validity. Surveys are useful in quantitative research because they allow researchers to examine the relationships between various variables; and scientists in the social sciences frequently employ surveys (Zhang et al., 2014). In the spring of 2021, data were collected from undergraduate students at universities (major campuses) in Pakistan's Punjab region. For this study, university students are the most appropriate participants since they have more free time and resources (Chan et al., 2006; Chou, 2001; Pinto et al., 2000). In the presence of their teachers, students were given a properly designed questionnaire to complete during their online lesson. The researchers gave the students a brief overview of the study's factors before

asking them to fill out the questionnaire. Due to missing data, 17 out of 450 replies were eliminated. As a result, the final sample included findings from 433 pupils. Males made up 50.44 percent of the responders, while females made up 49.55 percent. They were between the ages of 18 and 30. The respondents' demographic profiles are shown in Table 2.

3.3 Data analysis

We employed structural equation modelling (SEM) in conjunction with the partial least squares (PLS) approach to analyse the data to evaluate the measurement and structure models and confirm the adequacy of the measurement model by validating the proposed constructs' reliability and validity. PLS is a powerful regression measurement approach. Concurrently, A and confirmatory factor analysis (CFA).

Table 1:
Demographic profile

Variable	Group	Frequencies	Percentages
Age	19 to 24 Years	383	85.1
	25 to 30 Years	67	14.9
Gender	Male	227	50.4
	Female	223	49.6
Part-Time Job	Yes	86	19.1
	No	364	80.9
Per Month Spending on Fast Food	less than Rs.1000	177	39.3
	Rs.1001 to 2000	104	23.1
	Rs. 2001 to 3000	75	16.7
	Above Rs.4000	94	20.9

4. Results

4.1 Measurement model

The measuring model was evaluated in this study using CFA (Hair et al., 2012). We began by evaluating the measurement model's substance, convergence, and discernment. The most difficult technique is construct validity (Malhotra, 2010). Still, It is required for this study so that the concept's meaning might shift, and respondents' interpretations of the construct can fluctuate during data collecting (Drost, 2011). As a result, the data gathering step receives extra attention from researchers. A pilot test of 50 questionnaire responses was conducted before the main data collection to investigate the reliability, validity, and average variance extracted (AVE) for the validation of the content. We deleted some items and improved the convergent and discriminant validities, as well as the alpha values, during this

process. The degree to which a construct is connected with the other constructs in a conceptual model is called convergent validity. The AVE, Cronbach's alpha, and composite reliability (CR) scores, as well as the factor loadings, were used to assess convergent validity.

The most commonly used statistical approach for assessing construct reliability is Cronbach's alpha (Gefen & Straub, 2000). A latent variable's "internal consistency" refers to the consistency between its items. Construct reliability denotes the absence of random mistakes in construct elements and the consistency of results. The construct dependability ratings that are acceptable are higher than 0.70 (Keil et al., 2000), and Cronbach's alpha values for all constructs in the current study are greater than 0.70, as shown in Table 2. The term discriminant validity refers to the fact that each construct in the conceptual model is distinct from the others. The discriminant validity was assessed (Fornell & Larcker, 1981). At the notion level, we looked at discriminant validity. The square root of the AVE of variables was compared to the connection between correlations among variables. The results showed that the discriminant validity of the current study is good. AVE, CR, and Cronbach's alpha levels of 0.50, 0.80, and 0.70, respectively, have been advocated by the researcher (Faqih, 2016; Flynn et al., 1990). Table 2 shows that all of the measurement models' needed values are above the minimum level. As a result, the findings suggest strong discriminant and convergent validity.

4.2 *Structural model assessment*

Table 2:

Construct wise Reliability Analysis

Variable	Cronbach's Alpha	No. of Items	CR	AVE
Materialism	0.825	6	0.870	0.627
Celebrity Endorsement	0.848	4	0.853	0.595
Peer Influence	0.887	4	0.898	0.688
Impulsive Buying Behaviour	0.891	4	0.885	0.658
Obsessive Buying Behaviour	0.894	4	0.897	0.687
Social Media Use	0.905	10	0.915	0.546

As a result of the model's statistical tests for reliability and validity, it was determined that the model was suitable to test hypotheses. A correlation analysis was used to establish a straight link between the variables. The term "correlation" refers to the relationship between two or more variables. Materialism was positively associated with celebrity endorsement, peer influence, and social media usage (respectively, $r = .403$, $r = .364$, $r = .373$, $P < 0.001$). Materialism was found to be linked to young adults' impulsive and obsessive purchasing behaviour ($r = 0.268$, $r = 0.350$, $P < 0.001$). Correlation analysis values can be seen in Table 4 (see Fig. 1). The second stage was to use Amos to run the structural equation model to see if the hypotheses were supported. The impact of independent variables on dependent variables was investigated using the SEM approach. The antecedents' variables (celebrity endorsements, peer influence, and social media use) have a considerable influence on dependent variables, based on the data analysed in the conceptual model (materialism, impulsive and obsessive buying behaviour). The results indicate that path coefficients of celebrity endorsement ($\beta = 0.309^{***}$, $p < 0.01$), peer influence ($\beta = 0.252^{***}$, $p < 0.01$), and Social Media Use ($\beta = 0.224^{***}$, $p < 0.01$) all have significant predictors of materialism. Therefore, H1 and H2 are supported. Materialism significantly predicted ($\beta = 0.081^{***}$, $p < 0.01$) impulsive buying behaviour and ($\beta = 0.206^{***}$, $p < 0.01$) H3 and H4 are also supported by obsessive buying behaviour among young adults and materialism explains 24.7 percent of the variance in compulsive buying. Materialism was found to be a key driver of impulsive and obsessive purchase behaviour using parameter coefficients. Analysis of Regression (path coefficients & R²) values is presented in Fig. 2.

4.3 Mediation analysis

In the current research, materialism served as a mediator between (celebrity endorsement and peer influence), and (impulsive and obsessive buying behaviour). Several psychologists and social scientists have argued about the viability of mediation (Baron & Kenny, 1986; Hayes & Scharkow, 2013; MacKinnon et al., 2002; Preacher & Hayes, 2004; Shrout & Bolger, 2002). We employ the mediation approach explained by (Preacher & Hayes, 2004), employing a 95 percent confidence interval and the bootstrapping method. The indirect effect is substantial with a 95 percent confidence interval excluding zero. Materialism mediates between the variables (celebrity endorsement and peer influence) and variables (impulsive obsessive buying behaviour). The boot strap confidence interval shows 95percentt, excluding zero, the indirect effect of materialism on correlations between determinants (celebrity endorsement and peer influence) and (impulsive and obsessive purchase behaviour) is substantial. This finding suggests that materialism moderates the effect of the variables (celebrity endorsement and peer pressure) on impulsive and obsessive purchasing behaviour.

To test the moderation effects of social media use in the relationship between celebrity endorsement and materialism, the interaction terms were employed to test hypotheses H9 and H10. The results indicated social media use as a significant and positive moderation of the relationship between celebrity endorsement and materialism. The interaction term ($b=0.126$, $p < 0.05$) was a significant moderator between the relationship. In the same way, social media use proved as a moderator in the relationship between peer influence and materialism. The interaction term ($b=.082$, $p < 0.05$) is a significant moderator.

Table 3:
Moderation effects of social media

	Relationship	Estimate	Significance
ZMaterialism <---	ZCelebrity_Endorsement	0.332	***
ZMaterialism <---	ZSocial_media_Use	0.224	***
ZMaterialism <---	INT_CEN_SMU	0.126	***

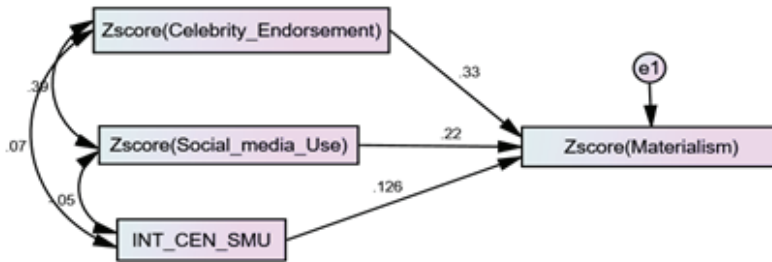


Figure 2: Endorsement

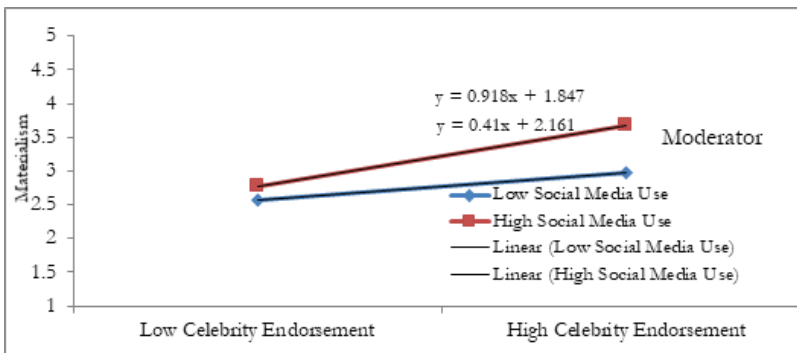


Figure 3: Low and High Celebrity Endorsement

Table 4:
Results

			Estimate	Significance
ZMaterialism	<---	ZPeer_Influence	0.273	***
ZMaterialism	<---	ZSocial_media_Use	0.263	***
ZMaterialism	<---	INT_PIN_SMU	0.082	***

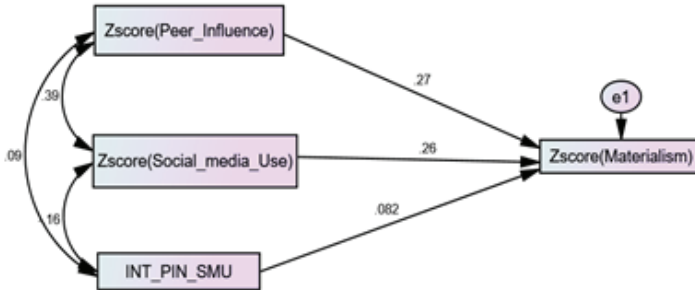


Figure 4: Materialism

5. Discussions

The relationship between celebrity endorsement and peer influence on compulsive or impulsive purchase behaviour was specifically studied in this study. This study also investigates the mediating role of materialism and impulsiveness in relationships. Moreover, the moderating role of social media use among the younger generation is also investigated. By Russell and Mehrabian (1977), the description of the SOR model reads, “various aspects of the environment act as stimuli (S) that together affect people’s internal states and act as organisms (O), drive their behavioural responses (R).” According to this study, celebrity

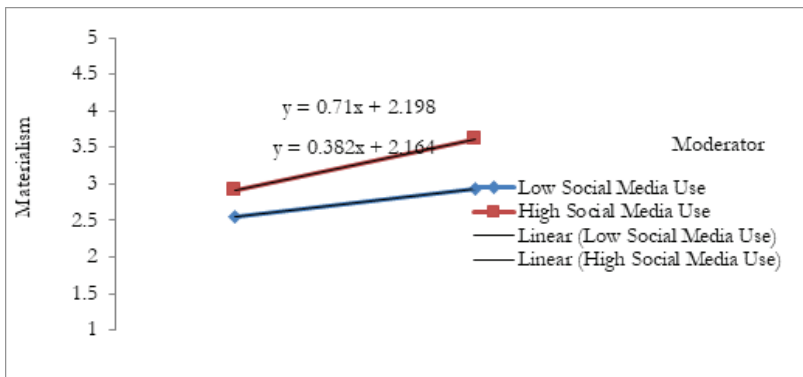


Figure 5: Materialism Graph

endorsement, peer influence, family influence and social media use are used as Stimulus (S), factors from the environment, whereas materialism and impulsiveness are presented as Organism (O), and obsessive and impulsive buying behaviours are behavioural outcomes. We divide the framework into three models. In the first model, the direct effect of celebrity endorsement, peer influence and social media use on materialism was analysed, and it also has the direct effect of materialism on impulsive and obsessive buying behaviour. In the 2nd model, mediating effect of materialism between the relationships of celebrity endorsement and impulsive and obsessive buying behaviour was found; and the mediating effect of materialism between the relationships of peer influence and impulsive and obsessive buying behaviour was estimated. The young generation has a strong influence from media celebrities and peers. They follow media celebrities in their purchasing. In the same way role of the peer also has a significant impact. According to the research, celebrity endorsement is the most important predictor of materialism in Pakistan, as it is in other nations (Kim et al., 2007; La Ferle & Chan, 2008; Pugliese & Okun, 2014). This is important since Pakistan is an Islamic state with a Muslim majority.

It varies from the Western multi-religious situations in which most prior research was undertaken. Islam is not opposed to personal growth and quality of life; rather, it fosters and directs the development of a happy life. It encourages people to improve their lives by striving to make each day better than the previous one, but it discourages people from focusing their lives solely on accumulating material goods. Materialism and obsessive shopping are forbidden in Islam. Pakistani culture, according to the current study, is not homogeneous and is influenced by various cultures. Our findings show that, like their foreign counterparts, Pakistani young people are impressed by social actors like celebrities and peers. So, that is the conclusion to be derived from the current study's findings that are similar to those of other cultures' investigations (Chan & McNeal, 2003; Chan & Prendergast, 2008; Chen & Chia, 2006; Islam et al., 2018; Keppell et al., 2006; La Ferle & Chan, 2008; Lee & Ahn, 2016; Mueller et al., 2011; Nga et al., 2011). The findings revealed that peer pressure has altered young adults' materialistic beliefs and obsessive buying habits. The youth of Pakistan has a strong desire for material possessions.

Materialistic young adults who frequently connect with their peers are more likely to be materialistic than those who do not connect. That is the case in Pakistan and other nations. (Chen & Chia, 2006). It implies that peer communication develops a predisposition to become impulsive. It has been previously researched by Lueg et al. (2006) also that Consumers' shopping preferences and decision-making are heavily influenced by peer communication (Shim, 1996). Young adults are more likely to utilise social media. The formers' widespread use can be attributed to several factors. First, we discovered that around 10% of college students have laptops and smartphones during the data collection process. Students at Pakistan's universities have been given free laptops and Wi-Fi internet access by the government.

When young adults have smartphones with access to a range of social media applications, they are more likely to see videos in which celebrities promote things on social networking sites. Finally, since young adults have vast social networks, they are prone to observe their friends and favourite media superstars' material things. Furthermore, young adults actively adhere to group norms when it comes to talking about material belongings and making purchases of various goods and services to maintain relationships with their peer group.

As a result, the moderating influence of social media on young adults reinforces the relationship between (peers and media superstars) and consumerism, which is detrimental to their development. All of the hypotheses are supported, implying that social media has an impact on the development of a materialistic mindset in young people, as well as on the personality trait of impulsivity. These outcomes are consistent. (Fan & Gordon, 2014; Joshi & Rahman, 2019) Similarly, materialism mediated the connections between celebrity endorsement and compulsive buying behaviour in the first instance, and between peer influence and compulsive buying behaviour, in the second instance, respectively. The current study employs the SOR model to investigate how interpersonal communication influences the development of materialism, which in turn influences consumer purchasing behaviour (Chan & Prendergast, 2007, 2008; Engeln-Maddox, 2005). Consumer behaviour research has made considerable use of the SOR model, which has received widespread endorsement and application (Islam et al., 2018; Liu & Cao, 2016). This finding demonstrates that young adults in peer groups are under pressure to shop according to their friends' recommendations. Young people are influenced by their peers in their study and employment contexts that have an impact on their materialistic attitudes.

According to the social exchange hypothesis, young adults are inclined to compare their material possessions to those of their friends. As a result, the findings in Pakistan are encouraging and in line with prior research. (Chan & Prendergast, 2007; La Ferle & Chan, 2008). Today's young adults are preoccupied with the ideas of material belongings and the acquisition of expensive items, as this appears to be an important aspect of modern life. As a result, the family system is transforming from collectivism to individualism. The high proportion of young adults is the primary factor. Second, the media has had an impact on people's lifestyles. Pakistan is a developing country that is undergoing cultural and social transformations, owing to the widespread use of social media among the country's youth. Young adults in Pakistan utilise media for a variety of purposes including gathering information about products, brands, and discounts. Moreover, today's youth is more exposed to media (e.g., Facebook, Twitter, and LinkedIn) than previous generations (Lee et al., 2016). This has had a major impact on materialistic attitudes and obsessive shopping. As a result, the empirical research presented, herein, sheds light on these aspects apart from demonstrating that young adults in Pakistan (a modern Islamic society) have materialistic outlooks that are strikingly comparable to those in other cultures. According to the findings of our study, young Pakistani individuals are influenced by peer pressure and celebrity endorsement to

become materialistic and obsessive shopaholics. Compulsive purchasing was linked to the research variables' sociocultural factors through materialism.

5.1 *Theoretical contributions*

Our work contributed to the present corpus of knowledge. The first step was to test and validate a conceptual model that predicted materialistic beliefs in young people. The results revealed that all hypotheses in the conceptual model were accepted. Our research backs up theories on the causes of materialism that have been proposed in the literature, which covers a wide range of societal circumstances. As a result, this study is the first to systematically investigate the interrelationships among social and marketing components, compulsive buying behaviour, and materialism among young adults in Pakistan, as well as, to a lesser extent, in other countries with a majority of those under Islamic influence. Second, this study demonstrates that sociological variables are the most important constructs for the development of compulsive purchasing in a modern Islamic culture, which lends support to previously discovered factors (Chan & Prendergast, 2008; Chan & Zhang, 2007), and, through the inclusion of materialism, as a mediator in the theoretical model.

The third point is that our proposed model provides a new theoretical viewpoint on materialistic goals and obsessive buying behaviour. This is because just a few research studies have found materialism to play a mediating role between contextual factors and compulsive purchase. As a result, the current research added to the body of knowledge regarding the factors that influence compulsive purchase behaviour. Implications For policymakers, the current study's findings add to our understanding of how to reduce materialistic desires among teenagers. The government's policymakers should also learn from these findings, which show that young adults in Pakistan, like in other nations, are either currently infected with materialism or on the verge of becoming so.

The policymakers may want to look for a remedy to stop this tendency from continuing. If this is the case, the remedies that work in drastically diverse societies should be investigated; properly for this article implies that this is a global problem. The governments should adopt a program to teach young adults how to develop a decent buyer's mindset to avoid consumerism and excessive purchasing. Secondly, because television advertising is strongly associated with compulsive behaviour and material accumulation, authorities should put in place laws to mitigate the effect. Third, new visual and ethical courses would be developed at the university level to reduce the amount of consumerism that young adults are exposed to. Fifth and last, materialism is anti-culture in Pakistan, where the collective family system is the dominant social structure because it is constantly centred on individual values. Parents should spend time with their young children and instil fundamental values in them. They should dissuade kids from comparing their consuming habits to those of their peers.

5.2 *Limitations and future research*

There are certain limitations to the research we conducted. First, we acquired information from the university students who were all respondents. Since the model's outcomes could differ in different situations, the study's conclusions have low external validity; with a different audience in mind, the study's findings could be different. Future researchers should retest and re-evaluate the conceptual model in different circumstances. Second, the data was collected from the university students in Pakistan's province of Punjab, where young people are more influenced by (peer group, celebrity endorsement) contextual variables than those in other parts of the country. Future research should focus on a large sample size and data collection from all universities throughout the province in order to acquire a more comprehensive picture of young adults' attitudes regarding the study constructs and the constructs in general. Third, we used cross-sectional data in our study. Since buying compulsively varies with time and is not a one-dimensional construct, a longitudinal study could help to explain this concept. Fourth, the type of product should be considered as a predictor and variable of materialism and compulsive buying in future research. A future research project could look into the impact of family communication on consumerism.

Conflicts of Interest

The authors declare no conflict of interest.

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