The mediating impact of customer satisfaction in relation of brand equity and brand loyalty

An empirical synthesis and re-examination

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Abstract

Purpose – The purpose of this paper is to explore the inter-relationship of dimensions for consumer-based brand equity and brand loyalty with customer satisfaction as a mediator for oral care segment with special reference to Delhi and connecting areas.

Design/methodology/approach – For achieving the objective of this study, the theoretical model was tested through structural equation modelling. Research scales from the literature were modified for suitability. Data were collected from 250 respondents.

Findings – The results indicate that for the oral care segment, customer satisfaction is significantly related to the perceived quality, brand trust, perceived value of cost and lifestyle congruence. Moreover, customer satisfaction partially mediates the relationship of perceived quality and perceived value of cost with brand loyalty, whereas it fully mediates the relationship of lifestyle congruence and brand trust with brand loyalty. Thus, even for low-involvement products, consumer purchases are based on the attributes of the brand rather than being merely habitual.

Originality/value – The literature supports the direct influence of brand equity on brand loyalty. However, no other study has investigated the mediating role of customer satisfaction on the relationship between brand equity and brand loyalty for low-involvement products.

Keywords Brand equity, Customer satisfaction, Brand loyalty, Perceived quality, Perceived value of cost, Lifestyle congruence

Paper type Research paper

1. Introduction

The brand is considered as a highly distinguished and valuable asset for any company. The brand is a strategic tool for marketers, and it diminishes the effect of price sensitivity in market competition (Helming et al., 2007). Customers are inclined to spend additional money for a preferred brand because they believe that no competitor can deliver the value provided by the preferred brand. The premium price paid by the customers is partially justified by brand loyalty. Hence, brand loyalty is considered as a requisite for an organisation’s profitability and sustainability (Chaudhuri and Holbrook, 2001). With reducing product differentiation and the short maturity period and increasing unpredictability of the product market, the conservation and growth of brand loyalty is the focal interest of marketers.

Previous studies have not been able to reach a common consensus regarding the relationship of brand loyalty with customer-based brand equity. Aaker suggested that loyalty is one of the principal elements for brand equity, whereas Keller believes that loyalty is the outcome of brand equity rather than a determinant of it (Aaker, 1991; Keller, 1993; Lei and Chu, 2015). In his study, Nam et al. (2011) supported Keller’s viewpoint by mentioning that loyalty is not one of the element of equity but rather a consequence of it because brand equity is a perception, whereas loyalty is a behavioural construct related to the intentions of repurchase. Expanding on the perspective of Nam et al. (2011), the current study considers loyalty as a outcome of brand equity. Hence, brand loyalty is observed as a dependent variable for brand equity rather than its component.
The majority of research on brand loyalty gave attention to the high-involvement product category. The consumption period of oral care products is generally short (i.e. less than one month), and the involvement of customers is also low. Previous studies support that product involvement, specifically high product involvement, is an important determinant for brand loyalty (Iwasaki and Havitz, 1998). However, Martin (2004) suggested that even in the low-involvement product category, consumers can have high brand loyalty. Consumer purchases are based on the attributes of these products rather than being merely habitual. Other researchers (Quester and Lin Lim, 2003; Ferreira and Coelho, 2015; Kumar Mishra et al., 2016) have supported Martin’s viewpoint and have empirically investigated the relationship of product involvement and brand loyalty. However, the nature and scope of the relationship remain undetermined and require further investigation.

It was first pointed out in the 1980s that brand equity is positively related to customer satisfaction (Lanza, 2008). The majority of the literature focuses on customers’ postconsumption evaluation, including their behavioural and attitudinal loyalty (Cooil et al., 2007; Hansemann and Albinsson, 2004). However, limited attention has been devoted to the inter-relations among loyalty, brand equity and customer satisfaction. Although the literature suggests that brand loyalty is directly influenced by brand equity, the mediating role of customer satisfaction in the relationship between loyalty and equity has not been analysed by researchers for the low-involvement product category. Despite the significance of the topic and the numerous studies published on loyalty, brand equity and customer satisfaction, there exists a scarcity of studies on the relationship among these three variables.

The study of Lei and Chu (2015) is notable because they illustrated the role of customer satisfaction as a mediator in the relationship between brand loyalty and brand equity for the sports brand industry. They concluded that brand equity has a significant effect on loyalty, which is partially mediated by customer satisfaction. Lei and Chu further indicated that perceived value is most significant and important variable for improving brand equity. The current study contributes to consumer behaviour literature by introducing a parsimonious estimate of brand equity, including the symbolic and functional consumption aspects of brand evaluation through the consideration of lifestyle congruence and brand identification from the model of Nam et al. (2011), and using the perceived quality and perceived value of cost dimensions from Aaker’s (1991) model of brand equity with another dimension, namely trust.

The objective of the current study is to investigate the mediating role of customer satisfaction in the relation between brand loyalty and brand equity and to confirm the significant dimensions of brand equity for the low-involvement product category.

1.1 Criteria for selecting the product category

The Indian oral care sector is one of the fastest-growing fast-moving consumer goods sectors. Products such as toothpaste, mouthwash and toothpowder mainly dominate the Indian oral care market, whereas products such as dental floss and dental rinse are still in their niche stage. Sales in the toothpowder category have declined due to changes in taste and preferences of Indian consumers. The oral care sector provides tremendous potential for penetration because the per capita consumption of oral care products is still quite low. Increases in disposable earnings, the income of the lower middle class, oral hygiene awareness, and the convenience of usage and the achievement of a developed distribution system are expected to inflate the oral sector’s growth rate. Even in rural areas, consumers are switching from various traditional solutions, such as datum (neem twigs), tobacco, salt, and ash, to new and contemporary solutions. The current study attempts to explore the symbolic and functional aspects in an emerging market such as India (Nguyen et al., 2011). Strategies developed in western or mature markets may be unsuitable for emerging markets (Sheth, 2011) because western consumer insights may be inapplicable to developing
countries due to differences in socioeconomic and cultural conditions (Hamzaoui Essoussi and Merunka, 2007). This study attempts to combine traditional dimensions, such as perceived quality and value of cost, with contemporary developments, such as brand trust, brand identification and lifestyle congruence. Such studies on brand loyalty and customer satisfaction have not been published and thus provide an opportunity to address issues relevant for practitioners and academicians.

The oral sector is characterised by frequent sales promotion, close pricing and high-decibel advertising of brands, which increases brand awareness and offers consumers an opportunity to try out different available brands. Consumers can assess and discriminate between brands of oral care and express their loyalty because this product category has been available in the Indian market for decades and most consumers are familiar with the brands in this category. Thus, the oral care category is suitable for the research objective. Moreover, this category comprises both therapeutic and cosmetic brands. Thus, both functional aspects (perceived quality and perceived cost) and symbolic aspects (lifestyle) can be investigated. For instance, Closeup, Colgate and Fresh Gel are positioned as lifestyle brands, with symbolism being the main driver of the brands. On the other hand, Patanjali Ayurveda’s Dant Kanti, Pepsodent, Colgate Visible White and Dabur Red Paste are positioned on the basis of functional benefits.

2. Literature review

2.1 Brand equity

Various researchers have provided different perspectives on brand equity, with most of them being similar to the definition provided by Farquhar (1989), Park and Srinivasan (1994), Baldering and Rubinson (1996) and Aaker (1996) that “brand equity is the value addition done by a brand through customers’ association and perception towards a particular product”. Brand equity is generated from the higher faith that consumers have in a particular brand compared with others. This built-in trust translates into brand loyalty and premium pricing for the brand. Brand equity is the overall utility, including both functional and symbolic utility, associated by the customer with purchase of the brand (Vazquez et al., 2002). Brady et al. (2008) distinguished brand equity from brand loyalty. They indicated that brand equity is a wider concept than brand loyalty because it entails brand familiarity and brand image (i.e. perception regarding quality), whereas brand loyalty is generally associated with the number of repurchases by the consumer. Brand equity encompasses the positive inclination that may or may not translate into purchase. Hence, behavioural intention is the consequence of brand equity rather than a component.

Lehmann and Srinivasan (2014) indicated three viewpoints of brand equity: customer, product market and finance viewpoints. According to customer viewpoint, brand equity represents consumers’ perception and reaction to branded and nonbranded products (i.e. the customer association with the brand). The product market viewpoint reflects brand equity in sales and revenue for a branded product compared with that for an equivalent nonbranded product. Finally, the finance perspective represents brand equity as the net present value of brand-anticipated future purchases.

The current study adopts the customer-based approach because this approach is beneficial for evaluating marketing strategies and positioning the brand, whereas the finance perspective is only limited to brand valuation. Keller (1993) suggested that the source of brand equity is customer perceptions. Therefore, measuring and tracking brand equity at the customer level is a crucial task for managers (Lassar et al., 1995). According to Kim et al. (2008), the consumer perspective is feasible because it offers a strategic perspective of consumer behaviour, which can help marketers in developing suitable strategies. The consumer perspective provides managers with a structured approach for formulating branding strategies.
2.2 Brand loyalty
Brand loyalty is a major topic in consumer behaviour literature. The significance of brand loyalty can be estimated by the fact that this factor is a measure of the business performance, which influences the financial performance of an organisation (Khan, 2013). It brings numerous uncountable benefits, such as substantial entry barriers for competitors, increased market share and sales revenue, increased company’s capacity to react to competitive threats and low sensitivity of customers towards the marketing efforts of a competitor having the potential to cause switching behaviour (Delgado-Ballester and Luis Munuera-Alemán, 2001).

It was previously considered as a subset of repeat purchase behaviour or intention to repurchase the same brand (Cunningham, 1956). This approach was highly criticised by researchers because brand loyalty is not merely repurchase of the brand. Repurchase may occur due to situational factors or lack of brand preference by the customer. Thus, repeat purchase is one of the outcomes but certainly not the determinant of loyalty. Brand loyalty is developed when the consumer becomes an ambassador for the company without any incentive. Marketers should not only be concerned with repurchase but should also focus on the reasons driving repurchase. Furthermore, Dick and Basu (1994) indicated that the behavioural approach is not sufficient for interpreting the drivers behind repeat purchase behaviour.

Broadly, as per literature there are two school of thought measuring brand loyalty: Behavioural and Attitudinal Loyalty. Behavioural approach consists of repurchase of specific brand inspite of situational and marketing efforts of competitors whereas attitudinal loyalty is consumer’s psychological attachment and positive attitude towards the particular brand (Rauyruen and Miller, 2007). It includes positive word of mouth; commitment to brand; recommendation and encouraging others about brand (He et al., 2012). Thus, concluding that brand loyalty is a multi-dimensional approach rather than uni-dimensional (Aurier and Séré de Lanauze, 2012; Curran and Healy, 2014).

2.3 Mediating variable: customer satisfaction
Customer satisfaction has been characterised from numerous viewpoints (Dimitriades, 2006). However, the most broadly acknowledged definition of customer satisfaction in the literature is provided by the expectancy disconfirmation theory (McQuitty et al., 2000), where satisfaction level is defined as a consequence of the difference between the expected and perceived performance (Oliver, 1999). Customer satisfaction may directly and indirectly influence business sustainability, competitiveness and profitability (Gomez et al., 2004; Luo and Homburg, 2007). Satisfied consumers are considered to be less price conscious and less influenced by rivals’ strategies, thus resulting in a broad customer base for a brand (Dimitriades, 2006; Zineldin, 2000). Satisfaction is an affective psychological process rather than only a cognitive process (del Bosque and San Martin, 2008).

Broadly, two kind of satisfaction are described in the literature: transaction-specific and overall satisfaction (Oliver and Westbrook, 1993). The current study uses the measure of overall satisfaction because this measure is a superior indicator of future loyalty as its evaluation is based on all encounters with the manufacturer. Transaction-specific satisfaction is an affective reaction that differs from one experience to another. Hence, this measure may lack stability, whereas overall satisfaction is a superior indicator of the overall brand attitude because this measure is comparatively stable (Auh et al., 2003).

2.4 Perceived quality
Netemeyer et al. (2004) defined perceived quality as the customers’ assessment of the overall supremacy of the brand compared with that of alternative available brands. This measure is subjective in nature due to it being based on customers’ perception regarding quality,
product benefits and need fulfilment. Attributes attached to a brand, such as the cost, physical appearance, features, advertisements and brand name, also influence a purchaser’s perception of quality. Perceived quality forms a selective brand image in consumers’ mind and hence leads to product differentiation (Aaker, 1991). Keller (1993) differentiated quality from perceived quality. He defined quality as actual superiority or excellence over competitors’ brands and perceived quality as consumers’ intangible perceptions of superiority of a product (i.e. their overall feeling regarding the brand). Creating a quality product is only a partial victory. Perception should also be created by marketers.

It is an elemental factor in the brand equity framework due to its association with brand choice, premium price, brand purchase intention and brand loyalty (Keller et al., 2011). Moreover, perceived quality is an important strategic variable that drives the financial performance of an organisation. In the short run, high perception of quality would result in increased profits due to premium pricing whereas in long run, market share and market gain play a critical role in business growth (Bartikowski et al., 2010). In conclusion, perceived quality is a subjective judgements of customers, and future purchase are dependent on the evaluation of previous experiences and feelings.

2.5 Perceived value of cost
According to Tzeng (2011), perceived value as the outcome of assessing the relative value of benefits received and amount sacrificed in relation with purchase. Due to its simple approach, this definition was highly criticised by other researchers for not being multidimensional. Netemeyer et al. (2004) provided a more holistic approach and described perceived cost as customers’ evaluation of rewards obtained from the brand based on the perception of benefits secured (example: quality and satisfaction) and sacrifices incurred (like: price paid and other nonmonetary cost). Consumer behaviour can be better analysed through the perceived value approach because perceived value is a basis for all marketing strategies, like: market segmentation, policy positioning and product differentiation. The value construct can explain various branches of consumer behaviour like brand choice, purchase intention and repeat purchase behaviour. Sirdeshmukh et al. (2002) suggested that consumer perceived value is likely to regulate brand loyalty because perceived value is a superordinate goal, whereas brand loyalty is a subordinate goal. Thus, the value construct supervises behavioural intentions of loyalty till such relational exchange can deliver higher value than other brands can. Value also helps in obtaining competitive advantage in the ever-shrinking product differentiation market.

2.6 Brand identification
Consumers indicate their social identity by connecting to or consuming a particular brand. This leads to integration or dissociation of consumers with a particular class of individuals, who form a social circle. Long and Schiffman (2000) indicated that the consumption of a brand is influenced by customers’ social identity. The relationship of brand identification and brand loyalty was empirically supported by Bhattacharya and Sen (2003). Nam et al. (2011) indicated that customer satisfaction partially mediates the relationship between brand identification and brand loyalty. They stated that strong brand identification leads to high satisfaction. According to the aforementioned perspectives, this study defines brand identification as customers’ perceived association with a particular brand, where the customers regard the brand as an integral part of their life and associate themselves with its successes and failures.

2.7 Brand trust
Trust is logically and experientially an important factor in the relationship between a buyer and seller (Komunda and Osarenkhoe, 2012). Customers who lack trust are unlikely to be
brand-loyal and switch from one brand to another, whereas a trusted brand enjoys increased market share and sales revenue, premium price, increased purchasing power. A few studies have suggested trust to be an intention (Gefen and Straub, 2003), whereas others have suggested it to be a belief (Ganesan, 1994). In their study on the mediating role of values in the relationship between trust and loyalty, Sirdeshmukh et al. (2002) concluded that organisations should primarily focus on competence, benevolence and the problem-solving attitude for building trust with consumers. Despite the importance attached to trust, limited consumer behaviour literature focusses on brand trust (Delgado-Ballester and Luis Munuera-Alemán, 2005). In another study, they further concluded that in the high-involvement product category, brand trust leads to brand loyalty and firms also enjoy premium pricing (Delgado-Ballester and Luis Munuera-Alemán, 2001). They further illustrated that previous favourable brand experience results in brand trust, which positively impacts brand loyalty and equity. The aforementioned findings were also confirmed by Chiou et al. (2002).

2.8 Lifestyle congruence

The lifestyle concept reveals consumers’ daily needs and wants. It also indicates how particular brands help consumers in their pursuit of a particular lifestyle. Moreover, consumers develop a preference for and repurchase a particular brand when its consumption helps them express their uniqueness by pursuing their desired lifestyle (Phau et al., 2015). In a wider sense, lifestyle indicates demographic characteristics, attitudes towards life, beliefs, and aspirations and is an integral component of consumers’ daily life (Brassington and Pettitt, 2003). However, no such widely accepted definition of lifestyle is available in literature. Solomon (2010) broadly defined lifestyle as the degree to which consumption supports individuals’ uniqueness of living, which is influenced by their beliefs, judgements, interests and affairs.

2.9 Summary of literature review

Literature review supported the idea that the perceived quality, perceived value and trust had an impact on satisfaction and loyalty. The former studies concluded to verify the experiences of users of FMCG category and highlighted that:

1. literature supported perceived quality, value of cost as an essential determinant for customer-based brand equity;
2. brand loyalty is the consequence for brand equity rather than being a component;
3. the relation between brand identification, trust and lifestyle congruence with customer’s satisfaction are presenting new perspectives of loyalty concept; and
4. there is strong connection between brand trust and behavioural loyalty in low-involvement product category, which reveals that true loyalty do exist and buyers purchase on the basis of attributes rather than habit.

3. Theoretical model and hypothesis development

3.1 Theoretical model

The objective of the current study is to examine the inter-relationship among customer-based brand equity, customer satisfaction and brand loyalty in the low-involvement product category (oral care sector) with reference to New Delhi and its connecting areas. The various variables considered in the current study are illustrated in Figure 1. A model is first developed without considering the mediating effect of customer satisfaction, followed by inclusion of customer satisfaction for estimating the relationship
among various independent variables that are assumed to construct brand equity, namely perceived quality, perceived value of cost, brand identification, trust and lifestyle congruence with brand loyalty.

3.2 Hypothesis development

3.2.1 Perceived quality and customer satisfaction. Aaker (1991) was the first to establish the relationship between perceived quality and brand equity. Perceived quality influences brand equity by reducing the perceived risk associated with the brand. Previous studies illustrated that perceived quality influences customer satisfaction because perceived quality is the evaluation of a specific belief, whereas satisfaction is a postpurchase concept (Olsen, 2002). Hence, satisfaction is an affective evaluation that can be predicted from the quality belief as a cognitive component of the evaluation. Darsono and Junaedi (2006) supported the view that perceived quality is an antecedent for customer satisfaction and shares a direct and positive relationship with satisfaction. Zeithaml (2000) concluded that a brand with high-quality perception would achieve high satisfaction. Other researchers have also supported this relationship and have concluded perceived quality to be a major antecedent for customer satisfaction. Hence, satisfaction and loyalty are positively influenced when customers perceive high quality and the product meets customers' expectation (Juran and Godfrey, 1999). Therefore, the following hypothesis is proposed:

\[ H1. \] Perceived quality positively influences customer satisfaction.

3.2.2 Perceived value of cost and customer satisfaction. Consumer value is fundamental to all marketing strategies because high value is the primary motivation for repurchase by the customer. Perceived value is directly linked with satisfaction. As the perception of value increases in consumers' mind, satisfaction also increases (Dorai and Varshney, 2012; Vandermerwe, 2003). There is a direct relationship between perceived value and customer satisfaction because both concepts are based on evaluative judgement (Woodruff and Gardial, 1996). There exists a high possibility that customer satisfaction can be an antecedent or a result of perceived value; however, the literature supports the view that satisfaction is a result of perceived value, that is, perceived value significantly influences satisfaction (Cronin et al., 2000). Consumer satisfaction is a postpurchase evaluation which is dependent upon perceived quality and value. Chitty et al. (2007) also supported the direct association between perceived

\[ H2. \] Perceived value of cost positively influences customer satisfaction.

\[ H3. \] Brand identification positively influences customer satisfaction.

\[ H4. \] Trust positively influences customer satisfaction.

\[ H5. \] Lifestyle congruence positively influences customer satisfaction.

\[ H6. \] Customer satisfaction positively influences brand loyalty.
value and customer satisfaction. McDougall and Levesque (2000) concluded that perceived value directly impacts customer satisfaction, which further results in loyalty. Other researchers (Anderson and Mittal, 2000; Theodorakis et al., 2014) have also empirically supported that there exists a significant relationship between perceived value and satisfaction. Therefore, the following hypothesis is proposed:


3.2.3 Brand identification and customer satisfaction. Consumers who identify with a brand feel satisfied when brand expectations are met. The literature supports the view that brand identification encourages emotional attachment, symbolic consumption and brand loyalty. Kim et al. (2001) also indicated that brand identification influences customer satisfaction and loyalty. Shirazi et al. (2013) analysed the inter-relationship among brand identity, brand identification, loyalty, trust and customer satisfaction and concluded that brand identification indirectly influences loyalty through perceived value of cost, trust and satisfaction. Other researchers have also supported the view that brand identification is a determinant for customer satisfaction (Casaló et al., 2010; Pérez and Rodríguez del Bosque, 2015). However, researchers also have another viewpoint regarding the direction of the relationship. After fulfilling self-definitional needs, a satisfied customer is more likely to ascribe positive identity to the target of identification, which further enhances identification (Bhattacharya et al., 1995; Arnett et al., 2003). Other studies have also empirically supported this viewpoint (Kuenzel and Vaux Halliday, 2008). Hence, additional studies are required to enrich literature on the direction of this relationship. This study proposes that high brand identification would result in high customer satisfaction:


3.2.4 Trust and customer satisfaction. Trust is a significant antecedent for customer satisfaction (Chiou and Pan, 2009; Berry, 2000). A customer with high brand trust would have high satisfaction and high willingness to commit. Singh and Sirdeshmukh (2000) concluded that trust directly influences satisfaction, which leads to increased loyalty. Chaudhuri and Holbrook (2001) also supported this conclusion and suggested that trust plays an indispensable role in customer satisfaction which in turn impacts loyalty, and results in increased market share and premium pricing. Other researchers have also empirically supported the existence of a positive relationship between trust and satisfaction (Yoon, 2002). Therefore, the following hypothesis is proposed:


3.2.5 Lifestyle congruence and customer satisfaction. Lifestyle branding is a social scenario in which a customer purchases a brand that correlates with their desired lifestyle. Solomon (2010) suggested that higher the compatibility between the brand image and customers’ personal lifestyle, the higher is the level of customer satisfaction experienced with the brand. He further indicated that marketers should aim to increase satisfaction by creating a brand that identifies with customers’ lifestyles. Nam et al. (2011) postulated that customer satisfaction fully mediates the effect of lifestyle congruence on brand loyalty. Therefore, the study proposes the following hypothesis:

H5. Lifestyle congruence positively influences customer satisfaction.

3.2.6 Customer satisfaction and brand loyalty. Various researchers have supported the viewpoint that loyalty is one of the consequences of customer satisfaction (Delgado-Ballester and Luis Munuera-Alemán, 2001). Previous studies have indicated that increased consumer satisfaction leads to increased attitudinal loyalty (Jones and Suh, 2000;
Rundle-Thiele and Maio Mackay, 2001). Fornell et al. (1996) concluded that enhanced satisfaction significantly influences both attitudinal and behavioural loyalty, that is, a satisfied customer would make repeat purchases and endorse the brand to acquaintances. Hence, high customer satisfaction would lead to increased market share and premium price through attitudinal and behavioural loyalty. Brakus et al. (2009) also concluded that a favourable relationship exists between satisfaction and loyalty. They further illustrated that when a customer feels positive towards and appreciates a particular brand, the level of brand loyalty increases. Behavioural theories, such as the theory of cognitive dissonance and learning theories, also explain satisfaction as an antecedent for loyalty. Other studies have empirically supported that customer satisfaction significantly and directly impacts loyalty (Boenigk and Helmig, 2013; Szymanski and Henard, 2001; Homburg et al., 2009). However, certain researchers have predicted that customer satisfaction may not necessarily result in brand loyalty (Hosseini and Ahmadi Nejad, 2009). Thus, additional studies are required on the relationship between customer satisfaction and brand loyalty. Therefore, the following hypothesis is proposed:

\[ H6. \] Customer satisfaction positively influences brand loyalty.

3.2.7 Mediating effect of customer satisfaction. Murray and Howat (2002) examined the relationship between perceived quality and brand loyalty with customer satisfaction as a mediator. They concluded that satisfaction has a direct and favourable effect on loyalty. Alexandris et al. (2004) also supported the mediating effect of satisfaction in the relationship of perceived quality and loyalty. Chiou et al. (2002) concluded that trust positively influences customer satisfaction, which results in an increased level of loyalty. Perceived value is a significant contributor to consumers’ repurchase intention (Chang and Wildt, 1994). Nguyen et al. (2011) stated that perceived quality and loyalty share a direct and positive relationship. Pappu et al. (2005) concluded that perceived quality is directly associated with loyalty. As per the identification theory, brand identification significantly influences brand loyalty (Bhattacharya and Sen, 2003). Libai et al. (2010) also empirically supported the view that brand identification results in increased brand loyalty. Therefore, we propose the following hypothesis:

\[ H7. \] Consumer satisfaction mediates the effect of consumer-based brand equity dimensions, namely perceived quality, perceived value of cost, brand identification, trust and lifestyle congruence, on brand loyalty.

4. Research methodology
The current research examines the relationship between customer-based brand equity and brand loyalty with customer satisfaction as the mediator. This relationship is examined for the oral care sector with special reference to New Delhi and its adjoining areas. The products considered in this study include toothpaste (various herbal and tooth-whitening pastes), toothpowder, mouthwash and dental floss.

Research boundaries:
- Objective boundaries: mediation by customer satisfaction in the relationship of customer-based brand equity and brand loyalty was studied through five dimensions which were determined as: perceived quality, perceived value, brand identification, trust and lifestyle congruence.
- Spatial boundaries: a sample of oral care customers in New Delhi and connecting areas market.
- Time boundaries: the questionnaire was held in June–September 2018.
4.1 Measurement instrument and questionnaire design

For testing the hypotheses, the theoretical model was analysed through structural equation modelling. A questionnaire was drafted with the help of recognised scales from the literature. Minor modifications were made to the scales to suit the research objective. A five-point Likert scale was used for drafting the questionnaire. Table I presents the measurement instruments used in the current study.

4.2 Data collection and descriptive statistics

For empirical analysis, quantitative design was adopted for this study by using the survey method. The survey method facilitated data collection from large groups of respondents, required minimum investment, could be easily used to make generalisations and allowed numerous variables to be studied (Zikmund et al., 2009).

The target population for the current study was Indian consumers in the National Capital Region who were familiar with the oral care product category and previously made purchase decisions related to it. The sampling unit was an individual consumer. A random sample of 35 consumers was considered for pretesting of the questionnaire. This sample also represented the target consumers for final data collection because the selection criteria for both samples were the same. Some items in the questionnaire were modified according to the

<table>
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<th>Items</th>
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| Brand loyalty (Chaudhuri and Holbrook, 2001; Mols, 1998) | 1. I will purchase my current brand next time I purchase from this product category  
2. I plan to continue purchasing my current brand  
3. I believe the quality of my preferred brand is superior to others  
4. I am willing to pay a higher price for brand regardless of similar quality from competitor  
5. I will prescribe this brand to my acquaintance  
6. When asked about this product category, the name of my brand comes to mind immediately |
| Customer satisfaction (Spreng et al., 1996) | 1. My current brand is as good as I expected  
2. My current brand is worth the price I paid for it  
3. My needs are entirely fulfilled by this brand  
4. My expectations are generally met by this brand |
| Brand trust (Chaudhuri and Holbrook, 2001) | 1. This brand enjoys my trust  
2. I can rely on this brand as it is mainly concerned with consumer’s interest  
3. I consider this brand as honest brand  
4. I consider this brand as safe for consumption |
| Perceived value of cost (Walsh et al., 2014) | 1. My current brand offers attractive cost of product in comparison with alternative options  
2. My current brand charges justly in comparison with similar brand  
3. My current brand delivers me good value for money in comparison with what I paid and might get from other alternative brands |
| Perceived quality (Yoo et al., 2000) | 1. The current brand I use is of consistently high quality  
2. My current brand is likely to have an extremely high  
3. The likelihood of functionality of my current brand is quite high  
4. The likelihood of reliability of my current brand is quite high  
5. My current brand must be of very good quality  
6. My current brand appears to be of very good quality |
| Brand identification (Mael and Ashforth, 1992) | 1. While talking about my current brand I prefer to use “we” rather than they  
2. I would be embarrassed if media criticises my current brand  
3. I felt like a personal insult when others criticise my current brand |
| Lifestyle congruence (Johnson et al., 2006) | 1. My personal lifestyle is reflected by this brand  
2. My lifestyle is in congruence with this brand  
3. My current lifestyle is well supported by this current brand |

Table I. Measurement instruments used in the questionnaire for various variables
inputs received after pretesting. Moreover, the sequence of the questionnaire was changed according to the consumer familiarity with the dimensions considered in the current study. The consumers were more familiar with the aspects of cost and quality compared with other dimensions, such as lifestyle congruence and brand identification. The aim of the selected questionnaire sequence was to proceed from simple to complex aspects for maintaining the interest and attention of the respondents. A total of 300 questionnaires were circulated through convenience sampling method and self-selection via the personal contacts of the researchers. Of the 300 questionnaires, 250 were used for further analysis (response rate of 83.33 per cent). The questionnaire was administered by the field investigator in New Delhi and its adjoining areas. The investigator resolved the queries of the respondents with regard to the statements in the questionnaire and then collected the filled questionnaires. The data were collected during a four-month period from June to September 2018.

The respondents consisted of 55 per cent males and 45 per cent females. The majority of the respondents belonged to the age group of 36–45 years (38 per cent of the total respondents), followed by the age group of 21–35 years (34 per cent of the respondents). Only 9 per cent of the respondents were above 45 years of age, and 19 per cent were 18–21 years of age (Table II). Most of the respondents were working professionals.

4.3 Common method bias
It is advisable to examine the biasness in data before assessing the reliability and validity, i.e., psychometric properties. Herman’s single factor was adopted for measuring biasness as it is broadly accepted for assessing CMB. Exploratory factor analysis was executed for the calculation of CMB, if a single factor accounts for maximum variance then CMB is assumed to exist. Variance explained is 35.817 per cent which is less than the acceptable limit of 50 per cent as suggested by Harman (1976), thus predicting that data are free from any biasness. Confirmatory factor analysis (CFA) on Harman’s Single factor test was also conducted, as it not only provides model fit but also shows discrepancies through \( \chi^2 \) difference in a single factor model and a multi-factor model (Craighead et al., 2011). Model fit indices of the multi-factor model are better in comparison to the single factor model as depicted from Table III; thus, we can conclude absence of CMB in data. Byrne (2013) supported that data are free from biasness if index difference is more than 0.001; thus, concluding data are fit for reliability and validity check.

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<th>Descriptive statistics</th>
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<tr>
<td>Post graduate</td>
<td>36</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
</tbody>
</table>

Table II. Descriptive statistics
5. Analysis and result

Validated tools and procedures were employed for the examination of collected data. Exploratory factor analysis was carried out in SPSS followed by CFA and path analysis for the confirmation of findings, and lastly mediation effect of variables was investigated in AMOS (20) software. The results are depicted below in the following sections.

5.1 Assessment of reliability measure

Each measurement item and construct should be examined for the assessment of reliability (Fornell and Larcker, 1981). Cronbach’s $\alpha$ was used for measuring the reliability of construct as it is a measure for the internal consistency of items (Cronbach, 1951). The obtained values as shown in Table IV are more than the acceptable limit of 0.7 (Nunnally, 1978). Overall, the value for reliability coefficient was observed as 0.931. Reliability of each measurement item is the square of its standardized loading. For the assessment of reliability of construct SMC is used, and values of SMC (Table IV) are higher than the threshold limit of 0.30 (Bagozzi and Yi, 1988). Thus, reliability coefficients for all construct and internal consistency of items were good and appropriate for research purposes.

5.2 Exploratory factor analysis

For examining the appropriateness of data for factor analysis, Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett’s test of sphericity needs to be assessed. KMO is used to check the suitability of data for factor analysis. KMO value is calculated as 0.878, which meets the cut off criterion of 0.60. (Kaiser and Rice, 1974). Bartlett’s test of sphericity indicates the relation between variables. Significant value is calculated as 0.000, which is less than 0.05; hence, the given factors are considered as zero correlated.

Under factor analysis, principal component analysis and varimax rotation in SPSS 20.0, were employed to reveal the close relationship between various items. On the basis of eigenvalues 1 and above, seven factors comprising 29 items were extracted. These seven factors explained around 83 percentage of variance in variables. The communalities extracted were higher than 0.5 indicating appropriateness of data for factor analysis (Stewart, 1981). Mean, standard deviation and squared multiple correlation are also depicted in Table IV below. The underlying structure of the measurement items incorporated in study is confirmed with the help of EFA.

5.3 Confirmatory factor analysis

For assessing the dimensionality and adequacy of the measurement model, CFA was used by using AMOS 20. CFA is applied to all the seven constructs: perceived quality, perceived

<table>
<thead>
<tr>
<th>Indices for model fit</th>
<th>Multi factor</th>
<th>One factor</th>
<th>$\Delta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIN</td>
<td>748.248</td>
<td>4,788.376</td>
<td>4,040.13</td>
</tr>
<tr>
<td>df</td>
<td>356</td>
<td>377</td>
<td>21</td>
</tr>
<tr>
<td>CMIN/df</td>
<td>2.102</td>
<td>12.701</td>
<td>10.599</td>
</tr>
<tr>
<td>AGFI</td>
<td>0.806</td>
<td>0.254</td>
<td>0.552</td>
</tr>
<tr>
<td>GFI</td>
<td>0.841</td>
<td>0.353</td>
<td>0.488</td>
</tr>
<tr>
<td>IFI</td>
<td>0.943</td>
<td>0.362</td>
<td>0.581</td>
</tr>
<tr>
<td>NFI</td>
<td>0.897</td>
<td>0.344</td>
<td>0.554</td>
</tr>
<tr>
<td>CFI</td>
<td>0.943</td>
<td>0.359</td>
<td>0.584</td>
</tr>
<tr>
<td>RMR</td>
<td>0.040</td>
<td>0.207</td>
<td>−0.167</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.067</td>
<td>0.217</td>
<td>−0.15</td>
</tr>
</tbody>
</table>

*Table III. Harman’s single factor test*
value of cost, brand identification, lifestyle congruence, brand loyalty, brand trust and customer satisfaction.

5.3.1 Validity measure. Convergent validity is how many different procedures of evaluating a variable give a similar result, i.e., it measures whether items present in a construct are related or not (John and Benet-Martínez, 2000). Three approaches are present for ensuring convergent validity of data: communalities should be higher than 0.5; value of SMC coefficient should be higher than 0.5 and lastly the value of composite reliability and average variance explained is required to be greater than 0.7 and 0.5, respectively (Hair et al., 2012). As depicted in Table IV each standardized loading was more than 0.5 and thus statistically significant. Adequate convergent validity is represented in data as CR and AVE were above acceptable limits. The value of CR ranges from 0.913 to 0.953, as depicted in Table VI, and AVE was also above the acceptable limit of 0.5, ranging from 0.7 to 0.8.

5.3.2 Discriminant validity. Strong discriminant validity shows that no correlation exists between different factors of the model. It reveals the uniqueness of the factors. Two methods are generally used by researchers for ensuring the discriminant validity of the measurement model: pairwise construct comparison method and comparison of shared variance between factors (Bagozzi and Yi, 1988; Kesharwani and Tiwari, 2011; Fornell and Larcker, 1981).

First method: for seven factors, we compared all 21 possible pairs with their respective \( \chi^2 \) value of full model with the collapsed model. One pair of factor was constrained with one

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Factor loading ( \lambda )</th>
<th>SMC</th>
<th>KMO</th>
<th>( \alpha )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived quality</td>
<td>PQ1</td>
<td>3.99</td>
<td>1.024</td>
<td>0.869</td>
<td>0.755</td>
<td>0.919</td>
<td>0.953</td>
</tr>
<tr>
<td></td>
<td>PQ2</td>
<td>4.00</td>
<td>0.992</td>
<td>0.932</td>
<td>0.869</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PQ3</td>
<td>3.96</td>
<td>1.069</td>
<td>0.868</td>
<td>0.753</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PQ4</td>
<td>4.08</td>
<td>1.067</td>
<td>0.871</td>
<td>0.759</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PQ5</td>
<td>4.02</td>
<td>1.006</td>
<td>0.842</td>
<td>0.708</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PQ6</td>
<td>4.02</td>
<td>0.971</td>
<td>0.887</td>
<td>0.786</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived value of cost</td>
<td>PV1</td>
<td>3.81</td>
<td>1.141</td>
<td>0.912</td>
<td>0.832</td>
<td>0.762</td>
<td>0.925</td>
</tr>
<tr>
<td></td>
<td>PV2</td>
<td>3.74</td>
<td>1.144</td>
<td>0.906</td>
<td>0.821</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PV3</td>
<td>3.79</td>
<td>1.191</td>
<td>0.874</td>
<td>0.764</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand identification</td>
<td>BI1</td>
<td>4.02</td>
<td>1.026</td>
<td>0.924</td>
<td>0.853</td>
<td>0.750</td>
<td>0.912</td>
</tr>
<tr>
<td></td>
<td>BI2</td>
<td>3.91</td>
<td>1.072</td>
<td>0.887</td>
<td>0.787</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BI3</td>
<td>4.10</td>
<td>1.035</td>
<td>0.883</td>
<td>0.694</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand trust</td>
<td>BT1</td>
<td>3.67</td>
<td>1.164</td>
<td>0.954</td>
<td>0.909</td>
<td>0.854</td>
<td>0.945</td>
</tr>
<tr>
<td></td>
<td>BT2</td>
<td>3.42</td>
<td>1.201</td>
<td>0.834</td>
<td>0.695</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BT3</td>
<td>3.74</td>
<td>1.178</td>
<td>0.871</td>
<td>0.759</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BT4</td>
<td>3.71</td>
<td>1.147</td>
<td>0.940</td>
<td>0.884</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifestyle congruence</td>
<td>LSC1</td>
<td>3.67</td>
<td>1.093</td>
<td>0.892</td>
<td>0.796</td>
<td>0.765</td>
<td>0.925</td>
</tr>
<tr>
<td></td>
<td>LSC2</td>
<td>3.83</td>
<td>1.187</td>
<td>0.905</td>
<td>0.819</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LSC3</td>
<td>3.89</td>
<td>1.128</td>
<td>0.895</td>
<td>0.801</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>CS1</td>
<td>3.99</td>
<td>0.925</td>
<td>0.879</td>
<td>0.772</td>
<td>0.856</td>
<td>0.920</td>
</tr>
<tr>
<td></td>
<td>CS2</td>
<td>3.92</td>
<td>0.966</td>
<td>0.878</td>
<td>0.771</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>CS3</td>
<td>3.94</td>
<td>1.039</td>
<td>0.875</td>
<td>0.776</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CS4</td>
<td>3.99</td>
<td>0.955</td>
<td>0.817</td>
<td>0.667</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand loyalty</td>
<td>BL1</td>
<td>3.85</td>
<td>1.091</td>
<td>0.872</td>
<td>0.761</td>
<td>0.918</td>
<td>0.943</td>
</tr>
<tr>
<td></td>
<td>BL2</td>
<td>3.87</td>
<td>0.967</td>
<td>0.855</td>
<td>0.731</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BL3</td>
<td>3.81</td>
<td>1.076</td>
<td>0.864</td>
<td>0.747</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BL4</td>
<td>3.84</td>
<td>0.990</td>
<td>0.825</td>
<td>0.680</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BL5</td>
<td>3.86</td>
<td>1.026</td>
<td>0.875</td>
<td>0.766</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BL6</td>
<td>3.84</td>
<td>1.110</td>
<td>0.857</td>
<td>0.735</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table IV.
Result of factor extraction

Notes: Factor loadings above 0.5 are acceptable (Hair et al., 1995); SMC stands for squared multiple correlation should be above 0.30 (Bagazzi and Yi, 1988); 70 per cent or higher values for Cronbach’s \( \alpha \) are acceptable (Nunnally, 1978); KMO value are greater than acceptable limit of 0.6 (Kim and Mueller, 1978)
correlation in the collapsed model. For ensuring discriminant validity the change in \( \chi^2 \) value should be more than 4 (Kesharwani and Tiwari, 2011). Results of \( \chi^2 \) value change are depicted in Table V below, and hence assuring that free model is a better fit.

Second method: a comparison of correlation among factors with square root of AVE for ensuring discriminant validity was suggested by Fornell and Larcker (1981). The diagonal value (square root of average variance explained) should be greater than non-diagonal values (correlation between construct) (Kesharwani and Tiwari, 2011). Table VI shows that the value of AVE is greater than the maximum shared variance (MSV) for all the latent variables and diagonal values are more than the non-diagonal value, thus ensures discriminant validity for the construct.

Covariances among factors are free to vary covariance between one pair of factor F1 and F2 is constrained to 1 (Figure 2).

<table>
<thead>
<tr>
<th>Constrained path</th>
<th>( \chi^2 )-value</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unconstrained path</td>
<td>748.243 (356)</td>
<td>–</td>
</tr>
<tr>
<td>PQ(\rightarrow)BL</td>
<td>793.699 (357)</td>
<td>45.456</td>
</tr>
<tr>
<td>PQ(\rightarrow)BT</td>
<td>807.608 (357)</td>
<td>59.365</td>
</tr>
<tr>
<td>PQ(\rightarrow)CS</td>
<td>785.755 (357)</td>
<td>37.512</td>
</tr>
<tr>
<td>PQ(\rightarrow)LSC</td>
<td>831.458 (357)</td>
<td>83.215</td>
</tr>
<tr>
<td>PQ(\rightarrow)BI</td>
<td>838.674 (357)</td>
<td>90.431</td>
</tr>
<tr>
<td>PQ(\rightarrow)PV</td>
<td>783.863 (357)</td>
<td>35.62</td>
</tr>
<tr>
<td>BL(\rightarrow)BT</td>
<td>798.811 (357)</td>
<td>50.568</td>
</tr>
<tr>
<td>BL(\rightarrow)CS</td>
<td>794.827 (357)</td>
<td>46.584</td>
</tr>
<tr>
<td>BL(\rightarrow)LSC</td>
<td>802.606 (357)</td>
<td>54.363</td>
</tr>
<tr>
<td>BL(\rightarrow)BI</td>
<td>832.238 (357)</td>
<td>83.995</td>
</tr>
<tr>
<td>BL(\rightarrow)PV</td>
<td>771.329 (357)</td>
<td>23.086</td>
</tr>
<tr>
<td>BT(\rightarrow)CS</td>
<td>786.617 (357)</td>
<td>38.374</td>
</tr>
<tr>
<td>BT(\rightarrow)LSC</td>
<td>783.204 (357)</td>
<td>34.961</td>
</tr>
<tr>
<td>BT(\rightarrow)BI</td>
<td>800.498 (357)</td>
<td>52.255</td>
</tr>
<tr>
<td>BT(\rightarrow)PV</td>
<td>785.313 (357)</td>
<td>37.07</td>
</tr>
<tr>
<td>CS(\rightarrow)LSC</td>
<td>807.850 (357)</td>
<td>59.607</td>
</tr>
<tr>
<td>CS(\rightarrow)BI</td>
<td>827.927 (357)</td>
<td>79.684</td>
</tr>
<tr>
<td>CS(\rightarrow)PV</td>
<td>772.981 (357)</td>
<td>24.738</td>
</tr>
<tr>
<td>LSC(\rightarrow)BI</td>
<td>802.347 (357)</td>
<td>54.104</td>
</tr>
<tr>
<td>LSC(\rightarrow)PV</td>
<td>804.228 (357)</td>
<td>55.985</td>
</tr>
<tr>
<td>BI(\rightarrow)PV</td>
<td>820.850 (357)</td>
<td>72.607</td>
</tr>
</tbody>
</table>

Table V. Discriminant validity (comparison of \( \chi^2 \) difference)

<table>
<thead>
<tr>
<th></th>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
<th>ASV</th>
<th>BI</th>
<th>PQ</th>
<th>BL</th>
<th>BT</th>
<th>CS</th>
<th>LSC</th>
<th>PV</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI</td>
<td>0.913</td>
<td>0.778</td>
<td>0.076</td>
<td>0.033</td>
<td>0.882</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQ</td>
<td>0.953</td>
<td>0.772</td>
<td>0.379</td>
<td>0.147</td>
<td>0.125</td>
<td>0.879</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL</td>
<td>0.944</td>
<td>0.736</td>
<td>0.260</td>
<td>0.129</td>
<td>0.091</td>
<td>0.437</td>
<td>0.858</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BT</td>
<td>0.945</td>
<td>0.812</td>
<td>0.165</td>
<td>0.086</td>
<td>0.218</td>
<td>0.238</td>
<td>0.229</td>
<td>0.901</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>0.921</td>
<td>0.744</td>
<td>0.379</td>
<td>0.203</td>
<td>0.191</td>
<td>0.616</td>
<td>0.436</td>
<td>0.406</td>
<td>0.863</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LSC</td>
<td>0.925</td>
<td>0.805</td>
<td>0.114</td>
<td>0.072</td>
<td>0.275</td>
<td>0.154</td>
<td>0.271</td>
<td>0.337</td>
<td>0.316</td>
<td>0.897</td>
<td></td>
</tr>
<tr>
<td>PV</td>
<td>0.925</td>
<td>0.805</td>
<td>0.348</td>
<td>0.160</td>
<td>0.108</td>
<td>0.466</td>
<td>0.510</td>
<td>0.283</td>
<td>0.590</td>
<td>0.210</td>
<td>0.897</td>
</tr>
</tbody>
</table>

Table VI. Discriminant validity measurement index (Pairwise construct comparison)

Notes: Convergent validity: CR should be above 0.7 (Hair et al., 2012); Convergent validity: AVE should be above 0.5 (Hair et al., 2012); Discriminant validity: MSV should be less than AVE (Fornell and Larcker, 1981); Discriminant validity: diagonal values are more than non-diagonal values (Kesharwani and Tiwari, 2011)
5.4 Overall fit for the model

Model fit indices for measurement and structural model is provided below in Table VII. For measurement model, key model statistics represents that all the latent factor modelled simultaneously, with CMIN ($\sum^2$) = 748.248, Degree of freedom (df) = 356, CMIN/df ($\sum^2$/df) = 2.102, $p < 0.05$, goodness-of-fit indices (GFI, AGFI, NFI, IFI, CFI) and badness of fit measurement indices (RMR, RMSEA, ECVI). The result of the structural model shows CMIN/df ($\sum^2$/df) as 2.817, GFI = 0.830, AGFI = 0.805, RMR = 0.060, RMSEA = 0.069.

Goodness-of-fit measurement indices suggested that there is a high confirmation of uni-dimensionality in the measurement model (Byrne, 2013) whereas badness of fit measurement indices that reflect the discrepancy in model fit. The current study is in congruence with opinion of Schreiber (2008), McDonald and Ho (2002), Boomsma (2000) for the assessment of model fit. Most of the fit indices are met, whereas GFI is closer to the threshold limit. Still, the necessary requirements of above 0.8 are met by all the indices (Baumgartner and Homburg, 1996; Doll et al., 1994).

<table>
<thead>
<tr>
<th>Model fit</th>
<th>Cut off limit</th>
<th>Model statistics (measurement)</th>
<th>Model statistics (structural)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CMIN</td>
<td>–</td>
<td>748.248</td>
<td>1,044.944</td>
</tr>
<tr>
<td>2. df</td>
<td>–</td>
<td>356</td>
<td>371</td>
</tr>
<tr>
<td>3. CMIN/df</td>
<td>$\geq$4.00</td>
<td>2.102</td>
<td>2.817</td>
</tr>
<tr>
<td>4. GFI</td>
<td>$\geq$0.900</td>
<td>0.841</td>
<td>0.830</td>
</tr>
<tr>
<td>5. AGFI</td>
<td>$\geq$0.800</td>
<td>0.806</td>
<td>0.805</td>
</tr>
<tr>
<td>6. NFI</td>
<td>$\geq$0.900</td>
<td>0.897</td>
<td>0.890</td>
</tr>
<tr>
<td>7. IFI</td>
<td>$\geq$0.900</td>
<td>0.943</td>
<td>0.903</td>
</tr>
<tr>
<td>8. CFI</td>
<td>$\geq$0.909</td>
<td>0.943</td>
<td>0.932</td>
</tr>
<tr>
<td>9. RMR</td>
<td>$\leq$0.100</td>
<td>0.040</td>
<td>0.060</td>
</tr>
<tr>
<td>10. RMSEA</td>
<td>$\leq$0.80</td>
<td>0.067</td>
<td>0.069</td>
</tr>
<tr>
<td>11. ECVI</td>
<td>Smaller the better</td>
<td>3.641</td>
<td>3.850</td>
</tr>
</tbody>
</table>

Table VII.

Model fit indices

**Source:** Author’s calculation
5.5 Path coefficient for structural model

The structure model was evaluated using AMOS 20.0 after the estimation of psychometric properties. The results indicated that all hypothesis were found to be significant, except $H3$, as $p$ value is greater than 0.05. Hence, Brand identification had an insignificant relationship with customer satisfaction ($H3: \beta = 0.032, p = 0.399$). One of the reasons for $H3$ insignificance is that the current study pertains to low-involvement category as brand identification with customers gradually builds over a period of time as time in search of alternatives, amount and utilisation period invested by customer is quite low in comparison with high-involvement category. Second, brand identification includes affective attachment to the brands; customers who are highly identified with brand value transaction with brand as more desirable. In low-involvement category, affection with brand may be less as focus is more on functional benefits derived from product. Perceived quality and perceived value of cost share a significant relationship with customer satisfaction. Lifestyle congruence also have a direct relationship with customer satisfaction ($H5: \beta = 0.107; P = 0.005$). Customer satisfaction shares a direct and significant relationship with brand loyalty in low-involvement product category ($\beta = 0.526, p < 0.001$) as shown in Table VII (Table VIII and Figure 3).

5.6 Test of the mediation effect

The approach of Preacher and Hayes (2008) was adopted for testing the mediation hypothesis due to its technical superiority over other methods such as the approach of Baron and Kenny (1986) and the Sobel test (Sobel, 1982). The methods of Baron and Kenny (1986) and Sobel (1982) are based on the tenuous assumption that the indirect effect ($ab[1]$) is normally distributed, which is impossible even when even the variables involved ($a$ and $b$) are normally distributed (Edwards and Lambert, 2007). On the other hand, the process method examines the indirect effect between independent and dependent variables through the bootstrapping technique (Mooney et al., 1993). With the application of bootstrapped confidence intervals (CIs), the problem of non-normal sampling distribution can be avoided (MacKinnon et al., 2004). However, only simple mediation

<table>
<thead>
<tr>
<th>Hypothesised relationship</th>
<th>Path estimate</th>
<th>SE</th>
<th>CR</th>
<th>$p$</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H1$: CS $\leftarrow$ PQ</td>
<td>0.400</td>
<td>0.045</td>
<td>8.957</td>
<td>***</td>
<td>Supported</td>
</tr>
<tr>
<td>$H2$: CS $\leftarrow$ PV</td>
<td>0.282</td>
<td>0.038</td>
<td>7.335</td>
<td>***</td>
<td>Supported</td>
</tr>
<tr>
<td>$H3$: CS $\leftarrow$ BI</td>
<td>0.032</td>
<td>0.038</td>
<td>0.843</td>
<td>0.399</td>
<td>Not Supported</td>
</tr>
<tr>
<td>$H4$: CS $\leftarrow$ BT</td>
<td>0.129</td>
<td>0.033</td>
<td>3.860</td>
<td>***</td>
<td>Supported</td>
</tr>
<tr>
<td>$H5$: CS $\leftarrow$ LSC</td>
<td>0.107</td>
<td>0.038</td>
<td>2.784</td>
<td>0.005</td>
<td>Supported</td>
</tr>
<tr>
<td>$H6$: BL $\leftarrow$ CS</td>
<td>0.526</td>
<td>0.063</td>
<td>8.279</td>
<td>***</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Notes: *$p < 0.10$; **$p < 0.05$; ***$p < 0.001$

Source: Author’s calculation

Table VIII.

Results

Figure 3.

Result
can be tested through this approach. Multiple mediators and multistep mediation must be tested independently, which results in an increased value of the indirect effect coefficients and Type 1 error (Preacher and Hayes, 2008).

Table IX presents the estimates for the total, direct and indirect effects with 95% bias-corrected bootstrapped CIs. For Model 1, customer satisfaction partially mediates the path from perceived value to brand loyalty. This hypothesis is supported by the \( b \) and confidence interval values of the total effect (\( b = 0.5, 95\% \ CI = 0.4, 0.59 \)), direct effect (\( b = 0.38, 95\% \ CI = 0.25, 0.5 \)) and indirect effect (\( b = 0.11, 95\% \ CI = 0.02, 0.22 \)). For Models 2 and 3, customer satisfaction fully mediates the path from lifestyle congruence and brand trust, respectively, to brand loyalty. The effect of other variables becomes insignificant after the inclusion of customer satisfaction. For Model 4, customer satisfaction partially mediates the path from brand perceived quality to brand loyalty, as indicated by the \( b \) and CI values for the total effect (\( b = 0.5, 95\% \ CI = 0.38, 0.62 \)), direct effect (\( b = 0.29, 95\% \ CI = 0.14, 0.45 \)) and indirect effect (\( b = 0.2, 95\% \ CI = 0.08, 0.34 \)).

6. Discussion and conclusion
The aim of the current study is to investigate the mediating effect of customer satisfaction on the relationship between the dimensions of customer-based brand equity and brand loyalty for the low-involvement product category. This topic has not received sufficient attention from researchers. This study concludes that customer satisfaction has a significant and positive effect on brand loyalty. Customer satisfaction fully mediates the path from lifestyle congruence and brand trust to brand loyalty. Furthermore, customer satisfaction partially mediates the path from perceived quality and perceived value to brand loyalty, which indicates the importance of functional benefits for the customer. Finally, brand identification has an insignificant relationship with brand loyalty.

6.1 Theoretical implications
This study provides new insight by developing a parsimonious model on brand equity and brand loyalty for the low-involvement product category by considering customer satisfaction as a mediator. The literature on consumer behaviour is enriched in following ways: coefficient of the relationship between the independent variable and the mediator, and coefficient of the relationship between the mediator and the dependent variable.

First, the current study empirically supports the existence of a relationship among customer-based brand equity, loyalty and customer satisfaction. Although literature supported that brand equity has a positively influences brand loyalty, this hypothesis has not been empirically examined. Second, the current study concludes that perceived quality, perceived value of cost, brand trust and lifestyle congruence have significant and positive effects on customer satisfaction; however, brand identification has insignificant effect. This study also concludes that perceived quality is the most significant factor that influences customer satisfaction, followed by the perceived value of cost. Perceived quality

<table>
<thead>
<tr>
<th>Model 1 (PV→CS→BL)</th>
<th>Model 2 (LSC→CS→BL)</th>
<th>Model 3 (BT→CS→BL)</th>
<th>Model 4 (PQ→CS→BL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total effect</td>
<td>0.5</td>
<td>0.40</td>
<td>0.59</td>
</tr>
<tr>
<td>Direct effect</td>
<td>0.38</td>
<td>0.25</td>
<td>0.5</td>
</tr>
<tr>
<td>Indirect effect</td>
<td>0.11</td>
<td>0.02</td>
<td>0.22</td>
</tr>
</tbody>
</table>

**Notes:** *p < 0.10; **p < 0.05; ***p < 0.001

Source: Author’s calculation
and value of cost indicate the functional consumption aspect and lifestyle congruence indicates the symbolic aspect of brand equity. Furthermore, to retain and satisfy a customer, brand trust also plays a critical role in the low-involvement product category. The relationship between brand trust and customer satisfaction was found to be significant. Brand identification was removed from the model due its insignificant effect. Consumers focus more on quality and value benefits derived rather than personal identification with the brand in low-involvement product category. We conclude that consumers purchase low-involvement products not only on the basis of habit but also due to functional benefits derived from the brand. Third, the current study confirms the mediating effect of customer satisfaction, i.e., customer satisfaction fully mediates the effect of brand trust and lifestyle congruence on brand loyalty. Finally, this study contributes to the existing literature by predicting brand loyalty with the help of customer satisfaction in the low-involvement product category. The conclusions of the current study conform to the findings of Nam et al. (2011), Lei and Chu (2015) and Shen and Luo (2013).

6.2 Managerial implications
Due to the influx of international players and the introduction of new product categories, the oral care sector has turned to be extremely competitive and marketers are moving aggressively to attract customers by offering attractive promotions and services. Consequently, marketers must take necessary steps to satisfy customers for retaining a loyal customer base. First, managers are required to pay more attention to enhance the attached product attributes of the brand and institute uniqueness for differentiating the brand from competitors, thereby enhancing functional utility. As per the current study, in the low-involvement product category, perceived quality and perceived value of cost have a higher influence on customer satisfaction than other dimensions of brand equity do. The relationship of perceived quality and perceived value with brand loyalty is partially mediated by customer satisfaction. In other words, these dimensions still have a significant relationship with brand loyalty even after the mediating effects of customer satisfaction are considered. Thus, a customer focuses more on the functional benefits derived from a brand than the symbolic benefits. Growing awareness regarding the side effects of fluoride has resulted in the introduction of herbal and natural-ingredients-based toothpastes by competitors. Major players are also focusing on advancing oral solutions for consumers. Second, the product involvement category of a brand is an important variable in the measurement of brand equity because the results for the low- and high-involvement product categories may vary considerably. Thus, marketing strategies should be developed according to the product category. The current study proves that customers are not merely habitual buyers. They purchase products according to the attached functional attributes. The higher the perceived value, the higher is the perceived quality and the higher is the price premium, which further increases brand equity. Consumer satisfaction increases as brand equity increases, which eventually leads to increased brand loyalty.

In today’s transparent world, truly ethical behaviour is the prerequisite for success in business as it helps in developing trust among customer. Positioning the brand as trustworthy by offering stronger guarantees would increase brand trust and customer satisfaction, this would positively impact brand loyalty. Thus, it will facilitate customer retention, secured future purchase and encourage recommendation. Managers are required to boost true ethical behaviour that is transmitted to customers and various stakeholders. Under this dimension, brand will become an experience. Finally, the fact that the various dimensions of brand equity share different relationships with brand loyalty may help marketing managers to allocate resources more efficiently and effectively. The results of this study provide important insights to brand managers for justifying the spending of marketing resources on building a loyal customer base.
Overall, it can be deduce that marketers gain consumer’s loyalty only when trust in brand prevails and consumer perceives brand to have exceptional quality and value in comparison with its competitors.

6.3 Development of brand loyalty matrix

The following presented framework (Figure 4) shows two dimensions: brand functional benefit (perceived quality and perceived value of cost) and brand loyalty. Consumers who are characterised as “high” on brand functional benefits and brand loyalty are termed as “true loyal”. These customers are the core and most significant base of purchasers for any company. They perceive that brand provides high quality and value which no other competitor can provide. These customers will stick with the brand even in troubled times. This loyalty should be reinforced with clear communication of benefits and managers should reward these customers via promotional programmes, discounts, innovative sales programmes. Customers who are “high on loyalty” but “low on brand functional benefits” are termed as “Inertia Loyal”. This category perceives that purchase is not a very crucial activity. These customers are not motivated enough to reorganise their decision-making process despite consciously being aware that brand is low on functional benefits. They purchase due to habits, may be internalised brand association or to save time and energy. Thus, for shifting this category to true loyal, managers are required to increase their visibility in inertia loyal group by advocating brand functional benefits, increasing brand trust by advocating brand credibility and recommendation of peers, strengthening the consumer-brand relationship. “Complex” consumers are those who are high on brand functional benefits but low on brand loyalty. These consumers perceive brand to have high functional benefits but purchase less often in comparison with true loyal. Repurchase could be less due to variety seeking behaviour. Thus, managers are required to launch brand variants. “Switchers” are low on both brand loyalty and brand functional benefits. This category is price conscious and consumers may switch frequently due to sales promotions, discounts and other deals offered by competitors.

7. Limitation and future scope

The selection of sample is limited to New Delhi and connecting area. However, to enhance the generalisability of the findings more data can be collected from different regions of India. Study can be replicated in different culture, as findings may provide different outcome. To conclude, a much larger sample and more diverse respondents will help in yielding a more in-depth analysis using method which is both economical and effective. Reverse causality is always a possibility, i.e., the study suggested that brand equity leads to brand loyalty but it is also possible that continuous brand loyalty may also result in brand equity. In terms of the methodology data were collected for only care segment including toothpastes, mouthwash and powder; a wider study including extensive range of the product category can be incorporated for low-involvement segment. Antecedents of perceived quality and value of cost can be further analysed by researchers for a more comprehensive picture.
Note
1. (a) coefficient of the relationship between the independent variable and the mediator; (b) coefficient of the relationship between the mediator and the dependent variable

References


**Further reading**


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