MAPPING CONSUMERS' SENSORY EXPECTATIONS REGARDING SHOPPING MALLS:

A SEMANTIC NETWORK ANALYSIS

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ABSTRACT

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Master Program in Marketing Communication and Public Relations

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Prior research suggests that shopping malls are complex brands that are experienced primarily by individuals through an amalgamation of their senses. As a result, this research attempts to map the semantic meaning of consumers sensory brand experiences at shopping malls. Analysing the experience that consumers have at these multi-faceted locales is necessary for the formulation of effective marketing communication messages that resonate with the target market. This research attempts

to capture the ideas that individuals associate with sensory brand experiences. The empirical section is based on semantic network analysis; a type of social network analysis, where overlapping and co-occurring responses create meaning. The results highlight the sensory stimuli that influence consumers' experiences while also showcasing other elements that impact consumers at shopping malls. The findings of the study correspond to the proposition in the literature that shopping malls are primarily experienced through consumer senses and also provides insights into other important factors, other than sensory, that also play a role.

Keywords: sensory marketing, multi-sensory marketing, experiential marketing, human senses, shopping malls, semantic network analysis, social network analysis

ÖZET

ALIŞVERIŞ MERKEZLERINE İLIŞKIN TÜKETICILERIN DUYUSAL BEKLENTILERININ HARITALANDIRILMASI: BIR ANLAMSAL AĞ ANALIZI

Ahmad, Sama

Pazarlama İletişimi ve Halkla İlişkiler Yüksek Lisans Programı

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Daha önce gerçekleştirilen çalışmalar, alışveriş merkezlerinin, bireylerin öncelikle duyularının bir araya gelmesi ile deneyimledikleri karmaşık markalar olduğunu göstermektedir. Önceki araştırmaların sonucu olarak, bu çalışmada, tüketicilerin alışveriş merkezlerindeki duyusal marka deneyimlerinin semantik anlamının haritalandırılması hedeflenmektedir. Tüketicilerin bu çok yönlü yerlerdeki deneyimini analiz etmek, hedef pazarda karşılık bulan etkili pazarlama iletişimi mesajlarının formüle edilmesi için gereklidir. Bu araştırma, bireylerin duyusal marka deneyimleriyle ilişkilendirdiği nosyonları içermektedir. Çalışmanın ampirik kısmı, birlikte meydana gelen ve birbiriyle örtüşen cevapların bir anlam oluşturduğu bir tür sosyal ağ analizi olan semantik ağ analizine dayanmaktadır. Çalışmanın sonuçları tüketici deneyimini etkileyen duyusal uyaranların altını çizerken, alışveriş merkezlerinde tüketicileri etkileyen diğer unsurları da sergilemektedir. Çalışmaların bulguları, alanyazında yer alan, alışveriş merkezlerinin öncelikle tüketicilerin duyularıyla deneyimlendiği önermesini desteklemekle birlikte tüketici deneyiminde rol alan diğer etkenlere dair içgörüler de sağlamaktadır.

Anahtar Kelimeler: duyusal pazarlama, çoklu duyusal pazarlama, deneyimsel pazarlama, insan duyuları, alışveriş merkezleri, anlamsal ağ analizi, sosyal ağ analizi

Dedicated to my Family

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1.1 Significance of the Study

Commoditization has been highlighted as a critical phenomenon for evolving markets by marketing scholars (Ulaga and Chacour, 2001; Sharma and Sheth, 2004; Olson and Sharma, 2008). Commoditized products are those that do not have any distinct features within the same class offering provided by a rival company (McQuiston, 2004; Kathuria and Gill, 2013). Commoditization normally occurs in competitive and stable industries that offer similar products to a consumer base that is price-sensitive and may easily shift to purchasing from another supplier (Reimann, Schilke and Thomas, 2010). Shopping malls, much like other industries, are affected by commoditization as well. If price is the only distinguishing factor between two malls, it is likely that consumers would then throng to locations that they perceive to provide cheaper products and services (Olson and Sharma, 2008).

Therefore, to combat the challenges posed by commoditization business owners attempted to find unique ways of differentiating their product offerings from those of their competitions' (Michell, King and Reast, 2001). The focus shifted from highlighting product and service attributes to the marketing of experiences since research suggested that consumers find experiences to be memorable (Lindgreen, 2016) and to also strengthen consumer-brand relationships (Khan and Fatma, 2017). A further distinction was observed within the experiential marketing literature that focused specifically on the importance of the sensory dimension of brand experiences (Gilmore and Pine, 2002).

A number of articles and research papers existed containing the theoretical information of sensory brand experiences (Hultén, Broweus and Dijk, 2009; Elder et al., 2010; Hulten, 2012; Lindgreen, 2016). However, self-reported, first-person free association accounts of consumers' sensory experiences that are the primary subjects of these experiences had not yet been recorded, as per the researchers knowledge.

As a result, this research focuses on exploring the self-reported sensory brand experiences that consumers have at shopping malls. Their responses were then analysed using semantic network analysis technique to infer meaning and draw themes that are deemed important by the consumers that visit shopping malls. Semantic networks help extract meanings that consumers give to a brand or company based on the words they use to describe it. They describe their experience within a shopping

mall by talking about what they like in a mall, dislike in it, reasons they shop in it and things they idealize.

CHAPTER 2: LITERATURE REVIEW

2.1 Philosophical Investigation of Human Experiences

Phenomenology, a branch of philosophy, studies human experiences in an attempt to understand the meaning people attribute to the world around them (Russon, 2003). Phenomenology is a historical movement that gained traction in the early 20th century (Giorgi and Giorgi, 2003) and is credited to notable philosophers such as Edmund Husserl, Martin Heidegger, Maurice Merleau-Ponty and Jean-Paul Sartre. In certain instances it is said to focus rather restrictively on sensory experiences of individuals (Maruna and Butler, 2005) even though it is recognized that experiences are more than just sensations; they also include perceptions, linguistics, thoughts, bodily awareness, emotions and desires (Smith, 2018).

Phenomenology studies first-person stories and descriptions of experiences presented by people as a means to understand their own reality and the world around them (Halling, 2008). These experiences, according to philosopher John Dewey (1922), arise when human beings interact with the world around them, primarily, through the use of their five senses. Phenomenology also argues that any given object has two meanings i.e. denotative (word used to refer to the object) and connotative (the experience provided by the object) (Varela, Thompson and Rosch, 2016).

It is noteworthy, that before the conception of phenomenology philosophers made distinctions between the body (sensory processes) and mind (thoughts) (Martin, 2008). With Rene Descartes going as far as writing about his theory of knowledge which stated that human beings are born with an innate knowledge provided to them by a higher power i.e. God (Descartes, 1637). However, Husserl (1964), while considering Descartes a patriarch of phenomenology deviates from this theory by suggesting that reality cannot be studied objectively, since it is subjective in nature i.e. an individuals' reality is based on perceptions that are formed when s/he interacts with the physical world (Husserl, 1970). Phenomenology studies the responses of individuals when exposed to the same situation and elucidates the similarities and differences among them without applying any causal relationship, preconceptions or presuppositions (Biemel and Spiegelberg, 2017). This point is further elaborated by John Russon (2003), by extrapolating that human perception is based on cultural bias and is formed when human beings attempt to organize fragments of their observations into a complete whole.

For the discipline of marketing communications, phenomenology presents an opportunity to study and make use of lived experiences of individuals in a manner that resonates with the consumers on a dual level i.e. body and mind (Wilson, 2012).

2.2 The Experience Economy

In the past, traditional marketing academics and practitioners made a number of assumptions about consumers; they saw consumers as rational, value and benefit-driven entities that indulged in comparison shopping and selected products that fulfilled their practical needs (Holbrook and Hirschman, 1982; Schmitt, 1997; Wiedmann et al., 2018). Experiences, on the other hand, were considered less important and in certain cases, even labelled superficial, inconsequential and insignificant (Schmitt, 1997).

Joseph Pine and James Gilmore (1999, p.97) while discussing experiences wrote:

"as goods and services become commoditized, the experiences created by organizations will matter the most"

Commoditized products are those that do not have any distinct features within the same class offering provided by a rival company (McQuiston, 2004; Kathuria and Gill, 2013). Commoditization normally occurs in competitive and stable industries that offer similar products to a consumer base that is price-sensitive and may easily (without an added cost) shift to purchasing from another supplier (Reimann, Schilke and Thomas, 2010). No company wants to be associated with the word because when commoditization occurs it becomes difficult to differentiate between products and purchasing decisions by consumers are more likely to be based on price than on other attributes of the product and/or service (Andrien, Benoit and Zerrillo, 2015; Mainardes, Soares and Andrade, 2019).

Branding as a strategy is increasingly being adopted by organizations to achieve differentiation between commoditized goods and services (Ward, Goldstine and Light, 1999; Michell, King and Reast, 2001). Companies that are able to provide their customers with rich, compelling and consistent experiences via branding first

identify the factors that consumers place value on and as a result these are the firms that thrive (McQuiston, 2004).

Experiences are responsible for strengthening consumer-brand relationships (Zarantonello and Schmitt, 2010; Khan and Fatma, 2017). According to Schmitt (2010), experiences occur every time consumers encounter, undergo and live through brand-related activities at various consumer-brand touchpoint. The significance of experiences cannot be denied since according to Pine and Gilmore

"commodities are fungible, goods tangible, and services intangible, experiences are memorable" (Pine and Gilmore, 1999, p. 244)

Experiences are also considered to add an emotional element to marketing communications and lead to brand equity (Cleff, Walter and Lin, 2014), which in simple words is the worth of a brand. As a result consumers recall the brand in a favourable manner (Patrick and Adeosun, 2003). These positive recollections are then shared with friends and family resulting, in some cases, an increase in sales revenue as well as consumer loyalty (Luo et al., 2011). Since the more emotional an experience is, the more likely a person is to remember it (Srinivasan and Srivastava, 2010).

2.3 Understanding the Brand Concept

For any given term, word or concept in marketing literature there exist a plethora of definitions. Depending on the perspective, perception or situation in question, the definition alters. For the purpose of this thesis it is imperative to have a basic understanding of the concept of a brand.

A brand has been defined as an identifying name, logo, sign, symbol or design that distinguishes between the products and/or a services of one seller (or a group of sellers) from those of another within the same category (AMA, 1960). This definition remains in line with the literal meaning of the word *brand* that comes from the Norse word *brandr* and means "to burn" and was used by cattle herders to mark their livestock with a hot iron rod as an identifier (Maurya and Mishra, 2012). However, a brand is more than just an identifier or a differentiator and the definition presented by

the American Marketing Association is reductive in nature as it ignores key features of a brand by over simplifying a complex concept (Chernatony and Riley, 1998). For one, this definition focuses only on a company's input activities i.e. the actions performed by the organization to differentiate their product from that of the competition (Crainer, 1995). These actions do not involve an input from the consumers and in fact ignores them entirely. Much like the cattle that are branded. It also implies that consumers are passive receivers of brand stimuli even though, a brand lives in the perception of consumers and brand equity only occurs when the consumers are familiar and aware of the brand and possess strong associations with it (Schmitt and Rogers, 2008).

In order to understand what a brand is, it is just as important to understand what it is not. A brand is not a product or a service. A brand isn't just the packaging or a logo or a colour. A brand is an essence; communicated to consumers through marketing communications and is based on consumer needs, as identified by an organization (Kapferer, 1994; Jeon, 2017). Brands, as a result, live inside the minds of consumers (Kapferer, 2008).

A brand represents a consumers feelings and emotions regarding a product or a service. The stronger these perceived emotional connections are, the stronger the association with the brand is (Hwang and Kandampully, 2012). This means that when a company designs and implements branding activities, it needs to take into account the likes, dislikes, preferences, feelings and emotions of the target demographics.

One attribute of a brand that a number of academics recognize as being important is that a brand is an organizations' most valuable intangible asset (Kapferer, 1994; Chernatony and Riley, 1998; Wood, 2000; Keller and Lehmann, 2006; Aghekyan-Simonian et al., 2012; Maurya and Mishra, 2012; Jeon, 2017). An intangible asset is an economic resource owned by a company that does not have a physical form (Barone, 2021). This reiterates an aforementioned point, that brands live inside the minds of people that come in contact with them and are only as cherished as the value attributed to them by consumers.

An unanimous agreement by practitioners and academics for the definition of a brand has not been put forth in marketing literature since it is argued that a single

definition cannot fully incorporate the various elements and features of a brand (Kapferer, 2008; Maurya and Mishra, 2012; Andrien, Benoit and Zerrillo, 2015).

Leslie Chernatony and Francesca Riley (1998), conducted a content analysis of over a hundred academic articles that contained the definition of "brand" and generated themes that effectively highlight the essential elements a brand possesses. These themes, according to them, highlight the main features of a brand and are as follows; a brand is a legal instrument that indicates ownership via a trade-mark. Since companies invest money they attempt to seek proprietorship of the product design and name so that they can protect their products and services from imitators. A brand is distinguishable from its competition through its logo, colours, shapes, typefaces etc. A brand also provides instant recognition of a company's corporate identity and gives the business an advantage by lending their products instant credibility by borrowing the equity accrued by the corporate name (Delvecchio, 2000; Park and Stoel, 2005; Aghekyan-Simonian et al., 2012). For instance, the products by Nestle like Cerelac, Milo or Milkpak immediately give the product an advantage because of the corporate name attached.

Furthermore, consumers these days are hard pressed for time and when they set out to purchase an item they often select a familiar brand that they perceive to be reliable and of a higher quality (Berg and Gornitzka, 2012). The brand name serves as a type of shorthand that triggers consumers memories and results in faster purchase decisions (Chittagong, Ph and Stefan, 2010). As a result of the brand name, consumers perceive a lower risk attached with the purchase they make. This is how a reliable brand name lends the product or services dependability and people feel more at ease while making a purchase (Nowlis, 1995; Millman, 2011; Liu et al., 2017). For example, new products launched by Nike, Puma, Proctor and Gamble and Unilever possess a distinct advantage over lesser known brands.

The market has become flooded with products and services (Reimann, Schilke and Thomas, 2010). There are hundreds of shoes and clothing manufacturers, hotel chains, watch makers, estate agents, beauty salons, law firms and sports goods makers to choose from when a consumer sets out to shop. Furthermore, with the pervasiveness of information technology, global delivery services and online shopping websites, the possibilities of shopping are endless thus resulting in consumers experiencing an

overload of choices (Schwartz, 2004; Berg, 2007; Berg and Gornitzka, 2012). Therefore, it is important for companies to build strong brands that shine through the clutter (Aaker, 1996; Kotler and Armstrong, 2016; Putra, Sudarmiatin and Suharto, 2018).

One way for companies to achieve differentiation in this chaotic shopping environment is by focusing on the experiences customers have with the brand (Schmitt, 1997). Consumers are actively searching for brands that reflect their lifestyle and aspirations therefore, brands that are able to successfully provide experiences that are in leu with a consumers self-image and identity are then rewarded with consumer loyalty, higher profit margins and an increased share of spending (Smith and Wheeler, 2002).

2.4 Brand Experience

Brand experience is about building lasting, meaningful and memorable relationships between a brand and its consumers. A brand experience is important because it builds and strengthens the relationship between a company and the consumers at every contact and interaction point (Shaw and Ivens, 2002; Iglesias, Singh and Batista-Foguet, 2011; Meyer and Schwager, 2011). Companies design experiences that arouse sensations, emotions and cognitions within their target market resulting in loyalty and satisfaction from their consumers (Schmitt, 2003; Deming, 2007).

Gentile et al., (2007, p. 397) define brand experience as:

"experience (that) originates from a set of interactions between a customer and a product, a company, or part of its organization, which provoke a reaction. This experience is strictly personal and implies the customer's involvement at different levels (rational, emotional, sensorial, physical and spiritual)"

Brand experience has also been defined as:

"subjective, internal consumer responses (sensations, feelings and cognitions) and behavioural responses evoked by brand-related stimuli that are part of a

brand's design and identity, packaging, communications and environments" (Brakus, Schmitt and Zarantonello, 2009, p. 53)

Brand experiences are an amalgamation of functional and emotional consumer needs provided by organizations and sought after by consumers (Chernatony, McDonald and Wallace, 2011). Research suggests that consumers no longer look for just goods and services, they are now interested in purchasing the entire experience (Ekström and Brembeck, 2020).

Consumers, these days, take functional features, benefits, quality and good brand image for granted. They expect these features when they encounter a brand. That is the reason why they now demand experiences that,

"dazzle their senses, touch their hearts, and stimulate their minds. They want products, communications, and campaigns that they can relate to and that they can incorporate into their lifestyles" (Schmitt, 1999, p. 57)

Consumers have an experience when they come in contact with a brand, this experience might be positive, negative or neutral and the onus of making this experience positive is on the organization (Cleff, Walter and Lin, 2014). Since consumers experience the world around them, primarily, through their senses, Haeckel et al., (2003) propose that the experience crafted by brands is more likely to be memorable if it is reliant on strategies that engage the five senses. This point was also earlier highlighted by Pine and Gilmore (1999, p. 104) when they stated:

"the more senses an experience engages, the more effective and memorable it can be"

2.5 Brand Experience Dimensions

As discussed earlier, brand experience occurs when consumers interact with a brand either directly or indirectly. This experience is guided by the emotional, intellectual, behavioural or sensorial responses and reactions evoked in the consumers when they come in contact with brand-related stimuli (Nysveen, Pedersen and Skard, 2013).

Holbrook and Hirschman (1982) focused on hedonic consumption and proposed pleasure and enjoyment as dimensions of brand experience. Holt (1995), divided consumption experiences as cognitive and emotional. Aaker (1997), highlighted sensations, cognitions and behavioural responses as dimensions of experience. Whereas Pine and Gilmore (1999), provided a detailed review of the entire experience economy as they deemed experiences to be economic offerings that differentiated them from good and services. The following dimensions of brand experience were presented by them; emotional, mental, spiritual and physical.

Schmitt (1999, p. 63), through his research presented sense, feel, think, act and relate as dimensions of brand experience. Brakus et al., (2014, p. 54), identified similar dimensions to Bernd Schmitt and proposed sensory, affective, emotional, behavioural and social as dimensions of brand experience.

Brand experiences are difficult to define and even harder to measure, as they consist of multiple measures and are individualistic in nature (Chernatony, McDonald and Wallace, 2011). For example, two people might walk into the same movie theatre, watch the same movie, eat the same popcorn but while recalling their experience they might have a completely different interpretation of the series of events.

The sensory and affective dimension of brand experience has been identified by researchers as a dominant means by which consumers experience and form an emotional connection to a brand (Cleff, Walter and Lin, 2014). Thus making it memorable and distinguishing it from the competition (Patrick and Adeosun, 2003). Furthermore, the human senses are considered to be the building blocks on which sensory experiences are created and they play a crucial role in forging emotional connections between a brand and its customers (Schmitt, 2003; Krishna, 2012a).

The human senses are at the core of a firm's marketing activities and influence the creation and delivery of sensory experiences. This enables a firm to express its brand identity and values at an individual level by influencing an individual's final purchase and consumption experience (Hultén, Broweus and Dijk, 2009).

Even though there is clear evidence available that the five senses play a vital role influencing human behaviour they have been largely ignored in marketing literature (Hultén, Broweus and Dijk, 2009).

2.6 Sensory Brand Experiences and Marketing

Marketing professionals can no longer apply one campaign for their products and services since the market has now split into smaller segments and each segment has its' own unique qualities and attributes, likes, dislikes, needs, wants and identities (Thomas, 2007; Tedlow and Jones, 2014). As a result, the manner in which companies communicate with their target market has also had to evolve. A shift has been observed in marketing from mass marketing techniques to sensory marketing ones (Hussain, 2019). Furthermore, consumers are increasingly becoming immune to the mass messages that are broadcast to them and it has been suggested that sensory marketing is the future (Gilmore and Pine, 2002).

Before delving into the definition of sensory marketing, it is important to point out that sensory marketing is also referred to as brand sense, sense marketing and multi-sensory marketing by some scholars (Hulten, Broweus and Dijk, 2009; Elder et al., 2010; Linstrom, 2010). However, it is one in the same thing i.e. marketing aimed at stimulating the five senses. For the sake of uniformity and to avoid confusion only the term sensory marketing will be used hence forth.

Sensory marketing finds its' roots in human experiences and is defined by Krishna (2012a, p. 332), as:

"marketing that engages the consumers' senses and affects their perception, judgement and behaviour"

Hulten (2020, p. 19) defines sensory marketing as:

"a firms service process that focuses on sensory strategies with appropriate sensory cues/stimuli with the goal of creating multi-sensory brand experiences, in supporting the individuals identity creation through the five senses to generate consumer value, consumer experiences, and the brand as an image"

Individuals use their five senses of vision, smell, sound, taste and touch to perceive and experience their environment and the world around them on a daily basis (Achrol and Kotler, 2012). As a result the five senses facilitate marketeers in creating individualized and personal sensory brand experiences for goods, services, brands and even physical or digital service environments (Petit, Velasco and Spence, 2019). Sensory marketing is seen as a means for providing new opportunities in tackling individual needs, wants and desires on a much more personal level than before (Nadanyiova, Kliestikova and Kolencik, 2018). It allows companies to connect with a persons' body and mind to create strong emotional, behavioural and cognitive connections. Thus providing companies with an innovative way to deliver and create value (Hulten, 2020).

The consumer landscape has changed and consumers these days are informed, active, networked and empowered (Prahalad and Ramaswamy, 2004) therefore firms no longer have the freedom to design products/services, craft marketing messages and control sales channels without input from the target market (Dellaert, 2019). Traditionally the flow of information was one-way i.e. from the company to the consumer because the objective of the message was to 'persuade' (Janamian, Crossland and Wells, 2016). The consumers were considered outsiders while value was created inside the firm by the activities designed by the firm (Schau, Muñiz and Arnould, 2009). However, things have changed due to technological advancement (Schultz and Schultz, 1998). Through social media, companies are now in the unique position of receiving input from their consumers directly and immediately (Cole et al., 2011).

It is noteworthy, that the human senses and their impact on consumer experience have been studied in isolation in the past (Driver and Spence, 2000). However, there are few studies on the interplay between these senses and some academics have strongly proposed that the interaction between the senses needs to be explored so that their impact on customer perception, preferences and attitudes may be studied (Elder et al., 2010; Helmefalk and Hultén, 2017).

The sensory brand experience is created by firms through visual, auditory, tactile, gustative, and olfactory (sight, sound, touch, taste and smell) stimulations and result in enhancing brand identity and brand image (Zarantonello and Schmitt, 2010).

According to Hulten (Hultén, 2011), scant research exists on the role played by sensory experiences in the customers' value creation process and the formation of a brand image as a result. He emphasizes the need for implementing multi-sensory marketing techniques by utilizing the five senses in creating experiences thus building value for customers by creating memorable experiences and building a brand image.

Furthermore, marketeers are attempting to tap into the power of the senses to trigger memories and cause an emotional response in consumers in order to differentiate their products or services from the competition (Linstrom, 2010).

Sensory marketing is concerned with the way a firm treats its customer and the manner in which it interacts with an individual in a personalized manner through conversation, interaction, communication and technology and is a departure from the traditional mass marketing and relationship marketing techniques previously applied (Hultén, Broweus and Dijk, 2009). Through sensory marketing firms provide customers with sensory experiences; their aim is to be enjoyable, exciting, satisfying and pleasurable. Therefore, an understanding of the five senses is critical as they influence the consumption process which impacts consumer behaviour and decision making processes (Hussain, 2019). For instance, if a firm is able to provide a pleasurable sensory experience then consumers are more likely to remain in the environment for a longer period of time while also being able to differentiate one brand from another (Puccinelli, Grewal and Roggeveen, 2014).

2.6.1. Sense of Sight

The sense of sight is considered to be the most seductive of our senses, often influencing individuals beyond logic and also has the power to impact other senses like the sense of taste, smell, sound and touch (Linstrom, 2010).

If we look at the food test performed by Dr H. A. Roth (1988), the significance of the impact the sense of sight has on taste perception becomes clear. According to Dr. Roth, the colour of food items plays a role in identifying the degree of flavour of a food item i.e. degree of sweetness in this instance. In the experiment, participants were presented with five yellow drinks (shade of yellow varied dark to light) containing the lemon flavour and five green (shade of green varied dark to light) drinks containing the lime flavour , the amount of sucrose added to each of these

remained the same, the only variable was the concentration of the food colouring added; the intensity of the green or yellow colour . The results of the experiment showed that participants attributed more sweetness to the drink when the colour intensity was higher that is to say that participants attributed more sweetness to the drinks that were darker.

A similar experiment conducted by DuBose et al. (1980), revealed that participants were better able to identify the flavour of a beverage if the colour matched their perceptions. For example, the participants were correctly able to identify that a beverage was orange flavoured if the colour of the drink was also orange. However, when presented with a cherry-flavoured orange-coloured drink, a number of participants misidentified the flavour . Same was true for an orange-coloured cherry-flavoured drink (Herz, 2017).

Similarly, Spence et al. (2012), demonstrate through their research that various shapes, colours and sizes of tableware (glasses, plates, bowls, bottles etc.) have an impact on consumers of the food item. For example, when the plate that they are eating from was white consumers perceived the taste of the food item to be stronger than when it was served on a black plate.

The colours of items also influences whether or not consumers will make the decision to purchase it. There is an expectation among consumers that the more intensely coloured an item is then it is likely to be more intensely flavoured too and this directly impacts their buying decisions (Spence, 2016).

According to Hulten et al. (2009) almost two-thirds of human sense receptors are located in the eyes. This means that individuals rely heavily on sensorial cues to make sense of the objects around them.

2.6.2 Visual Marketing

Visual marketing is the use of commercial and non-commercial visual signs and symbols by a company to communicate messages and experiences to its consumers. Consumers are exposed to four types of visual content; explicit, implicit, point-of-sale and commercial. Explicit content is in the form of advertisements in newspapers, magazines, television and billboards while the implicit content is

available in the form of product packaging. Point-of-purchase stimuli is in the form of store displays, retail assistant uniforms and brochures while commercial stimuli is present as road signs and on the side of cars (Wedel and Pieters, 2008).

The importance of visual content may be understood by the fact that human beings process 90% of their surroundings through visual receptors and even written language finds its roots in pictures, hieroglyphs, icons and symbols (Manic, 2015). Furthermore, research shows that 40% of the population responds better to visual information rather than written text (Pavel, 2014)

Visual stimuli also play an important role in consumer decision making and this has been clearly demonstrated by the experiment carried out by McClure et al. (2004), when they attempted to address the Coke vs. Pepsi debate using neural imaging techniques. The objective of the experiment was to determine the impact cultural messages combined with content, shapes perceptions and the extent to which it impacts preferences for a certain sugary drink. The results showed that individuals identified and misidentified both coke and Pepsi in blind tests after tasting each. However, in the experiment that they were provided with visual cues i.e. Coke logo and Pepsi logo then that dramatically affected their responses i.e. the majority of individuals chose Coke over Pepsi. This experiments clearly illustrates the impact of visual brand stimuli on consumer preferences and decision making.

2.6.3 Sense of Sound

Similar to the sense of sight, the sense of sound also has a profound effect on emotions and behaviours. Sound has the power to induce powerful emotions within individuals and is known to influence mood (Linstrom, 2010).

Hulten (2020), identifies three type of sounds that individuals come in contact with in their environment; ambient sounds, voice and music. Ambient sounds are ones that emanate from animals, machines and birds. Ambient sounds are not linked to humans or instruments. Voice originates from a person, it could be a company spokesperson, brand ambassador or the customer services. Voices are used by brands on a regular basis and relate directly to the brand experience. Lastly, music relates to songs, instruments and jingles. It allows consumers to easily remember and recall a

product or service. The type of music also lends to the identity of the brand as well as the individuals that prefer it.

Krishna (2012a), discusses sound symbolism, language, music in advertising, ambient music and voice as types of sounds that consumers come in contact with. Sound symbolism is linked to the image conjured in an individuals' mind when they hear a certain sound or hear the name of a certain object. Language has also been explored at length by researchers interested in studying the role it plays for bilingual cultures. In a study conducted in India, a former British Colony, results showed that the English language is associated with modernism, sophistication, upper classes and pluralism. Whereas, the local Hindi Language is linked with the sense of belonging, closeness, family and friendliness (Krishna and Ahluwalia, 2008). Furthermore, the research states that since the meaning of the messages in both languages studied was the same, then the 'sound' of the language was the variable that resulted in a different behavioural and/or emotional response from the participants (Krishna, 2012a). Ambient music according to Krishna (Krishna, 2012b), is the background music that can be heard in retail outlets, restaurants, art galleries, banks, shopping malls etc. This type of music is said to influence consumers moods, time spent at an outlet as well as their actual spending.

Research has also shown that individuals retain more information from what they hear a message more so than information they receive from other senses because sound is processed in the amygdala; a part of the human limbic system responsible for managing emotions (Elias, 2010).

2.6.4. Auditory Marketing

Sound affects mood and behaviour. Results on the effects of sound on buying behaviour showed that when a restaurant that contained a wine cellar played classical music, consumers bought expensive wine as compared to when pop music was played (Areni and Kim, 1993). In a similar study on the impact of music on consumer purchasing decision for wine purchase, it was observed that playing music from France and Germany at a wine shop resulted in purchase of wines from the respective country (Hulten, 2020).

In addition to affecting consumer purchasing decisions, music also has a notable impact on consumer behaviour (Andersson et al., 2012). A study conducted in a restaurant to study the effect of music on consumer perception about the quality of service and wait time showed that when consumers found the music to be pleasant then their behaviours were impacted positively. For example, when the played music was perceived as good, then consumers had positive emotions regarding the waiting time and the quality of the service they received. However, when they did not like the music, waiting for their food resulted in negative emotions and they also had a negative impact on the perceived service quality. Furthermore, their overall behavioural approach to the organization was also affected accordingly (Hui, Dube and Chebat, 1997).

Sounds may also be used to attract customers to the store or restaurant and also affect the amount of time they spend at a location (Vida, Obadia and Kunz, 2007). That is why it is interesting to note that certain sounds may have the opposite effect as well. For example, a branch of McDonalds in Australia played classical music on loud speakers situated outside. It was observed, as a result, that young people no longer gathered outside that branch since they found the music to be repulsive (Nolan, 2013).

Sound is also known to have a considerable impact on a consumers attention, the atmosphere within a retail environment or hotel and the overall theme that the firm is trying to emulate (Hultén, 2011). Another example of a successful sound marketing strategy is that of Unilever Pakistan. Wall's ice cream is a sub-brand of Unilever and directly sells ice cream and frozen desserts to households. A salesperson wearing company uniform visits neighbourhoods on a specially designed bicycle that is fitted with a freezer. The bicycle is also fitted with a loud speaker that plays the Wall's ice cream music and can be heard by the neighbourhood children over long distances. The music has remained the same and instantly informs consumers that the ice cream is available at their doorsteps. The music that is played is the signature sound of Wall's ice cream.

2.6.5 Sense of Smell

The sense of smell is crucial for the survival of most living things, it alerts animals in the wild about food sources, cautions them regarding a predator (Takahashi

et al., 2005), it warns human beings about possible dangers in the environment (Li, 2014) like fire (going as far as to identify the type of fire) and it also plays an important role in the selection of a sexual partner (Croy, Bojanowski and Hummel, 2013). These functions are critical for survival. Furthermore, the sense of smell has an impact on memory, emotions and behaviours (Willander and Larsson, 2006). For example, areas associated with the smell of food are remembered so that they may be visited in the future whereas areas that smell of predators are avoided (Brown, 2007).

Most importantly the sense of smell plays a role in emotions, memory and learning (Krishna, 2012a). In order to fully understand the role played by the sense of smell in emotions and memory, it is important to look at the limbic system. The limbic system contains structures inside the brain that are responsible for emotions and memory (Catani, Dell'Acqua and Schotten, 2013). The olfactory system, is located within the limbic system, along with the amygdala and hippocampus (Herz and Engen, 1996). The amygdala is responsible for emotions and emotional memory (Hermans et al., 2014) and so is the hippocampus (Eichenbaum et al., 1996). This close proximity of the olfactory system to the limbic system is what results in memories linked with smell to last longer in the minds of individuals than memories associated with other senses.

2.6.6 Olfactory Marketing

According to Krishna, Lwin and Morrin, (2010) research on the link between the sense of smell and memory is limited and the instances that such research does exist, it focuses more on the role the sense of smell plays on product evaluation and ambient scents than actual product scent, to address this gap a set of experiments were carried out. The results of which showed that when consumers were given scented products they were able to recall more information about the product up to two weeks later, than when the product given was unscented.

Compared to other senses, the sense of smell is extremely hard to ignore as people can close their eyes, cover their ears, refuse to taste or touch something but they cannot stop breathing; individuals smell with every breath they take (Linstrom, 2010). Furthermore, human beings have over a 1000 scent receptors in the brain compared to only four for sight (Buck and Axel, 1992). Certain scents are also known to influence

moods either negatively or positively. For most individuals, pleasant scents are associated with emotions such as happiness, love, joy and freedom whereas, negative scents are associated with loneliness, anger, pain and sadness (Chebat and Michon, 2003).

It is also important to note that culture and geography impacts a the sense of smell heavily as well, as far as interpreting what is pleasant or unpleasant is concerned (MacPhee, 1992). An example of this is the smell of beer, for cultures that enjoy consuming alcohol the smell induces positive emotions but the smell of alcohol for Muslim societies is considered unpleasant (Lwin and Wijaya, 2010). Same is true for cheese, in Europe the smell of certain types of cheese is perceived as good whereas the same cheese when smelled by South Asians induces feelings of disgust (Hultén, 2017).

Pleasant smells are also credited with improving performance in employees, greater levels of creativity, goal setting and problem solving abilities (Kapustova et al., 2018). It has also been observed that certain smells like cinnamon and peppermint result in employees being more alert and reporting lower levels of fatigue during their work shifts (Raudenbush et al., 2009; Berčík, Paluchová and Hambalková, 2019).

During one experiment, aroma massage therapy accompanied by soothing music, was given to emergency room nurses in order to assess its impact on their stress and anxiety levels. Results showed that the practice significantly reduced anxiety and stress among the nurses. Furthermore, the experiment concluded that the practice of aromatherapy elevates stress and anxiety while also improving a persons' mood (Cooke et al., 2007).

An example of a successful scent marketing campaign is one implemented by Dunkin Donuts South Korea which resulted in a 16% increase in coffee and donut sales. The Dunkin Donuts jingle was played on city buses. While the jingle played in the background devices that looked like air fresheners released the scent of freshly brewed coffee. The bus then conveniently stopped at a bus stop close to a Dunkin Donuts store (Tam, 2012).

2.6.7 Sense of Taste

Human beings have the ability to distinguish between five kinds of tastes; sweet, bitter, salty, sour and umami (Boughter and Munger, 2013). According to Breslin (2013), sweet flavour is experienced through simple carbohydrates, foods rich in amino acids are experienced as umami, sodium content in food tastes salty, acids are considered sour and toxic compounds are experienced as bitter. However, some scholars argue that metallic and fatty acid taste should be added to the list, while others argue that there are close to 25 different tastes (Spence, 2013).

A further distinction exists between flavour (perception) and taste since the former arises as a combination of sensory input from other senses like smell (olfaction), taste (gustation) and touch (haptic) while the latter refers specifically to the taste cells (taste buds) in the mouth (Smith and Margolskee, 2001).

Furthermore, the sense of taste is influenced heavily by the culture and environment that an individual grows up in (Hultén, 2017), thus encouraging international fast food chains like McDonalds to offer additional menu items catering to the local tastes such as the vegetarian Maharaja Mac for India (Dash, 2005), cold yoghurt beverages in Turkey, beer and croissants in Germany, teriyaki burger in Japan, salmon sandwiches in Norway and pasta in Italy (Vignali, 2001). The taste of food is also said to be influenced by the context that it is consumed in. For example, research suggests that the same bottle of wine is rated lower in flavour quality when the label suggests that it was produced in North Dakota as opposed to California (Wansink, Payne and North, 2007).

From an evolutionary perspective the sense of taste is considered to be the primary driving force behind human eating choices (Breslin, 2013). This means that human beings have been able to distinguish between nutritious food and harmful foods based on the way they taste and this triggers essential behaviours that result in either the acceptance or the rejection of the food source (Yarmolinsky, Zuker and Ryba, 2009).

Flavour, as mentioned above, is considered to be influenced by other senses (Krishna and Elder, 2010), which means that the sense of touch, smell, sight and sound

play a role in human sensitivities about how good or bad the food tastes. To illustrate this point an experiment conducted on consumers while they consumed food accompanied by auditory and visual stimuli of a positive valence found that the food was rated as tasting better than when stimuli of a negative valence accompanied the food consumption experience (Velasco et al., 2014; Wang and Spence, 2018).

In an another experiment participants were exposed to low concentration of cherry aroma and asked if they could identify the smell, they were unable to do so and replied that they could not smell anything. However, when a sweet taste was introduced to their palette, with the same low concentration of a cherry aroma, they immediately replied that they smelled cherry (Dalton et al., 2000). It has also been suggested that without cues from other human senses, people find it difficult to distinguish between food items for example, differentiating between an apple and a potato is difficult, as is the difference in taste between red wine and coffee (Herz, 2017).

Experiments conducted on the impact visual and auditory stimuli have on a products' taste expectation suggests that when participants were presented with packaging that had a rounded shape and typeface and was accompanied by a low-pitched sound, they expected the product to taste sweet (Velasco et al., 2014). Similarly, angular typeface on packaging, high pitched sounds and sharper speech accompanying products were associated with a sour taste (Wang and Spence, 2018).

It is important to note that human beings never taste food in isolation from the other senses, unless it is a controlled laboratory environment, therefore, it is the complete multi-sensory experience that influences a persons' taste perception (Spence, 2013).

2.6.8 Gustative Marketing

According to the Oxford Learner's Dictionary (2021), gustatory means:

"concerned with tasting or the sense of taste"

Therefore, gustatory marketing involves communications designed for the sense of taste. A considerable amount of research from the 21st century on gustative

marketing is devoted either to studying the influence marketing communication messages have on the eating habits of children, adolescents and adults that result in obesity (Linn, 2004; Seiders and Petty, 2004; Kraak, Gootman and McGinnis, 2006; Nestle, 2006; Harris et al., 2009; Scully et al., 2012; Smith et al., 2019) or about strategies to apply to make healthy food options more appealing for obese consumers (Shill et al., 2012; Chan, Kwortnik and Wansink, 2017; Samoggia, Bertazzoli and Ruggeri, 2019; Folkvord and Hermans, 2020).

However, it is important to note that despite the various health concerns highlighted by government bodies regarding the negative effects of gustatory marketing (Grier and Kumanyika, 2010; Harris and Graff, 2011), the fact that eating has been identified as the single most economically important activity among human beings (Rozin and Hormez, 2010) may not be ignored. Food manufacturers are profit driven and feel pressured into providing and marketing food that is being demanded by consumers which is often high in sugar, fats and salts (Cornwell and McAlister, 2011). Furthermore, the demand for healthy food products is not enough to warrant a change in production and marketing of such items (Grant, 2006). On the other hand, marketeers argue that the food preference of children and adolescents depends heavily on the food choices made by the adults they come in contact with (Addessi et al., 2005; Koplan et al., 2007) therefore, in such situations marketing alone does not play a role in food preferences of children instead their exposure to such food items at a young age is the determining factor (Harris, 2008).

The debate regarding the merits and demerits of gustatory marketing aside it is undeniable that food plays an important role in an individuals' life and is even considered a universal human activity that is just as important as language (Parasecoli, 2014) with Levi Strauss (2008), going as far as stating that no society exists without a language or food consumption.

While designing marketing communication messages for food items, practitioners have to keep in mind that food consumption is part of an individuals' identity and the role it plays in their lives is two-fold; symbolic and nutritional (Fischler, 1988). This means that people consume food for nutritional replenishment (Mak, Lumbers and Eves, 2012) and this consumption also has a representational meaning (Kim, Eves and Scarles, 2009). For example, a person visiting a Michelin star

restaurant will be interested in the high taste and quality food being served, however, their visit may also have a connotative meaning. The patron might wish to project themselves as affluent, trendy and possessing a taste for the finer things in life (Hirst and Tresidder, 2017).

It is also noteworthy that food preference is influenced heavily by the culture that consumers belong to or identify with, as culture is part of an individuals' value system. Therefore, culture also serves as a determinant for food properties that are sensorially acceptable to consumers (Chang, Kivela and Mak, 2010) because unlike other activities, food consumption stimulates all five senses and fulfils the hedonic as well as experiential needs of consumers (Hjalager and Richards, 2011). Understanding the cultural preferences of the target market is important for marketeers since consumers are resistant to trying out new flavour profiles and prefer to consume food items whose taste they are familiar with (Hjalager and Richards, 2011).

2.6.9 Sense of Touch

Touch has been defined as:

"sensations aroused through stimulation of receptors in the skin… pressure, warmth, cold, and various blends of these attributes" (Stevens and Green, 1996, p. 1)

The sense of touch has been deemed important for centuries and has been used by human beings to collect information about the world around them (Peck and Childers, 2003), with the famous philosopher Aristotle highlighting its importance by claiming that it provides the

"soul an insight into itself" (Golluber, 2001, p. 655)

The entire human body is encompassed by skin which consists of tactile receptors that make up the sensation of touch. This sensation is transferred to the brain through skin receptors that are called mechanoreceptors; soft touch is deciphered by low-threshold mechanoreceptors whereas nociceptors identify harmful or hard touch (Behrends, Schomburg and Steffens, 1983; Takahashi, Sato and Mizumura, 2003). Each group of skin receptors has a unique location and performs a different function,

for example, the clusters of receptors in certain areas of the body that identify cool sensations, like the skin between the knuckles, will continue to give the same result even after coming in contact with a warm object and vice versa (Hancock, 1995). However, interestingly when the skin comes in contact with either very cold or very hot surfaces yet another set of interlaced skin receptors becomes active. These are called pain receptors and their function is jolt the brain into action and remove the skin from either one of the extreme situations as soon as possible (Park and Kim, 2013).

Even though vision is given more importance by humans in everyday life and in research (O'Shaughnessy, 1989), it is the skin that is in fact the largest sense organ (Field, 2014). The factor that sets touch apart from the rest of the senses is the intimacy that it requires; contact with the human body is essential to experience this sensation by a person (Jenkins and Lumpkin, 2017).

Touch is considered to be an important factor in the cognitive development of mammals (Ardiel and Rankin, 2010; Champagne, 2014; Snell-Rood and Snell-Rood, 2020) and even though there have been a number of studies on the importance of touch for the development of human (Green, Gustafson and West, 1980; Field, 2002; Barnett, 2005; Ferber, Feldman and Makhoul, 2008; Feldman, 2011), rat (Stock and Uvnäs-Moberg, 1988; Wilson, 2001; Barnett, 2005; Ardiel and Rankin, 2010) and primate infants (Hertenstein et al., 2006; Dunbar, 2010; Botero, Langley and Venta, 2020), its importance has largely been ignored in marketing communications (Peck, 2011). This is surprising given that touch provides an important communication function among humans as well (Field, 2014) while also expressing and decoding emotions (Hertenstein et al., 2006). The act of touching someone in a social situation is believed to strengthen bonds while also providing pleasure (Ellingsen et al., 2014). Touch also plays an important role during interpersonal interactions with people giving positive responses in the presence of touch. For example, instances in which a waitress casually touched a restaurant patron saw her tips increase considerably (Crusco and Wetzel, 1984). Similarly, visitors to a library rated their experience better if the librarian touched them briefly (Fisher, Rytting and Heslin, 1976).

However, touch, much like other senses is also interpreted according to the culture of the people (Field, 2014). Furthermore, there is also a gender (between men and women), race (black and white) and age (young and old) based difference on the

amount of touch people indulge in, with white women and younger people preferring to touch and be touched more, while men, black women and older people preferring not to. People belonging to cultures that are touch-avoidant and non-contact do not experience the same emotions as contact cultures. Instead, people who belong to non-contact cultures often experience feelings of disgust and aversion when touched (Remland, Jones and Brinkman, 1995). Research on the subject suggests that there is a considerable variation among cultures when it comes to contact behaviour for example, American men indulge in interpersonal touch behaviour a lot less than men of Mediterranean origin. Similarly, people belonging to far Eastern cultures touch less, especially in instances where men and women interact, than Americans (Jones and Remland, 2019). However, it has been argued that contact within the American society is also on a decline due to the reporting and threat of lawsuits as a result of increased reporting of sexual abuse. Therefore, caretakers, colleagues, employees, bosses, kindergarten and physical education teachers and even relatives have now become weary of touching each other (Field, 2014).

2.6.10 Tactile Marketing

The importance of the sense of touch, within the discipline of marketing communications, has been ignored in the past in favour of the sense of sight, as mentioned above (Peck, 2011). However, research suggests that consumers rely on both their sense of vision and touch while evaluating products and in some cases the sense of touch takes precedence (Heller, 1992). The way an object feels in the hands of a consumer directly influences their decision to buy it (Gallace and Spence, 2014), the reason behind the success of touch is attributed to the fact that it is the first sense to develop among infants in the womb (Miodownik, 2005) and Ackerman et al. (2010) argue that this in turn subconsciously influences their actions and judgement throughout their later years in life. As a result, researchers argue that touch marketing strategies and their relation to other senses are an important avenue to explore (Ernst and Banks, 2002; Helbig and Ernst, 2007; Hultén, 2017; Hulten, 2020) because humans experience the world in a multisensory way (Hillock, Powers and Wallace, 2011).

The nature and attributes of a product dictate whether or not a touch marketing strategy may be applied since some product categories encourage touching more than

others (Peck and Childers, 2003; Peck, Barger and Webb, 2013) these include clothing, hand-held electronic gadgets, make-up products etc. (Grohmann, Spangenberg and Sprott, 2007). For most consumers, the sense of touch relays softness, hardness, temperature and weight related information that is applied directly to product evaluation (McCabe and Nowlis, 2003; Peck and Shu, 2009). Retail and service environments also present consumers with an opportunity to touch a number of items (Jha et al., 2020). These tactile contacts in turn influence consumer behaviour, product evaluation, attention and decision making processes (Jansson-Boyd, 2011).

It is also noteworthy that consumers prefer visiting and shopping in environments that permit and encourage touching the products before purchase (McCabe and Nowlis, 2003) therefore retailers that adopt this strategy benefit from regular visitors and increased sales, since it has been suggested by Underhill (2009) that as soon as a consumer touches an object his chances of purchasing it increase considerably. The "endowment effect" is credited with this increase in sales because research suggests that the value of an object increases in the eyes of the consumer when they touch it and take possession of it (Reb and Connolly, 2007). Consumer research has also shown that consumers report a higher sense of ownership when allowed to touch an object (Peck, Barger and Webb, 2013), this is the reason why The Illinoi State Attorney General's office issued a warning in their Safe Shopping Guide, warning holiday shoppers to be weary of retailers that encourage them to touch products and image owning them, since this results in unnecessary buying with people willing to pay more for those objects (Peck and Shu, 2009) as well as impulse buying (Peck and Childers, 2006).

2.7 Shopping Malls

2.7.1 A Brief History and Definition of Shopping Malls

Shopping malls took definitive shape in the early twentieth century when the Southdale Mall opened its door on October 8, 1956 in the outskirts of Detroit, Minnesota (Longstreth, 1997). It was considered a revolutionary project and was the brain-child of Victor Gruen; an Austrian immigrant who was also a social reformer (Mennel, 2004). Gruen was a visionary and the first person to combine a pleasant shopping experience with modern architecture, civic services and cultural activities

within a single structure which was away from the city centre (Styhre, 2019). Victor Gruen defined shopping malls as,

"*a conveniently accessible, amply stocked shopping area with plentiful and free parking*" (Gruen and Smith, 1960, p. 23)

It is interesting to note that this mall was designed especially for people that owned cars since Gruen believed that even though the motor car was a necessity in the modern post-war era, it was also responsible for the destruction of community life (Jewell, 2015).

However, over the years the shopping malls evolved away from Gruen's vision of being community hubs, located away from city centres, and were taken over by capitalistic ideology and became a machine for generating money which saw a reduced investment in

"*public spaces, community services, landscape, and art*" (Wall, 2007, p. 413).

Capitalism is an economic market-based system where:

"*transaction costs are reduced on the basis of legal devices such as contracts, and through mutual agreements derived from perceived win–win situations*" (Styhre, 2019, p. 283)

As a result Gruen's vision of a shopping malls serving more of a social and cultural purpose were never fully recognized. More interestingly, however, Victor Gruen also changed his stance, later on in his career, on the location and purpose of the shopping malls and believed that the urban setting was just as good a place as any for the establishment of a shopping mall (Gillette, 1985).

The term shopping mall or shopping centre has been used interchangeably over the years but they both mean the same that is:

"*planned shopping space with a centralized management team*" (Merrilees, Miller and Shao, 2016, p. 262).

Denis et al. (2002, p. 38) define a mall as,

"A centrally managed, planned retail provision having at least three shops"

while, Bloch et al. (1994), describe a shopping mall as a location that is temperature controlled, secure and provides a large variety of stores. Furthermore, over the years shopping malls have also evolved to include entertainment, restaurants and other service options as well.

In developed countries a shopping mall has already become a part of people's lifestyle. It goes beyond being just a consumption trend (Kim, Lee and Suh, 2015). However, in a developing country such as Pakistan, even though the construction of shopping malls has amped up in recent years, research on the subject is scant (Tahseen and Ahmed, 2020).

2.7.2 Shopping Malls and Urban Development Policies in Pakistan

Much like the absence of meaningful research on shopping malls in Pakistan (Khokhar, 2020), research concerning the rapid urbanization experienced in the country is also lacking (Rana and Bhatti, 2018). Considering that Pakistan is urbanizing at such a brisk pace and is considered the fastest urbanizing country in the region, the absence of policy research on the matter is alarming (Ellis and Roberts, 2016). Research suggests that 70 percent of the population of Pakistan resides in densely populated areas that are either completely urban or are in the process of urbanising (UNDP, 2018). Furthermore, the most populous cities follow a garden city format which leaves little room for commercial development like large scale malls. This means that most of the land allotment is towards housing schemes with only 2 percent of space allowed for apartments, offices, shopping malls, community and entertainment centres (Haque, 2015). Therefore, for a country like Pakistan, where urban is synonymous with suburban, the construction of shopping malls is also within areas allocated for residential units (Rana and Bhatti, 2018).

As a result, the original format of a shopping mall proposed by Victor Gruen may not be adopted. Pakistan has experienced a new kind of urbanisation in which a mix between residential, commercial and institutional building construction has been observed. This model has its own advantages since it takes away dependence on

automobiles for the prospective consumers, this results in lower carbon emissions, encourages investments within communities and fosters friendly relationships among people (Qadeer, 2014).

2.7.3 Sensory Marketing in a Retail Setting

Traditional marketing strategies in a retail store are not the most viable option for consumers that demand unique and memorable experiences that meet their hedonic consumption needs (Schmitt, 1999; Arnold and Reynolds, 2003). With the proliferation of retail outlets and the added competition from digital shopping environments, retailers have had to adapt by creating experiences in brick-and-mortar settings that entice consumers in a sensorial, emotional and creative manner (Ebrahim et. al., 2016) instead of blasting messages about a products' functional attributes, discounts, sales or messages about extended store hours (Arnold and Reynolds, 2003; Kotler and Armstrong, 2016). As a result of this departure from tradition, the sensory marketing approach for enhancing customer experiences has emerged (Hultén, Broweus and Dijk, 2009; Linstrom, 2010; Krishna, 2012a; Hultén, 2017).

The objective of sensory marketing activities, as discussed earlier, is to strengthen the relationship between a brand and its consumer by applying techniques that stimulate two or more senses (Moreira, Fortes and Santiago, 2017; Helmefalk and Berndt, 2018).

Retailers apply a number of techniques to make the consumer experience as memorable and positive as possible, however, research suggests that a combination of sensorial stimuli are especially influential in doing so (Puccinelli, Grewal and Roggeveen, 2014). Furthermore, sensory cues influence consumers on a subconscious level and impact their judgements, behaviours and purchasing decisions (Biswas, 2019). The use of visual cues paired with auditory cues impacts consumer mood, for instance the colour red may induce feelings of aggression and also arousal (Mehta and Rui Zhu., 2009). Similarly, playing ambient music at an outlet results in consumers choosing a healthier food option in cases where the music played is relaxing, as opposed to choosing unhealthy food options when the music played is loud (Biswas, Lund and Szocs, 2019). Similarly, images of people consuming fast food encourage consumers to justify choosing unhealthy food items when they see other people eating

it as opposed to when they see images containing only the food item (Poor, Duhachek and Krishnan, 2013).

By allowing consumers to touch the products on sale retailers are able to reduce feelings of frustration that arise in an online setting. This paired with soothing music and pleasant smell results in positive product evaluations (Peck and Childers, 2003). Furthermore, the sense of touch elicits feelings of possession among consumers that directly impacts their shopping decisions (Jha et. al., 2020).

Olfactory cues are proven to influence a consumers motivation to shop while also influencing their memory (Krishna, Lwin and Morrin, 2010), emotions (Helmefalk and Hultén, 2017) and buying decisions (Kivioja, 2017). Haptic cues when combined with olfactory and visual cues result in encouragement of touch behaviour in consumers that leads to increased sales (Hulten, 2012). In addition, research suggests that soft music combined with soft flooring positively impacts the evaluation of the products within an outlet leading to an increase in the time spent inside the store along with an increase in sales (Imschloss and Kuehnl, 2017).

It has been argued that sensory stimulations exist within a retail setting irrespective of whether they are consciously influenced by the retailers. Therefore, it is an opportunity waiting to be utilized for the benefit of the retailer (Khanna and Mishra, 2012) and since sensory stimuli are multi-sensory by nature in the real world setting strategies that involve a cocktail of the senses should be applied (Puccinelli, Grewal and Roggeveen, 2014).

CHAPTER 3: METHODOLOGY

3.1 Introduction

Semantic network analysis techniques were used in the scope of this research to analyse sensory factors that influence consumer expectations at shopping malls. The line of inquiry attempted to gauge the reasons consumers like, dislike, idealise, shop and sensorially expect from a shopping mall.

The following are the questions the research attempted to answer:

1. What are the shared semantic associations of attributes consumers liked at shopping malls?
2. What are the shared semantic associations of attributes consumers idealized at shopping malls?
3. What are the shared semantic associations of consumers' reasons for shopping at a shopping mall?
4. What are the shared semantic associations of attributes consumers disliked at shopping malls?
5. What are the shared semantic associations of things consumers don't want to see at shopping malls?
6. What are the shared semantic associations of things consumers want to see at shopping malls?
7. What are the shared semantic associations of things consumers don't want to hear at shopping malls?
8. What are the shared semantic associations of things consumers want to hear at shopping malls?
9. What are the shared semantic associations of things consumers don't want to touch at shopping malls?
10. What are the shared semantic associations of things consumers want to touch at shopping malls?
11. What are the shared semantic associations of things consumers don't want to taste at shopping malls?
12. What are the shared semantic associations of things consumers want to taste at shopping malls?

13. What are the shared semantic associations of things consumers don't want to smell at shopping malls?

14. What are the shared semantic associations of things consumers want to smell at shopping malls?

This chapter proceeds to discussing the methodology applied for data collection and also explores semantic network analysis which is a form of social network analysis. Furthermore, the difference between social network analysis and semantic network analysis will also be discussed along with a summary of participant demographic information. Since semantic network analysis is conducted via a free software called Pajek. Therefore, information regarding the software is also provided.

3.2 Social Network Analysis and Semantic Network Analysis

The importance of social networks in an individuals' life is undeniable, any time a human being interacts with another a social network is formed. This may be in a virtual or a real-life environment. Social networks have the potential to influence an individuals' day-to-day life by enabling interactions for collaborating, learning and the sharing of information (Fu, Luo and Boos, 2017). A social network consists of individual nodes and ties; the nodes are made up of people, groups, organizations or countries whereas ties indicate the relationships and connections between them (Barabasi, 2002). Social network analysis is also considered a broader field of network sciences that is applied to studying human connections and relationships (Ackland and Shneiderman, 2011). In its essence, the objective of conducting a social network analysis is to identify and deduce the patterns of social connections between the actors (De Nooy, Mrvar and Batagelj, 2018).

Semantic network analysis differs from social network analysis in the sense that in semantic networks vertices are words or concepts (instead of people, groups or organizations) that are connected to each other based on their co-occurrence. The semantic network then allows the user to map the relationship between the nodes and extract meaning from the text depending on the number of times it has co-occurred (Ackland and Shneiderman, 2011). From a marketing communications perspective, semantic networks allow a brand or a company to collect a plethora of opinions and

impressions that consumers have regarding a certain brand (Scott and Carrington, 2014).

Semantic networks are used to represent knowledge that displays the connections between concepts in the form of a network. According to semantic network analysists, any idea, event, object or situation consists of a structure that can be displayed in the form of a semantic network that becomes useful when meaning is assigned to each node and link (Lehmann, 1992).

3.3 Research Design

Cross-sectional research design was used in this study to collect data in one point in time. The most common characteristics of this research design are that no variable manipulation is done. In addition, free associations were made by consumers to record their responses. An advantage of this research design is that it enables researchers to evaluate a number of attributes of the dataset at once.

3.4 Research Approach

This research study used the inductive research approach to evaluate the textual data gathered from the respondents. An inductive research approach is a form of scientific inquiry in which the researcher evaluates text or raw data collected and then formulates the propositions based on those textual data. Simply put, inductive research encourages the emergence of theory from data.

The purpose of using an inductive approach is threefold. Firstly, it involves the condensation of a large data-set into a summary or brief format. Secondly, it is used to formulate clear links between the objectives of the research and the summary findings deduced from unfiltered data. Lastly, the findings of such a research help in the development of models or theories that underline the structure of the process or experience that are clearly demonstrated in the data (Thomas, 2003). According to Locke (2007), inductive research methods contrast with the deductive approach while also encouraging premature theorizing which in the authors experience retards the progress of science.

Furthermore, deductive research methods disregard the role of human senses in acquiring knowledge and highlight the need for reliance on innate ideas or existing

theories to deduce hypotheses for research (Woiceshyn and Daellenbach, 2018). This view is the reason for the majority of research following the deductive research approach.

Since the current research attempts to gather information from consumers regarding their sensory expectations from shopping malls as a means for acquiring information regarding their experiences it makes sense to utilize inductive techniques for acquiring and deciphering the collected text.

3.5 Sampling Data Collection and Coding Procedure

The data was collected in Lahore, Pakistan from two popular shopping malls before the Corona Virus lockdown. The data collection process started on January 18th and ended on February 9th, 2020. A total of 400 questionnaires were handed out. However, responses of on 126 participants were useable. The total percentage of women was 57.14 % and 42.86% were men. Furthermore, the ages of the participants were between 11 and 72 years old. Since the questionnaire was long, it was administered mainly in the food court (where tables and chairs were available) and also at the resting spots located within the shopping mall.

This study administered a questionnaire as a method to survey data because network analysis is ideal for ethnographic observation, online data scraping, archival analysis, interviews and questionnaire surveys (Vicsek, Kiraly and Konya, 2016)

The study gathered data by using mall intercept survey technique using a structured open-ended questionnaire. The reason for collecting data in a mall setting is the belief held by researchers that studying organisms in the environment or habitat that they are found is imperative for accurate results. Therefore, adopting this research collection methodology to studying consumer behaviour in settings that they throng to would ideally result in accurate research findings (Ehrlich and Roughgarden, 1988; Bloch, Ridgway and Dawson, 1994).

The participants were asked three groups of questions within the questionnaire. First, the respondents were asked to name their favourite shopping mall. The question that followed was important for the creation of a network of associations for the attributes respondents liked in a shopping mall by providing three reasons for their

preference. In the second part, respondents were asked to name their least favourite mall followed by an inquiry as to why the mall in question was disliked by providing three reasons for their distaste. The reason the participants were asked to name their favourite and least favourite mall was because it was easier to respond to the questions that followed if they had a specific location in mind. Furthermore, the respondents provided free associations for their responses that provided an insight into the unconscious mind of the participants. The third group of questions was related specifically to the respondents sensory expectations from a shopping mall. They were asked questions directly, regarding their five senses; the things they want to see, hear, touch, taste and smell and also things they do not. The respondents were asked to list three attributes for each question posed to evaluate their sensory expectations from shopping malls. The respondents were asked to list 3 positive and 3 negative attributes which were then encoded in Pajek to be evaluated using sematic network analysis. The responses were evaluated by two independent coders and then consolidated afterwards. Once the coding was complete, the collected data was assessed in order to check the relationship among different nodes using Pajek.

3.6 Application and Structure of the Semantic Network Analysis

Among the variety of tools present for conducting a semantic network analysis, "Pajek" is one that is able to handle huge datasets along with being a freeware and open-source. Essentially, this tool is used by researchers for the analysis of networks and its name comes from a Slovenian word that means spider (Mrvar and Batagelj, 2016). The main purpose of using the program are to divide a larger network in to smaller sections that maybe further understood. It also provides users with powerful visual tools while also provide efficient algorithms for the analysis of large networks.

The representativeness of the members is shown by nodes or points and the lines connecting them depict the relationships among them. Additionally, in order to show the pathway of the flow in a relationship, an arrow is used (De Nooy, Mrvar and Batagelj, 2018). The connection among the nodes helps researchers in studying relationships for further investigation. However, if there are no links between the nodes then it cannot be studied as the nodes are in isolation from each other (Durland and Fredericks, 2005). This means that a connection has to exist between the nodes for meaningful interpretations of data.

The density of the plots or graphs is shown by the number of lines in it. Density is defined in terms of a classification of the maximum possible sum of line (Nooraie et. al., 2020). When the graph has all of its points adjacent to one another that is each point is linked directly to every other point, it is termed a "complete" graph (Hansen et. al., 2020). In order to see the comprehensive distribution of lines, the concept of density is used to measure how complete the graph is (Barabasi, 2002).

The networks for the research were simple, directed and one-mode while the loops and multiple lines were removed before running the text through Pajek. For a clear understanding of the following chapter; Findings and Analysis, it is necessary to provide the definitions of the key terms used. Vertices are defined as:

> *"nodes, agents, entities or items and they represent people or social structures such as workgroups, teams, organizations, institutions, states, or even countries"* (Ackland and Shneiderman, 2011, p. 115).

For semantic networks nodes represent words or concepts It is important to note that every core value in the network is a vertex for this study.

A graph is defined as:

> "*A set of vertices and a set of lines between pairs of vertices*" (De Nooy, Mrvar and Batagelj, 2018, p. 7).

A "line" represents a relation or link between two vertices in a network. The "line" may be directed in which case it is referred to as an arc or undirected in which case it is called an edge. Each arc, in a directed network has a point of origin and a destination (Brandes and Erlebach, 2005).

> *"A network is called semantic when its nodes represent concepts or clauses and when these are linked to each other by more than one kind of binary relation"* (Krippendorff, 2004)

The network may be one-mode or two- mode; where the former network consist of rows and columns which represent the same set of points or social actors;

while the latter represents two different sets of points and lines that tie points in one set to points in another (Borgatti, Brass and Halgin, 2014).

CHAPTER 4: FINDINGS AND ANALYSES

4.1 Introduction

This chapter includes the findings and a detailed data analysis of the questionnaire. There were eight dimensions on which the analyses were undertaken; valued core, clique, articulation points, input degree, output degree, input closeness, output closeness and betweenness. Semantic network analysis metrics which were significant and meaningful are included in the subsequent sections; however, whole results lists of analysis are appended in Appendix.

4.2 Semantic Network Analysis Metrics of Response Networks

Table 4.1 sums up the basic results of the analysis of the response networks. There were 123 nodes in the network of attributes that respondents liked which represent the total of core values. The nodes establish 326 lines. 292 of these lines have value 1; 34 of them have value more than 1.

There were 207 nodes in the network of attributes which respondents idealized which represent the total of core values. The nodes establish 372 lines. 366 of these lines have value 1; 6 of them have value more than 1.

There were 140 nodes in the network of attributes which respondents mentioned as the reasons for shopping which represent the total of core values. The nodes establish 335 lines. 309 of these lines have value 1; 26 of them have value more than 1.

There were 246 nodes in the network of attributes which respondents mentioned as the reasons for disliking a mall which represent the total of core values. The nodes establish 368 lines. 360 of these lines have value 1; 8 of them have value more than 1.

There were 219 nodes in the network of attributes which respondents wanted to see at the mall which represent the total of core values. The nodes establish 354 lines. 340 of these lines have value 1; 14 of them have value more than 1.

There were 175 nodes in the network of attributes which respondents did not want to see at the mall that represent the total core values. The nodes establish 351 lines. 333 of these lines have value 1; 18 of them have value more than 1.

There were 105 nodes in the network of attributes which respondents mentioned that they don't want to hear which represent the total of core values. The nodes establish 280 lines. 227 of these lines have value 1; 53 of them have value more than 1.

There were 138 nodes in the attributes which respondents mentioned that they want to hear which represent the total of core values. The nodes establish 327 lines. 299 of these lines have value 1; 28 of them have value more than 1.

There were 90 nodes in the attributes which respondents mentioned that they want to touch which represent the total of core values. The nodes establish 194 lines. 160 of these lines have value 1; 34 of them have value more than 1.

There were 170 nodes in the network of attributes which respondents mentioned that they don't want to touch which represent the total of core values. The nodes establish 355 lines. 337 of these lines have value 1; 18 of them have value more than 1.

There were 103 nodes in the network of attributes which respondents mentioned that they wanted to taste which represent the total of core values. The nodes establish 286 lines. 238 of these lines have value 1; 48 of them have value more than 1.

There were 132 nodes in the network of attributes which respondents mentioned that they don't want to taste which represent the total of core values. The nodes establish 346 lines. 326 of these lines have value 1; 20 of them have value more than 1.

There were 92 nodes in the network of attributes which respondents mentioned that they want to smell which represent the total of core values. The nodes establish 263 lines. 214 of these lines have value 1; 49 of them have value more than 1.

There were 107 nodes in the network of attributes which respondents mentioned that they don't want to smell which represent the total of core values. The nodes establish 316 lines. 283 of these lines have value 1; 33 of them have value more than 1.

The density of a network may be defined as *"the number of lines in a simple network, expressed as a proportion of the maximum possible number of lines"* (Nooy, Mrvar and Batagelj, 2018, p. 480) and is considered a mathematical representation for

expressing concepts such as unity, solidarity, cohesion and even constraint (Carrington, Scott and Wasserman, 2005).

Network of attributes which respondents liked had a density of 0.0215 which is not a dense network which means that there were only 2.15% of all the potential directed lines.

Lower density networks are credited with enriching research. The lower the density of the values the greater the diversity. Furthermore, density is directly dependent on the size of the network. That is the reason it is not an ideal method for making a comparison between all the networks through density function alone. A better way to measure the comparison among networks is through average degree centrality which is a robust measure because it does not alter the size of the network (Newman, 2010).

This measure depicts the average number of links in a network. Attributes respondents liked, the shopping reasons respondents highlighted, the things which respondents didn't want to hear and wanted to hear, taste and smell, the things which the respondents wanted to smell are more condensed than rest of the networks. The average degree centralities of attributes respondents liked about the shopping malls, the shopping reasons they highlighted, things they didn't want to hear, wanted to hear, wanted to taste, didn't want to taste, wanted to smell and didn't want to smell are 5, 5, 5, 5, 5, 6, 5, 6 and 6 respectively in approximate ter

Table 1 Semantic Network Analysis Metrics

	Liked Attribute	Idealized Attribute	Shopping Reasons	Dislike Reason	Don't Want to See	Want to See	Don't Want To Hear	Want To Hear	Want To Touch	Don't Want To Touch	Want To Taste	Don't Want To Taste	Want to Smell	Don't Want to Smell
No. of nodes	123	207	140	246	175	219	105	138	90	170	103	132	92	107
No. of lines	326	372	335	368	351	354	280	327	194	355	286	346	263	316
No. of lines = 1	292	366	309	360	333	340	227	299	160	337	238	326	214	283
No. of lines < 1	34	6	26	8	18	14	53	28	34	18	48	20	49	33
Density Network	0.021	0.008	0.017	0.006	0.011	0.007	0.025	0.171	0.023	0.012	0.026	0.019	0.031	0.027
Average Degree Centrality	5.300	3.594	4.785	2.991	4.011	3.232	5.333	4.739	4.311	4.176	5.553	5.242	5.717	5.906

Table 2 All Max Valued Core Values

	Liked Attributes	Idealized Attributes	Shopping Reasons	Dislike Reasons	Want to See	Don't Want to see	Don't Want To Hear	Want To Hear	Want To Touch	Don't Want To Touch	Want To Taste	Don't Want To Taste	Want To Smell	Don't want to smell
Dimension	123	207	140	246	219	175	105	138	90	170	103	132	92	107
Lowest Value	1	1	1	1	1	1	1	1	0	0	0	0	0	1
Highest Value	5	2	6	3	4	6	7	6	14	3	6	3	17	6

4.3 Valued Core Analysis

Valued core assesses the nodes which are linked together with a particular number of lines. It is demarcated on the basis of multiplicity. It shows the minimum value of lines (Nooy, Mrvar and Batagelj, 2018). Table 2 above demonstrates the highest and lowest valued core levels of all the response networks.

When valued core levels of responses were analysed, it was seen that the lowest values for networks of *attributes respondents liked, attributes respondents idealized, shopping reasons, dislike reasons for least favourite mall, don't want to see, want to see, don't want to hear, want to hear, and don't want to smell* are 1 respectively and 0 for *want to touch, don't want to touch, want to taste, don't want to taste and want to smell*.

The highest values for the networks of all these i.e., *attributes respondents liked, attributes respondents idealized, shopping reasons, dislike reasons for least favourite mall, want to see, don't want to see, don't want to hear, want to hear, want to touch, don't want to touch, want to taste, don't want to taste, want to smell and don't want to smell* were 5, 2, 6, 3, 4, 6, 7, 6, 14, 3, 6, 3, 17 and 6 respectively.

Table 1. Frequency Distribution of Clustered Values (Network of Attributes Respondents Liked in a Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
1	97	78.8618	97	78.8618	Lighting
2	17	13.8211	114	92.6829	Security
3	4	3.2520	118	95.9350	Availability (Brands)
4	3	2.4390	121	98.3740	Cleanliness (General)
5	2	1.6260	123	100	Variety of Shops

Table 2. Frequency Distribution of Clustered Values (Attributes Respondents Idealized in a Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
1	199	96.1353	199	96.1353	Parking Easily Available
2	8	3.8647	207	100	Food Court

According to table 4, 199 of 207 values were linked with value 1; 8 of them were linked with value 2. Since 199 of 207 values were linked with value 1, there is not a significant structure between them.

Table 3. Frequency Distribution of Clustered Values (Shopping Reasons)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
1	117	83.5714	117	83.5714	I can see a lot of people from my social background
2	18	12.8571	135	96.4286	Variety (clothing shops/outlets
3	1	0.7143	136	97.1429	Cinema
4	2	1.4286	138	98.5714	Availability (Brands)
6	2	1.4286	140	100	Close to my house

According to table 5, 117 of 140 values were linked with value 1; 18 of them were linked with value 2, 1 of them was linked with value 3, 2 of them were linked with value 4, 2 of them were linked with value 6. Since 117 of 140 values were linked with value 1, there is not a significant structure between them.

Table 4. Frequency Distribution of Clustered Values (Dislike Reasons for Least Favourite Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
1	237	96.3415	237	96.3415	Boring
2	7	2.8455	244	99.1870	Few food options
3	2	0.8130	246	100	It is dirty

According to table 6, 237 of 246 values were linked with value 1; 7 of them were linked with value 2 and 2 of them were linked with value 3. Since 237 of 246 values were linked with value 1, there is not a significant structure between them.

Table 5. Frequency Distribution of Clustered Values (Respondents Don't Want to See at the Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
1	154	88	154	88	Women without dupatta (eastern clothing item, it's like a big cloth that covers the breast area of women)
2	17	9.7143	171	97.7143	Snobbish people
3	2	1.1429	173	98.8571	A large crowd
6	2	1.1429	175	100	Cheap crowd

According to table 7, 154 of 175 values were linked with value 1; 17 of them were linked with value 2, 2 of them were linked with value 3 and 2 of them were linked with value 6. Since 154 of 175 values were linked with value 1, there is not a significant structure between them.

Table 6. Frequency Distribution of Clustered Values (Respondents Want to See at the Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
1	206	94.0639	206	94.0639	Decent People
2	9	4.1096	215	98.1735	Good Restaurants
3	2	0.9132	217	99.0868	Discipline
4	2	0.9132	219	100.0000	Overall Cleanliness

According to table 4.8, 206 of 219 values were linked with value 1; 9 of them were linked with value 2, 2 of them were linked with value 3 and 2 of them were linked with value 4. Since 206 of 219 values were linked with value 1, there is not a significant structure between them.

Table 7. Frequency Distribution of Clustered Values (Respondents Don't Want to hear at the Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
1	85	80.9524	85	80.9524	Foul Language
2	8	7.6190	93	88.5714	Women laughing very loudly
3	3	2.8571	96	91.4286	Announcements on PA system
4	3	2.8571	99	94.2857	Eye teasing
5	2	1.9048	101	96.1905	Children crying
6	2	1.9048	103	98.0952	Abusive language
7	2	1.9048	105	100	Loud music

According to table 9, 85 of 105 values were linked with value 1; 8 of them were linked with value 2, 3 of them were linked with value 3, 3 of them were linked with value 4, 2 of them were linked with value 5, 2 of them were linked with 6 and 2 of them were linked with value 7. Since 85 of 105 values were linked with value 1, there is not a significant structure between them.

Table 8. Frequency Distribution of Clustered Values (Respondents Want to Hear at the Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
1	113	81.8841	113	81.8841	Soothing music
2	16	11.5942	129	93.4783	Music
3	6	4.3478	135	97.8261	Quranic verses
6	3	2.1739	138	100	Laughter

According to table 10, 113 of 138 values were linked with value 1; 16 of them were linked with value 2, 6 of them were linked with value 3 and 3 of them were linked with value 6. Since 113 of 138 values were linked with value 1, there is not a significant structure between them.

Table 9. Frequency Distribution of Clustered Values (Respondents Want to Touch at the Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
0	1	1.1111	1	1.1111	Nothing
1	69	76.6667	70	77.7778	Items purchased
2	11	12.2222	81	90	Touch screens
3	1	1.1111	82	91.1111	Books
4	3	3.3333	85	94.4444	Fabrics
9	1	1.1111	86	95.5556	Food
10	2	2.2222	88	97.7778	Cleanliness focus – clean surfaces and items
14	2	2.2222	90	100	Clothes

According to table 11, 1 of 90 values was linked with value 0; 69 of them were linked with value 1, 11 of them were linked with value 2, 1 of them was linked with value 3, 3 of them were linked with value 4 and 1 of them was linked with value 9. Since 69 of 90 values were linked with value 1, the structure between them is not significant.

Table 10. Frequency Distribution of Clustered Values (Respondents Don't Want to Touch at the Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
0	1	0.5882	1	0.5882	Nothing
1	148	87.0588	149	87.6471	Security women
2	18	10.5882	167	98.2353	Dirty surfaces
3	3	1.7647	170	100	People

According to table 12, 1 of 170 values was linked with value 0; 148 of them were linked with value 1, 18 of them were linked with value 2 and 3 of them were linked with value 3. Since 148 of 170 values were linked with value 1, there is not a significant structure between them.

Table 11. Frequency Distribution of Clustered Values (Respondents Want to Taste at the Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
0	1	0.9709	1	0.9709	Nothing
1	76	73.7864	77	74.7573	Latest edibles
2	14	13.5922	91	88.3495	Halal food and beverages
3	5	4.8544	96	93.2039	Food samples
4	2	1.9417	98	95.1456	Street food
5	3	2.9126	101	98.0583	Coffee
6	2	1.9417	103	100	Good food

According to table 13, 1 of 103 values were linked with value 0; 76 of them were linked with value 1, 14 of them were linked with value 2, 5 of them were linked with value 3, 2 of them were linked with value 4 and 3 of them were linked with value 5 and 2 of them were linked to value 6. Since 76 of 103 values were linked with value 1, there is not a significant structure between them. But the cluster 2, 3, 4, 5 and 6 are significant with frequencies 14, 5, 2, 3 and 2 respectively.

Table 12: Frequency Distribution of Clustered Values (Respondents Don't Want to Taste at the Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
0	1	0.7576	1	0.7576	Nothing
1	112	84.8485	113	85.6061	Chinese food
2	13	9.8485	126	95.4545	Vegetables
3	6	4.5455	132	100	Rotten food

According to table 14, 112 of 132 values were linked with value 1; 13 of them were linked with value 2 and 6 of them were linked with value 3. Since 112 of 132 values were linked with value 1, there is not a significant structure between them. However, cluster 2 and 3 with frequency of 13 and 6 respectively were significant.

Table 13. Frequency Distribution of Clustered Values (Respondents Want to Smell at the Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
0	1	1.0870	1	1.0870	Nothing
1	69	75	70	76.0870	Ittar
2	11	11.9565	81	88.0435	Ager batti (perfumed essence)
3	4	4.3478	85	92.3913	Pleasant smells
4	2	2.1739	87	94.5652	Fresh air
8	2	2.1739	89	96.7391	Coffee
10	1	1.0870	90	97.8261	Food
17	2	2.1739	92	100	Perfumes

According to table 15, 69 of 92 values were linked with value 1; 11 of them were linked with value 2, 4 of them were linked with value 3, 2 of them were linked with value 4, 2 of them were linked with value 8, 1 of them linked with value 10 and 2 of them were linked with value 17. Since 69 of 92 values were linked with value 1, there is not a significant structure between them. But the clusters 2, 3, 4, 8, 10 and 11 with frequency of 11, 4, 2, 2, 1 and 2 respectively were significant.

Table 14. Frequency Distribution of Clustered Values (Respondents Don't Want to Smell at the Mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
1	88	82.2430	88	82.2430	Trash
2	7	6.5421	95	88.7850	Strong perfumes
3	6	5.6075	101	94.3925	Dirty mops
4	4	3.7383	105	98.1308	Bad body odour
6	2	1.8692	107	100	Bad smell in washrooms

According to table 16, 88 of 107 values were linked with value 1; 7 of them were linked with value 2, 6 of them were linked with value 3, 4 of them were linked with value 4 while 2 of them were linked with value 6. Since 143 of 198 values were linked with value 1, there is not a significant structure between them.

4.4 Clique Analysis

Cliques are cohesive subgroups that are constituted with two-way and directly connected with three or more nodes. That is to say that cliques are:

"sub-networks with maximum density" (Carrington, Scott and Wasserman, 2005; Newman, 2010).

This means that a clique consists of a group of vertices that are connected to every other vertices.

Table 15. Clique Directed

	Attributes Respondents Liked	Don't Want To Hear	Want To Touch	Want To Taste	Want To Smell	Don't Want To Smell
Dimension	123	105	90	103	92	107
Lowest Value	0	0	0	0	0	0
Highest Value	2	7	5	8	13	7

According to table 17, the maximum number of cliques that a value created was 2, 7, 5, 8, 13 and 7 for the network of responses mentioned. In other words, there are values that create 2, 7, 5, 8, 13 and 7 cliques in *attributes respondents liked, don't want to hear, want to touch, want to taste, want to smell and don't want to smell* respectively.

Table 16. Frequency Distribution of Clustered Values (Attributes Respondents Liked in a mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
0	118	95.9350	118	95.9350	1
1	4	3.2520	122	99.1870	4
2	1	0.8130	123	100	21

Table 18 shows that 118 of the network of attributes of respondents liked do not create any clique; 4 values create 1 clique and 1 value created 2 cliques. Figure 1 displayed below shows the network of the attributes that create cliques with others.
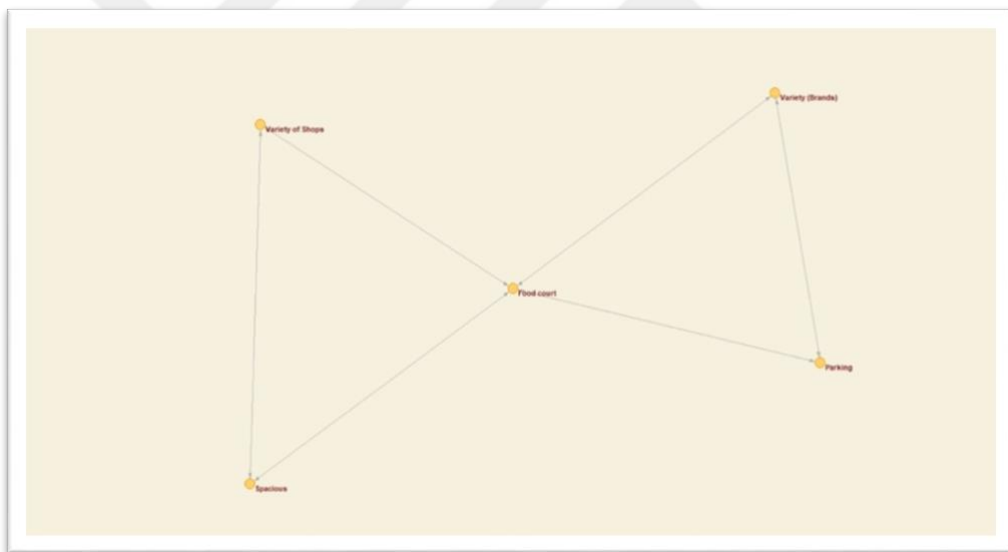
Figure 1. Directed Cliques of Attributes Respondents (Liked in a Mall)

Table 17. Frequency Distribution of Clustered Values (Respondents Don't Want to Hear in the mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
0	98	93.3333	98	93.3333	1
1	1	0.9524	99	94.2857	15
3	1	0.9524	100	95.2381	12
4	1	0.9524	101	96.1905	18
5	3	2.8571	104	99.0476	2
7	1	0.9524	105	100	7

Table 19 shows that 98 values of the network for *don't want to hear* response do not create any clique; 1 value created 1 clique, 1 value create 3 cliques, 1 value created 4 cliques, 3 values create 5 cliques and 1 value created 7 cliques. Figure 4.2 below displays the network of values that create cliques with others.
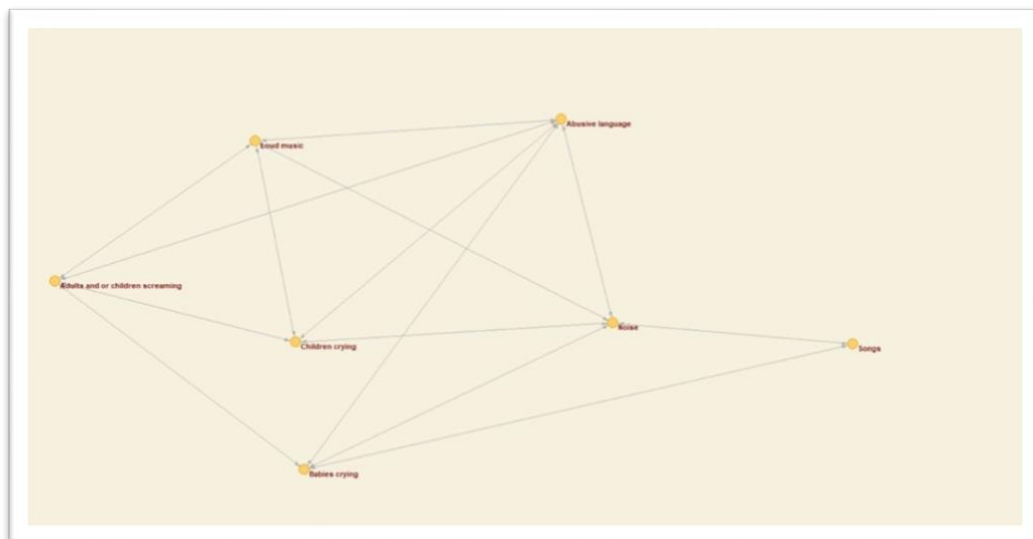
Figure 2. Directed Cliques of Attributes Respondents (Don't Want to Hear)

Table 18. Frequency Distribution of Clustered Values (Respondents Want to Touch in the mall)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
0	82	91.1111	82	91.1111	4
1	2	2.2222	84	93.3333	25
2	3	3.3333	87	96.6667	1
3	1	1.1111	88	97.7778	2
5	2	2.2222	90	100	3

Table 20 shows that 82 of the network values of want to touch responses do not create any clique; 2 values created 1 clique, 3 value created 2 cliques, 1 value created cliques and 2 values create 5 cliques. Figure 4.3 displays the network of values that create cliques with others.
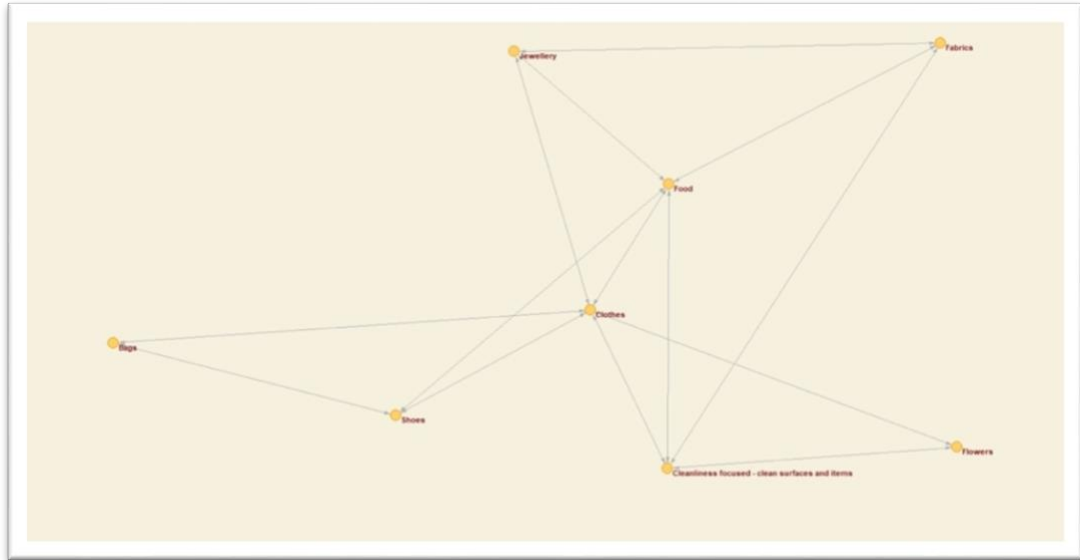
Figure 3. Directed Cliques of Attributes Respondents (Want to Touch)

Table 19. Frequency Distribution of Clustered Values (Want to Taste)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
0	95	92.2330	95	92.2330	1
1	3	2.9126	98	95.1456	12
4	1	0.9709	99	96.1165	11
5	3	2.9126	102	99.0291	9
8	1	0.9709	103	100	26

Table 21 shows that 95 of network values of *want to taste* response do not create any clique; 3 values created 1 clique, 1 value created 4 cliques, 3 value created 5 cliques and 1 value created 8 cliques. Figure 4.4 displays the network of values that create cliques with others.
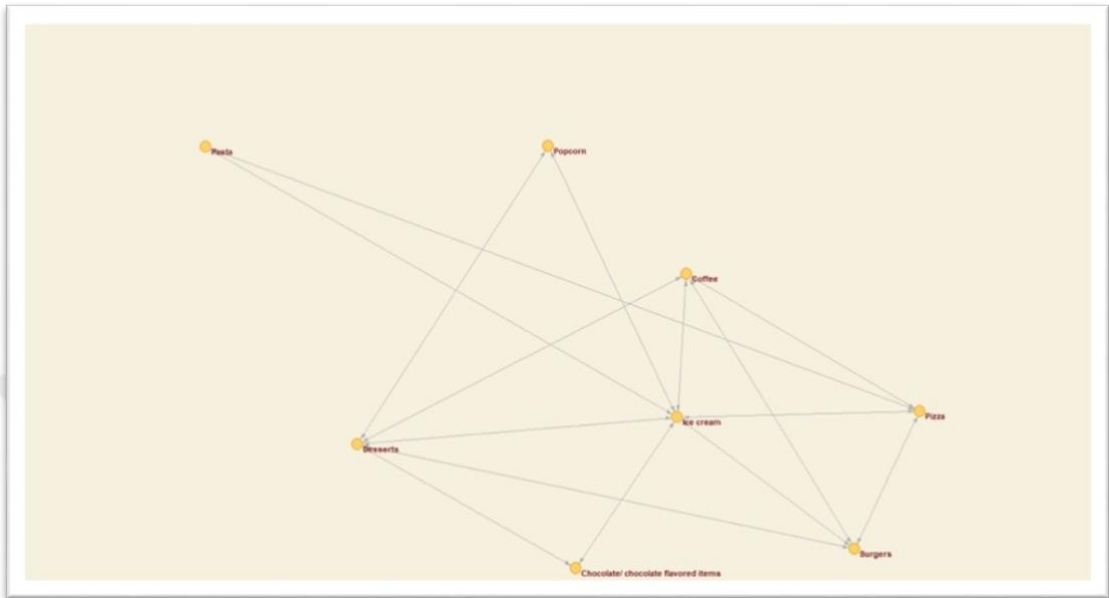
Figure 4. Directed Cliques of Attributes Respondents (Want to Taste)

Table 20. Frequency Distribution of Clustered Values (Want to Smell)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
0	82	89.1304	82	89.1304	2
1	2	2.1739	84	91.3043	13
3	1	1.0870	85	92.3913	51
4	1	1.0870	86	93.4783	15
5	2	2.1739	88	95.6522	6
6	2	2.1739	90	97.8261	5
7	1	1.0870	91	98.9130	12
13	1	1.0870	92	100	1

Table 22 shows that 82 of network values of *want to smell* response do not create any clique; 2 values created 1 clique, 1 value created 3 cliques, 1 value created 4 cliques, 2 values created 5 cliques, 2 values created 6 cliques, 1 value created 7 cliques and 1 value created 13 cliques. Figure 4.5 displays the network of values that create cliques with others.
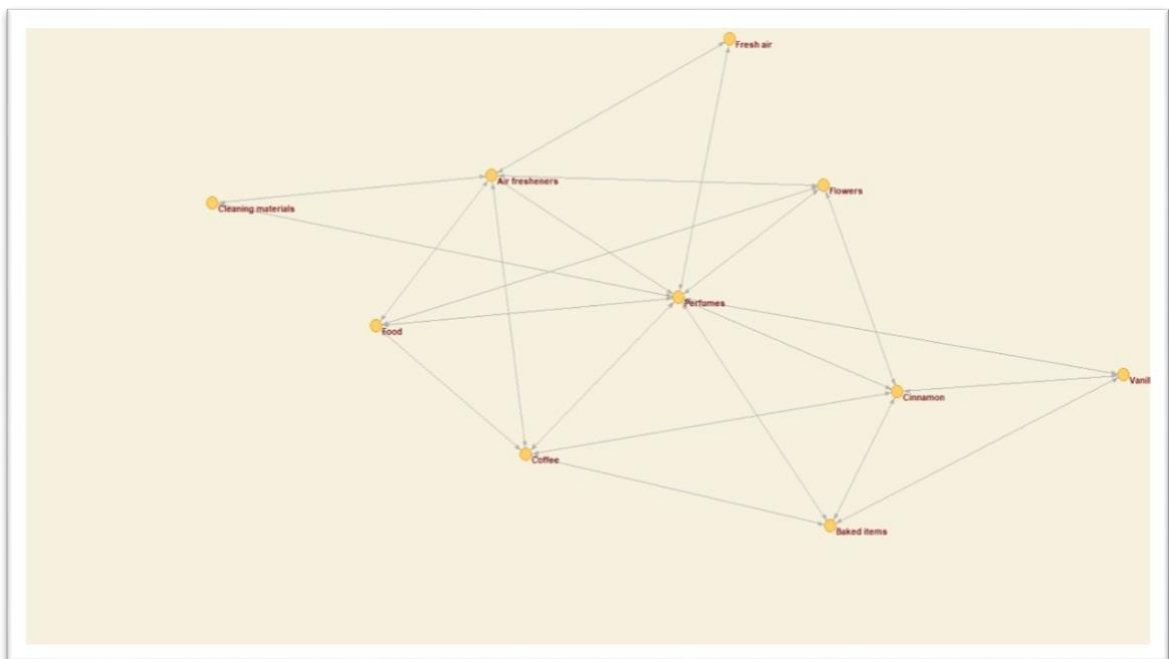
Figure 5. Directed Cliques of Attributes Respondents (Want to Smell)

Table 21. Frequency Distribution of Clustered Values (Don't Want To Smell)

Cluster	Frequency	Percentage	Cumulative Frequency	Cumulative Percentage	Representative
0	98	91.5888	98	91.5888	2
1	4	3.7383	102	95.3271	9
2	3	2.8037	105	98.1308	11
4	1	0.9346	106	99.0654	1
7	1	0.9346	107	100	3

Table 23 shows that 98 of network values of *don't want to smell* response do not create any clique; 4 values created 1 clique, 3 values created 2 cliques, 1 value created 4 cliques and 1 value created 7 cliques. Figure 4.6 displays the network of values that create cliques with others.
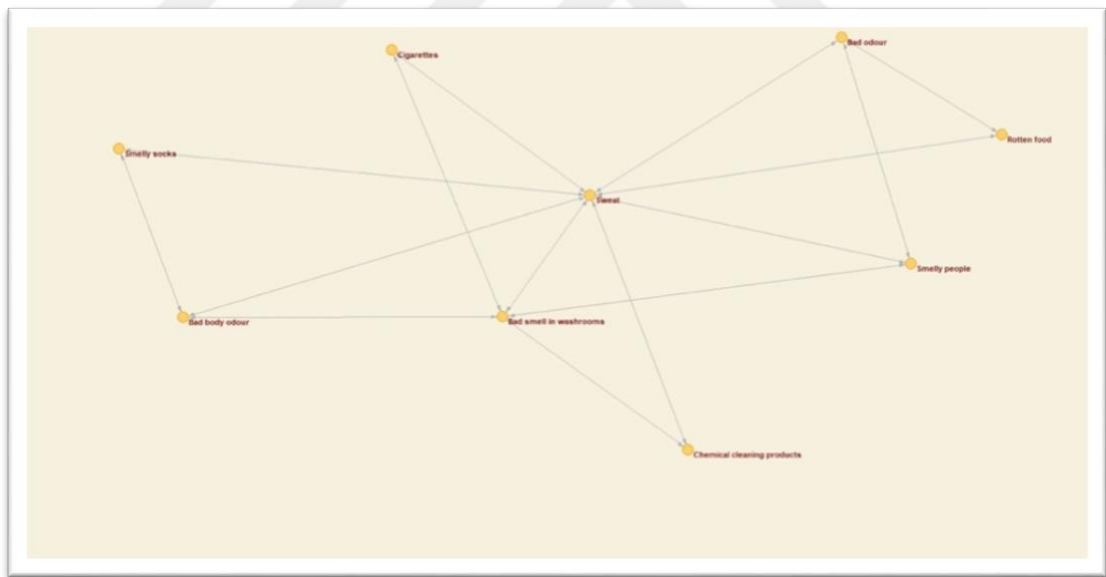
Figure 6. Directed Cliques of Attributes Respondents (Don't Want to Smell)

4.5 Articulation Point Analysis

The articulation point depicts the number of

"bridges or bi-components to which a vertex belongs" (Nooy, Mrvar and Batagelj, 2018, p. 173)

It is considered to be the glue that holds the networks together which means that its' removal results in the dissolution of the network. This removal would also cause the network to transform into an independent graph. Table 4.24 shows the articulation points of networks based on participant responses.

Table 22. Articulation Points (Liked Attributes in a Mall)

Value	Response
3	Variety of Shops
2	Staff
2	Affordable Products
2	Cleanliness (General)
2	Availability (Shops/ outlets)
2	Spacious
2	Cinema
2	Parking

Table 24 shows that 8 responses made up the basic structure of the network. The most important response with 3 articulation points for reasons participants liked a mall was *variety of shops*. This means that removal of this response would result in the separation of the network into 3 different and unconnected parts. The articulation points are not as many for *staff, affordable products, cleanliness (general), availability (shops/ outlets), spacious, cinema and parking*. However, these responses still hold the network together albeit not as strongly.

Table 23. Articulation Points (Idealized Attributes in a Mall)

Value	Response	Value	Response
3	Not crowded	2	Parking easily available
3	Cafes	2	Good lighting
3	Spacious	2	Celebrities
3	Glass windows/ roof	2	People
3	A lot of people	2	Disabled Person Access
3	Cleanliness General	2	Miniso
3	Big food court	2	Sales
3	Elevators	2	Lights
3	Inclusive for all social groups	2	Colourful
3	Play area (children)	2	Easy access
2	Modern	2	Escalators
2	Smells good	2	Availability (Brands)
2	Non-designer shops	2	Play area
2	Availability of favourite outlets/brands	2	Size (Big)
2	Loud music	2	Touch screens

Table 25 depicts the articulation points for responses to participants' description of an ideal mall for them. The responses that have 3 articulation points are *not crowded, café's, spacious, glass windows/roof, a lot of people, cleanliness (general), big food court, elevators, inclusive for all social groups and play area (children).* Responses with 2 articulation points are *modern, smells good, non-designer shops, availability of favourite outlets/brands, loud music, parking easily available, good lighting, celebrities, people, disabled person access, Miniso, sales, lights, colourful, easy access, escalators, availability (brands), play area, size (big) and touch screens*.

Table 24. Articulation Points (Reasons for Shopping at a Mall)

Value	Response	Value	Response
6	Close to my house	2	Availability (brands)
3	Events	2	Good entertainment
2	Big in size	2	Prayer area
2	Considered safe by my family	2	Variety of products
2	Convenient	2	Fulfils my needs
2	Good shops	2	Great food
2	Good atmosphere	2	Offers escape from reality
2	Big parking		

Table 26 shows responses of participants that describe their reasons for shopping at a particular mall. The response with the most number of articulation points i.e. 6 is *close to my house*. This means that removal of this response from the network would result in it dissolving into 6 parts. The second significant response is *events* with 3 articulation points. The responses with 2 articulation points are *big in size, considered safe by my family, convenient, good shops, good atmosphere, availability (brands), good entertainment, prayer area, variety of products, fulfils my needs, great food, offers escape from reality and big parking.*

Table 25. Articulation Points (Reasons for Disliking a Mall)

Value	Response	Value	Response
10	It is small	2	Dislike the type of people that visit
10	Parking issues	2	Noisy
6	Over crowded	2	No food court
5	Crowded	2	Uncomfortable environment
3	Very few shops	2	It is dirty
3	Congestion	2	Bad food
3	Smells bad	2	Lacks variety
3	Feel claustrophobic	2	Few visitors
2	Dark	2	Not spacious

Table 27 depicts the responses for the reasons participants disliked a mall. The response with the highest articulation point was *it is small and parking issues*. The other response with considerably higher articulation point of 6 was *over-crowded* whereas the response *crowded* had 5 articulation points. *Very few shops, congestion, smells bad and feel claustrophobic* had 3 articulation points. Furthermore, the responses with 2 articulation points were *dark, dislike the type of people that visit, noisy, no food court, uncomfortable environment, it is dirty, bad food, lacks variety, few visitors and not spacious.*

Table 26. Articulation Points (Don't Want to See)

Value	Response	Value	Response
7	A large crowd	2	Dim lights
5	Trash	2	Indecent crowd
4	Animals	2	Cockroaches
3	Rush	2	Litter
2	Garbage	2	Rude behaviour
2	Too many advertisements	2	Traffic
2	Cheap crowd	2	Snobbish people
2	Game shows	2	Dirt
2	Concerts	2	Paint peeling off
2	Loud sound	2	People that stare

The 20 nodes in table 28 represent the key responses that highlight things mall visitors *don't want to see*. The nodes which are holding the network together are; *a large crowd, trash, animals and rush* with the articulation points 7, 5, 4 and 3 respectively. With the other responses being low in frequency but still essential.

Table 27. Articulation Points (Want to See)

Value	Response	Value	Response
8	Overall cleanliness	2	Plants
3	Educated customers	2	Happy individuals
3	Families	2	Pets/Animals
3	More entertainment options	2	Good food
3	Good safety measures	2	Book stores
3	Variety of brands	2	Comfortable waiting areas
3	Friendly staff	2	Clear directions to shops
2	Friendly people	2	Easy access to all shops
2	Attractive displays	2	Seating areas
2	Fountains	2	Cafes

The answers holding the network together with high values for articulation points for things respondents *want to see* at the mall are; *overall cleanliness, educated customers, families, more entertainment options, good safety measures, variety of brands* and *friendly staff* with the articulation points 8, 3, 3, 3, 3, 3 and 3 respectively.

Table 28. Articulation Points (Don't Want to Hear)

Value	Response
4	Noise
3	Abusive language
3	Children crying
2	Single men
2	Loud music
2	Children talking back to their parents
2	Eve teasing
2	Music/ certain genres

In the above table, there are 8 nodes that represent the key articulation points for things respondents *don't want to hear* at the mall. The nodes which are holding the network together are; *noise, abusive language and children crying* with the articulation points 4, 4 and 3 respectively.

Table 29. Articulation Points (Want to Hear)

Value	Response	Value	Response
4	Soft music	2	Relaxing music
3	Pleasant music	2	Loud music
3	Announcements about sales and discounts	2	Old Pakistani songs
2	Music	2	Singing
2	Light music	2	Conversations between people
2	People talking politely	2	Pleasant conversations
2	Prayer call	2	Upbeat music
2	Good music		

In the table above, there are a total of 15 significant nodes which are the key articulation points for things respondents *want to hear* at the mall. The nodes which are holding the network together are; *soft music, pleasant music and announcements about sales and discounts* with the articulation points 4, 3 and 3 respectively.

Table 30. Articulation Points (Want to Touch)

Value	Response
2	Stuffed toys
2	Food
2	Cleanliness focused - clean surfaces and items
2	Touch screens

The table above depicts that there are 4 important nodes which display the articulation points for things respondents *want to touch* at the mall. The nodes which are holding the network together are; *stuffed toys, food, cleanliness focused - clean surfaces and items and touch screens* with the articulation points to be 2 for each.

Table 31. Articulation Points (Don't Want to Touch)

Value	Response	Value	Response
7	Dirty Bathroom surfaces	2	Dirty items
4	Sticky things	2	Dirty chairs
3	Dirty doors/door handles	2	Dirty glass paraphernalia
2	Dirty tables	2	Cheap quality items
2	Dirt	2	Wet tissues
2	Wet stuff	2	Rough things
2	Dirty surfaces	2	Spilled soda
2	Wet things		

Table 33 shows 15 nodes which are significant for gaging articulation points for things respondents *don't want to touch* at the mall. The nodes which are holding the network together are; *dirty bathroom surfaces, sticky things and dirty doors/door handles* with the articulation points 7, 4 and 3 respectively.

Table 32. Articulation Points (Want to Taste)

Value	Response	Value	Response
3	Ice cream	1	Lasagne
3	Desserts	1	Responsibly sourced meat
2	McDonalds	1	Sugar free Cinnabon
2	Chocolate/ chocolate flavoured items	1	Tasty beverages
2	Good food	1	Hotshots
2	Water	1	Smoothies
2	Fresh food	1	Baby corn
2	Milkshakes	1	Tea
1	Wholesome meals	1	Hot soup
1	Thai food	1	Specific restaurant name

The table above depicts 20 nodes which were the key articulation points of the main body for things respondents *want to taste* at the mall. The nodes which are holding the network together are; ice cream and desserts with the articulation points to be 3 for each.

Table 33. Articulation Points (Don't Want to Taste)

Value	Response	Value	Response
2	Ketchup	1	Frozen food
2	Spicy food	1	Dark chocolate
2	Dirt	1	Poop
2	Alcohol	1	Bad tea
2	Oily food	1	High salt processed food
2	Soda	1	Sodas
2	Food from unsanitary sources	1	Sweet rice
2	Sour consumables	1	Fanta
2	Juices	1	Chemicals
2	Yoghurt	1	Dry cake

In table 35 there are 20 nodes which are the key points of the main body of the reasons which are highlighted for things respondents *don't want to taste* at the mall. The nodes which are holding the network together are *ketchup, spicy food, dirt, alcohol, oily food, soda, food from unsanitary sources, sour consumables, juices and yogurt with the articulation points* to be 2 each.

Table 34. Articulation Points (Want to Smell)

Value	Response	Value	Response
3	Food	1	Zinger chicken
3	Coffee	1	Exotic food
3	Leather	1	Lemon grass
2	Flowers	1	Sugary desserts
2	Air fresheners	1	Sweet scents
2	Mint	1	Good perfumes
1	Baby powder	1	Fresh salads and vegetables
1	Air conditioner smell	1	Ensure that the food I order is fresh
1	Fried food	1	Herbs and exotic spices
1	Freshly mopped floors	1	Chai

In the table above there are 20 nodes which are the key points of the main body of the reasons which are highlighted for things respondents *want to smell* at the mall. The nodes which are holding the network together are; *food, coffee, leather, flowers, air fresheners and mint* with the articulation points to be 3, 3, 3, 2, 2 and 2 respectively.

Table 35. Articulation Points (Don't Want to Smell)

Value	Response	Value	Response
3	Sweat	1	Cinnamon
3	Smelly socks	1	Curdled milk
2	Strong air fresheners	1	Coconut oil in women's hair
2	Smelly food	1	Stuffy air
2	Bad body odour	1	Mouldy air
2	Dirty diapers	1	Sewage
2	Smelly people	1	Dettol
2	Bad odour	1	McDonalds
2	Stale air	1	Urine
1	Over dose of perfume	1	Smelly shops

Table 37 shows that there are 20 nodes which are the key points of the main body of the reasons which are highlighted for things respondents *don't want to smell* at the mall. The nodes which are holding the network together are; *sweat, smelly socks, strong air fresheners, smelly food, bad body odour, dirty diapers, smelly people, bad odour and stale air* with the articulation points to be 3, 3, 2, 2, 2, 2, 2, 2 and 2 respectively.

4.6 Input Degree Analysis

The degree centrality encompasses input degree which is the dimension of the former. The social power of a vertex is represented by the centrality emanating from the connections it holds. The metrics which are catered in centrality are called "degree", "closeness" and "betweenness". The relationships between two nodes is called degree centrality. Input and output degrees are calculated for directed networks only (Nooy, Mrvar and Batagelj, 2018).

The input degree involves counting the directed lines. In a directed network the lines which are coming towards or away from the node are of importance. The popularity of a node is measured through the input degree (Brandes and Erlebach,

2005). Tables below depict the input degree values for each node having ranked as first 20 in all the networks.

Table 36. Attributes Respondents Liked in the Mall

Rank	Vertex	Value	Response
1	6	4.387	Variety of Shops
2	21	4.387	Food court
3	54	3.1641	Environment
4	36	3.1641	Parking
5	3	2.8584	Cleanliness (General)
6	12	2.2469	Spacious
7	29	1.9412	Shops
8	48	1.9412	Cinema
9	4	1.9412	Variety (Brands)
10	27	1.6355	Close to my house
11	11	1.6355	The atmosphere
12	71	1.3298	Parking lot size
13	65	1.3298	Favourite outlets/brands
14	55	1.0241	Availability (Shops/outlets)
15	101	1.0241	Safety
16	9	1.0241	The decorations
17	37	1.0241	Location
18	18	1.0241	Availability (Brands)
19	70	1.0241	Variety
20	85	0.7183	Food variety

In table 38, the most valued attributes people liked are *variety of shops, food court and environment* while all others i.e., *parking, cleanliness (general), spacious, shops, cinema, variety (brands), close to my house, the atmosphere, parking lot size, favourite outlets/brands, availability (shops/outlets), safety, the decorations, location, availability (brands), variety and food variety*, were lesser valued.

Table 37. Attributes Respondents Idealized in a Mall

Rank	Vertex	Value	Response
1	97	4.83	Good lighting
2	23	4.83	Cleanliness (General)
3	22	4.31	Food court
4	158	4.31	Play area (children)
5	49	3.78	Spacious
6	1	3.26	Parking easily available
7	55	2.21	Good food
8	192	2.21	Greenery
9	33	2.21	Safety
10	28	1.68	Smells good
11	107	1.68	Live performances
12	152	1.68	Good parking
13	139	1.68	Clean
14	32	1.68	Variety (Shops)
15	131	1.68	Size (Big)
16	57	1.16	Non-designer shops
17	27	1.16	Not crowded

The table 39 displays the responses for most valued attributes people idealized in a mall are *good lighting, cleanliness (general) and food court* while all others i.e., *play area (children), spacious, parking easily available, good food, greenery/plants*

inside mall, safety, smells good, live indoor music performances, good parking, clean, variety (shops), size (big), non-designer shops, not crowded, a lot of facilities for shoppers, cafes and lots of shops, are lesser valued.

Table 38. Shopping Reasons

Rank	Vertex	Value	Response
1	5	4.9653	Close to my house
2	20	4.2355	Cleanliness
3	59	3.1408	Food court
4	12	2.7759	Availability (Brands)
5	42	2.7759	Cinema
6	15	2.0461	Good security measures
7	120	2.0461	Play place (children)
8	21	2.0461	Great food
9	25	1.6812	Good Entertainment
10	24	1.6812	Spacious
11	49	1.6812	Variety (Shops/outlets)
12	99	1.6812	Not crowded
13	46	1.6812	Good Environment
14	4	1.6812	Competitive prices
15	14	1.3163	Big in size
16	104	1.3163	Good atmosphere
17	6	1.3163	Favourite outlets/brands

In table 40, the most important responses for *reasons for shopping at this mall* were *close to my house, cleanliness and food court*, while all others i.e., *availability (brands), cinema, good security measures, play place (children), great food, good entertainment, spacious, variety (shops/outlets), not crowded, good environment, competitive prices, big in size, good atmosphere, favourite outlets/brands, the kind of people that visit the mall, events and easily accessible* were the lesser valued ones.

Table 39. Dislike Reasons For Least Favourite Mall

Rank	Vertex	Value	Response
1	27	11.876	Parking issues
2	6	2.7812	It is small
3	89	2.7812	Smells bad
4	10	2.2759	Lacks variety
5	164	2.2759	Not enough brand outlets
6	50	1.7706	Crowded
7	24	1.7706	Congestion
8	96	1.7706	Uncomfortable environment
9	5	1.7706	It is dirty
10	21	1.7706	Few visitors
11	20	1.7706	Dark
12	238	1.2653	Noisy
13	13	1.2653	Over crowded
14	108	1.2653	Very few shops
15	194	1.2653	Small food court
16	188	1.2653	Outdated stocks

In table 41, the most valued attributes people mentioned were *parking issues, it is small, smells bad, lacks variety and not enough brand outlets*.

Table 40. Attributes Don't Want to See at the Mall

Rank	Vertex	Value	Response
1	16	6.2585	Trash
2	1	4.9168	A large crowd
3	24	4.0224	Litter
4	15	3.1279	Garbage
5	36	2.6807	Dirty washroom/rest room
6	105	2.2335	Single boys/ men
7	93	2.2335	Unattended children
8	38	2.2335	Dirt
9	18	2.2335	People that stare
10	6	1.7863	Cheap crowd
11	66	1.7863	Judgemental people
12	121	1.3391	Uneducated people
13	112	1.3391	Dull environment
14	52	1.3391	Concerts
15	9	1.3391	Animals
16	27	0.8919	Children
17	46	0.8919	Rush
18	173	0.8919	Expensive brands/products

In table 4.42, the most valued attributes people mentioned pertaining to things they *don't want to see* at the mall were *trash, a large crowd, litter, garbage and dirty washroom/rest room.*

Table 41. Attributes Respondents Want to See at the Mall

Rank	Vertex	Value	Response
1	40	8.8145	Overall cleanliness
2	20	4.758	Lighting oriented
3	41	4.251	Good safety measures
4	72	3.2368	Friendly staff
5	17	3.2368	Live performances
6	7	2.7298	Friendly people
7	191	2.2227	Clear directions to shops
8	151	1.7157	Variety of brands
9	30	1.2086	Sales
10	58	1.2086	Events
11	23	1.2086	Families
12	185	1.2086	Seating areas
13	171	1.2086	More restaurants
14	169	1.2086	People laughing
15	10	1.2086	More entertainment options
16	161	1.2086	Dustbins
17	75	1.2086	Food festivals
18	68	1.2086	Decorations

In table 4.43, the most valued attributes people mentioned were *overall cleanliness, lighting oriented, good safety measures, friendly staff and live performances*.

Table 42. Don't Want To Hear

Rank	Vertex	Value	Response
1	7	4.04	Abusive language
2	5	4.04	Loud music
3	18	3.19	Adults and or children screaming
4	2	2.63	Children crying
5	14	2.35	Rude comments
6	8	2.35	Eye teasing
7	17	2.35	Noise
8	12	2.07	Babies crying
9	25	2.07	Arguments
10	29	1.79	Fighting
11	16	1.79	Music/ certain genres
12	28	1.5	People shouting
13	66	0.94	Machinery noise
14	15	0.66	Songs
15	13	0.66	Announcements on PA system
16	53	0.66	People speaking loudly
17	64	0.66	Bargaining
18	89	0.38	Animals

In table, the most valued attributes people didn't want to hear were *abusive language, loud music, adults and or children screaming, children crying and rude comments*.

Table 43. Want To Hear

Rank	Vertex	Value	Response
1	3	7.43	Laughter
2	28	3.6614	Prayer call
3	35	3.6614	Announcements about sales and discounts
4	81	2.7918	Birds chirping
5	14	2.212	Soft music
6	50	2.212	Sound of water
7	30	1.9221	People talking politely
8	18	1.9221	Friendly chatter
9	37	1.9221	Live music
10	93	1.3423	Announcements (general)
11	43	1.3423	Conversations between people
12	41	1.3423	Concerts
13	52	1.0524	Catchy tunes
14	32	1.0524	Light instrumental music
15	51	0.7625	Soft chatter of people
16	95	0.7625	People speaking in English

In the table above, the most valued attributes people wanted to hear were *laughter, prayer call, announcements about sales and discounts, birds chirping and soft music*.

Table 44. Want To Touch

Rank	Vertex	Value	Response
1	3	5.971	Clothes
2	2	3.6287	Cleanliness focused - clean surfaces and items
3	12	3.2941	Food
4	20	2.6248	Shoes
5	1	1.2864	Fabrics
6	48	1.2864	Watches
7	9	1.2864	Soft surfaces
8	16	1.2864	Jewellery
9	15	0.9518	Decorations
10	10	0.9518	Books
11	27	0.6172	Make-up products
12	25	0.6172	Flowers
13	19	0.6172	Electronic gadgets
14	33	0.6172	Fluffy items
15	56	0.2826	Wallets

In table above, the most valued attributes people wanted to touch were *clothes, cleanliness focused - clean surfaces and items, food, shoes and fabrics.*

Table 45. Don't Want To Touch

Rank	Vertex	Value	Response
1	27	8.93	Dirty Bathroom surfaces
2	15	3.33	Dirty tables
3	5	2.95	Dirty surfaces
4	48	2.58	Dirty glass paraphernalia
5	1	2.21	People
6	87	2.21	Dirty used tissues
7	29	1.83	Dirt
8	3	1.83	Railings
9	78	1.83	Dirty railings
10	22	1.46	Trash cans
11	21	1.46	Sticky things
12	20	1.46	Wet things
13	73	1.46	Elevator buttons
14	14	1.09	Animals
15	51	1.09	Wet surfaces
16	45	1.09	Dirty doors/door handles
17	37	1.09	Floor
18	126	0.71	Escalator railings
19	125	0.71	Dirty flushes

In the table above, the most valued attributes people didn't want to touch were *dirty bathroom surfaces, dirty tables, dirty surfaces, dirty glass paraphernalia and people.*

Table 46. Want To Taste

Rank	Vertex	Value	Response
1	26	6.6352	Ice cream
2	17	3.4667	Desserts
3	14	2.7355	Chocolate/ chocolate flavored items
4	11	2.4917	Pizza
5	10	2.248	Coffee
6	8	2.248	Street food
7	28	1.2731	Fries
8	57	1.0294	Pasta
9	6	1.0294	Food samples
10	12	1.0294	Popcorn
11	29	0.7856	Steak
12	9	0.7856	Burgers
13	73	0.7856	Variety of cuisine
14	31	0.5419	McDonalds
15	68	0.5419	Chinese cuisine
16	15	0.2982	Cinnamon rolls
17	59	0.2982	Snacks
18	7	0.2982	International cuisine

In table above, the most valued responses for people in the items that they wanted to taste were *ice cream, desserts, chocolate/ chocolate flavoured items, pizza and coffee.*

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Table 47. Don't Want To Taste

Rank	Vertex	Value	Response
1	4	4.1074	Old food
2	1	3.3854	Rotten food
3	3	2.6635	Haraam food
4	18	2.6635	Fish
5	61	2.3025	Tasteless food
6	6	2.3025	Salty food
7	13	2.3025	Spicy food
8	12	2.3025	Undercooked food
9	20	2.3025	Food from unsanitary sources
10	23	1.9416	Raw food
11	34	1.9416	Burnt food
12	66	1.9416	Unhealthy food
13	62	1.5806	Bland food
14	58	1.5806	Cold food
15	51	1.5806	Bitter tasting food
16	11	1.5806	Oily food
17	21	1.2196	Onions
18	83	1.2196	Over cooked food
19	2	1.2196	Alcohol

In table above, the most valued attributes people didn't want to taste were *old food, rotten food, haram food, fish and tasteless food.*

Table 48. Input Degree for Want To Smell

Rank	Vertex	Value	Response
1	12	4.1569	Air fresheners
2	6	3.8994	Food
3	1	3.3843	Perfumes
4	5	3.1268	Coffee
5	15	2.6117	Flowers
6	19	1.8391	Fries
7	13	1.5816	Fresh air
8	26	1.5816	Cinnamon
9	27	1.324	Baked items
10	75	1.324	Books
11	22	1.0665	Leather
12	10	1.0665	Scented candles
13	51	0.5515	Vanilla
14	39	0.5515	New clothes
15	38	0.5515	Fresh food
16	60	0.2939	Chocolate
17	28	0.2939	Popcorn
18	86	0.2939	Mint
19	79	0.2939	Sweet scents
20	24	0.0364	Candles

The most valued attributes people wanted to smell were *air fresheners, food, perfumes, coffee and flowers.*

Table 49. Input Degree for Don't Want To Smell

Rank	Vertex	Value	Response
1	3	7.0695	Sweat
2	1	4.2017	Bad smell in washrooms
3	20	2.8781	Smelly people
4	11	1.5545	Bad body odour
5	34	1.5545	Smelly socks
6	7	1.3339	Dirty mops
7	21	1.3339	Dirty diapers
8	37	1.3339	Bad odour
9	23	1.1133	Garbage
10	33	1.1133	Rotten food
11	26	0.8927	Farts
12	9	0.8927	Chemical cleaning products
13	18	0.8927	Cigarettes
14	85	0.6721	Strong cologne
15	2	0.4515	Strong perfumes
16	22	0.4515	Smelly feet
17	44	0.4515	Poop
18	4	0.4515	Trash
19	59	0.2309	Garlic

In table above, the most valued attributes people didn't want to smell were *sweat, bad smell in washrooms, smelly people, bad body odour and smelly socks.*

4.7   Output Degree Analysis

Output degree is a measure of degree centrality similar to input degree. Output degree is the number of lines which are diverging towards other nodes from a given node. Output degree is not the same as input degree since it shows outgoingness of a network (Nooy, Mrvar and Batagelj, 2018). The tables below present the top values in terms of output degree in all the networks generated for the attributes that were important for the respondents concerning shopping mall.

Table 50. Output degree for three Attributes Respondents Liked in a Mall

Rank	Vertex	Value	Response
1	12	6.528	Spacious
2	3	4.2983	Cleanliness (General)
3	21	4.0506	Food court
4	6	3.0596	Variety of Shops
5	36	2.0686	Parking
6	29	1.3253	Shops
7	42	1.3253	The big size
8	4	1.3253	Variety (Brands)
9	27	0.8298	Close to my house
10	55	0.8298	Availability (Shops/outlets)
11	48	0.8298	Cinema
12	5	0.8298	The small size
13	32	0.8298	Imported items
14	7	0.5821	Mall design
15	25	0.5821	The kind of people that visit the mall
16	1	0.5821	Security
17	11	0.5821	The atmosphere
18	23	0.5821	The architecture
19	22	0.5821	Beautiful building (Exterior)
20	19	0.5821	Good Ambience

Spacious, Cleanliness (General), Food court, Variety of Shops and Parking lot were the important attributes. Output degree of "variety of shops" is also significant since it is closer to the other values in the network.

Table 51. Output Degree for Attributes Respondents Idealized in a Mall

Rank	Vertex	Value	Response
1	49	6.6822	Spacious
2	23	5.3636	Cleanliness (General)
3	22	5.3636	Food court
4	1	3.6055	Parking easily available
5	2	3.1659	A lot of people
6	16	2.7264	A lot of entertainment
7	11	1.8473	Good atmosphere
8	70	1.8473	Shops
9	12	1.4078	Friendly people
10	97	1.4078	Good lighting
11	46	1.4078	Big food court
12	44	1.4078	Big parking area
13	42	1.4078	Elevators
14	75	1.4078	Escalators
15	74	1.4078	Nicely designed resting area
16	15	0.9683	Open
17	62	0.9683	Fountains
18	58	0.9683	Modern
19	55	0.9683	Good food

Spacious, Cleanliness (General), Food court, Parking and a lot of people were the important attributes. Output degree of "variety" is significant since it is closer to other values in the network.

Table 52. Output Degree For Shopping Reasons

Rank	Vertex	Value	Response
1	5	8.886	Close to my house
2	6	4.401	Favourite outlets/brands
3	12	3.3332	Availability (Brands)
4	13	2.2654	Convenient
5	49	1.6246	Variety (Shops/outlets)
6	1	1.6246	Variety (clothing shops/outlets)
7	24	1.1975	Spacious
8	20	1.1975	Cleanliness
9	14	0.7704	Big in size
10	11	0.7704	Lots of variety
11	10	0.7704	Fulfils my needs
12	4	0.7704	Competitive prices
13	36	0.7704	The kind of people that visit the mall
14	15	0.5568	Good security measures
15	32	0.5568	Convenient location
16	59	0.3432	Food court
17	58	0.3432	Considered safe by family
18	46	0.3432	Good Environment

Close to my house, favourite outlets/brands, availability (brands), convenient and variety (shops/outlets) were the important attributes.

Table 53. Output Degree for dislike reasons for the Least Favourite Mall

Rank	Vertex	Value	Response
1	6	9.7057	It is small
2	27	7.5884	Parking issues
3	13	3.7067	Over crowded
4	24	3.3538	Congestion
5	10	3.3538	Lacks variety
6	5	3.0009	It is dirty
7	20	2.648	Dark
8	50	2.2952	Crowded
9	17	1.5894	Feel claustrophobic
10	52	1.2365	No food court
11	14	0.8836	Dislike the type of people that visit
12	35	0.8836	Too big
13	7	0.5308	Cramped
14	1	0.5308	Few food options
15	89	0.5308	Smells bad
16	21	0.5308	Few visitors
17	43	0.5308	Traffic
18	40	0.5308	No variety
19	19	0.5308	Not enough security
20	78	0.5308	Too far

It is small, parking issues, over crowded, congestion and lacks variety were the important attributes. Output degree of "*parking issues*" is also significant since it is closer to other values in the network.

Table 54. Output Degree For Don't Want To See

Rank	Vertex	Value	Response
1	1	7.9925	A large crowd
2	16	5.7873	Trash
3	6	3.8577	Cheap crowd
4	24	3.582	Litter
5	9	3.3063	Animals
6	15	2.4794	Garbage
7	2	1.928	Snobbish people
8	30	1.1011	Harassment
9	19	1.1011	Disrespectful customers
10	18	1.1011	People that stare
11	7	0.8254	Rubbish
12	25	0.8254	Dim lights
13	46	0.8254	Rush
14	38	0.8254	Dirt
15	60	0.5497	Filth
16	27	0.5497	Children
17	5	0.5497	Rude people
18	21	0.5497	Rowdy people
19	42	0.5497	Pickpockets
20	20	0.5497	People I don't like

A large crowd, trash, cheap crowd, litter and animals were the important attributes. Output degree of "*trash*" is significant since it is closer to other values in the network.

Table 55. Output Degree For Want To See

Rank	Vertex	Value	Response
1	40	9.9433	Overall cleanliness
2	41	4.1684	Good safety measures
3	3	3.7242	Educated customers
4	20	2.8357	Lighting oriented
5	7	2.3915	Friendly people
6	1	1.9473	Discipline
7	10	1.9473	More entertainment options
8	35	1.9473	Food
9	25	1.5031	Happy individuals
10	50	1.5031	Pets/Animals
11	24	1.5031	Good food
12	15	1.0588	Attractive displays
13	31	1.0588	Fountains
14	30	1.0588	Sales
15	61	1.0588	Activities
16	6	1.0588	Plants
17	49	1.0588	Book stores
18	23	1.0588	Families
19	45	1.0588	More outlets/shops

Overall cleanliness, good safety measures, educated customers, lighting oriented and friendly people were the important attributes.

Table 56. Output Degree for Don't Want to Hear

Rank	Vertex	Value	Response
1	5	5.3653	Loud music
2	17	4.3466	Noise
3	12	3.9391	Babies crying
4	2	3.3279	Children crying
5	7	2.1054	Abusive language
6	18	2.1054	Adults and or children screaming
7	14	1.6979	Rude comments
8	16	1.2904	Music/ certain genres
9	13	1.0867	Announcements on PA system
10	8	1.0867	Eye teasing
11	28	0.8829	People shouting
12	29	0.6792	Fighting
13	25	0.6792	Arguments
14	24	0.4754	Yelling
15	19	0.4754	Ill-mannered people
16	15	0.2717	Songs
17	30	0.0679	Inappropriate songs
18	41	0.0679	Loud people
19	40	0.0679	Loud chatter

Loud music, noise, babies crying, children crying and abusive language were the important attributes. Output degree of "*abusive language*" and "*adults and/or children screaming*" was also significant since it was closer to other values in the network.

Table 57. Output Degree For Want To Hear

Rank	Vertex	Value	Response
1	14	5.9479	Soft music
2	16	4.4377	Good music
3	3	3.1792	Laughter
4	28	3.1792	Prayer call
5	1	2.9275	Music
6	4	2.6758	Pleasant music
7	35	2.1723	Announcements about sales and discounts
8	6	1.9206	Relaxing music
9	15	1.6689	Light music
10	17	1.6689	Songs
11	5	1.4172	Soothing music
12	37	1.4172	Live music
13	2	1.4172	Quranic verses
14	8	1.4172	Latest music
15	30	0.9138	People talking politely
16	9	0.9138	Upbeat music
17	32	0.9138	Light instrumental music

Soft music, good music, laughter, prayer call and music were the important attributes. Output degree of *"pleasant music and announcements about sales and discounts"* was significant since it was closer to other values in the network.

Table 58. Output Degree For Want To Touch

Rank	Vertex	Value	Response
1	3	4.5344	Clothes
2	1	4.2803	Fabrics
3	25	3.2639	Flowers
4	2	3.2639	Cleanliness focused - clean surfaces and items
5	12	2.5015	Food
6	20	1.7392	Shoes
7	15	1.4851	Decorations
8	16	1.231	Jewellery
9	6	0.9769	Stuffed toys
10	5	0.9769	Touch screens
11	13	0.4687	Silk
12	9	0.4687	Soft surfaces
13	4	0.4687	Items I purchase
14	34	0.4687	Good quality products
15	33	0.4687	Fluffy items
16	10	0.2146	Books
17	35	0.2146	Plants
18	7	-0.0395	Stationary
19	31	-0.0395	Cozy sofas

Clothes, fabrics, flowers, cleanliness focused - clean surfaces and items and food were the important attributes.

Table 59. Output Degree For Don't Want To Touch

Rank	Vertex	Value	Response
1	27	8.828	Dirty Bathroom surfaces
2	1	4.6961	People
3	15	3.5156	Dirty tables
4	5	2.335	Dirty surfaces
5	29	2.0399	Dirt
6	45	2.0399	Dirty doors/door handles
7	21	1.7448	Sticky things
8	9	1.7448	Sticky tables
9	56	1.4496	Dirty furniture
10	14	1.1545	Animals
11	48	1.1545	Dirty glass paraphernalia
12	20	1.1545	Wet things
13	30	0.8594	Escalators
14	60	0.8594	Insects
15	59	0.8594	Dirty walls
16	57	0.8594	Cobwebs
17	26	0.8594	Dirty items
18	12	0.8594	Dirty chairs
19	23	0.8594	Garbage

Dirty bathroom surfaces, people, dirty tables, dirty surfaces and dirt were the important attributes. Output degree of "*dirty doors/door handles*" was significant since it was closer to other values in the network.

Table 60. Output Degree For Want To Taste

Rank	Vertex	Value	Response
1	26	5.6408	Ice cream
2	5	3.4547	Good food
3	17	3.2118	Desserts
4	11	2.9689	Pizza
5	6	2.2403	Food samples
6	10	1.9974	Coffee
7	9	1.9974	Burgers
8	21	1.5116	Fresh food
9	14	1.2687	Chocolate/ chocolate flavored items
10	7	1.0258	International cuisine
11	29	0.7829	Steak
12	28	0.7829	Fries
13	12	0.7829	Popcorn
14	19	0.7829	Desi food
15	35	0.7829	Fresh salads
16	34	0.7829	Delicious food
17	15	0.54	Cinnamon rolls
18	36	0.54	Milkshakes
19	30	0.2971	Donuts

Ice cream, good food, desserts, pizza and food samples were the important attributes. Output degree of "*coffee and burgers*" was significant since it was closer to other values in the network.

Table 61. Output Degree For Don't Want To Taste

Rank	Vertex	Value	Response
1	4	4.6358	Old food
2	1	4.3691	Rotten food
3	36	4.1023	Food that tastes bad
4	3	3.3021	Haram food
5	34	2.7686	Burnt food
6	12	2.2351	Undercooked food
7	2	1.9683	Alcohol
8	11	1.7016	Oily food
9	20	1.7016	Food from unsanitary sources
10	23	1.4348	Raw food
11	46	1.4348	Expired consumables
12	13	1.1681	Spicy food
13	51	1.1681	Bitter tasting food
14	50	1.1681	Sushi
15	21	1.1681	Onions
16	41	1.1681	Sour consumables
17	8	1.1681	Vegetables
18	33	1.1681	Burgers
19	14	0.9013	Desi food

Old food, rotten food, food that tastes bad, haram food and burnt food were the important attributes. Output degree of "*undercooked food and alcohol*" was significant since it was closer to other values in the network.

Table 62. Output Degree For Want To Smell

Rank	Vertex	Value	Response
1	1	6.1205	Perfumes
2	15	3.6838	Flowers
3	6	2.8716	Food
4	12	2.6685	Air fresheners
5	5	2.6685	Coffee
6	11	1.4501	Good fragrance
7	3	0.8409	Pleasant smells
8	13	0.6379	Fresh air
9	27	0.6379	Baked items
10	26	0.6379	Cinnamon
11	10	0.6379	Scented candles
12	18	0.6379	Fresh aromas
13	2	0.4348	Ittar
14	20	0.4348	Cologne
15	4	0.4348	Lavender
16	36	0.4348	Cleaning materials
17	8	0.4348	Ager batti (perfumed essence)
18	28	0.2318	Popcorn
19	19	0.2318	Fries

Perfumes, flowers, food, air fresheners and coffee were the important attributes.

Table 63. Output Degree For Don't Want To Smell

Rank	Vertex	Value	Response
1	3	6.4938	Sweat
2	1	4.1164	Bad smell in washrooms
3	11	3.2519	Bad body odour
4	26	1.9552	Farts
5	20	1.7391	Smelly people
6	9	1.7391	Chemical cleaning products
7	21	1.523	Dirty diapers
8	30	1.3068	Strong air fresheners
9	2	1.3068	Strong perfumes
10	4	1.3068	Trash
11	37	1.3068	Bad odour
12	22	0.8746	Smelly feet
13	34	0.8746	Smelly socks
14	15	0.4423	Bad breath
15	23	0.4423	Garbage
16	45	0.4423	Vomit
17	44	0.4423	Poop
18	31	0.2262	Cigarettes
19	7	0.2262	Dirty mops
20	28	0.2262	Coffee

Sweat, bad smell in washrooms, bad body odour, farts and smelly people were the important attributes. Output degree of "*chemical cleaning products*" was significant since it was closer to other values in the network.

4.8   Input Closeness Analysis

The closeness centrality of a vertex is based on the total distance between one vertex and all other vertices, where larger distances yield lower closeness centrality scores (Carrington, Scott and Wasserman, 2005). The closeness is considered as the displacement i.e., the shortest distance, between the two points. The directed networks sometimes have some unavailable directions because of the directed nature of the networks; thus, input closeness encompasses the shortest of the paths. Closeness is also termed as "geodesic distance" (Scott and Carrington, 2014). Same as the degree centrality, this closeness signals that how much a node is accessible. Top input closeness values are shown in each table below for each network along with their interpretation.

Table 64. Input Closeness for three Attributes Respondents Liked in Malls

Rank	Vertex	Value	Response
1	21	1.7294	Food court
2	36	1.5055	Parking
3	54	1.4711	Environment
4	6	1.3721	Variety of Shops
5	11	1.2942	The atmosphere
6	29	1.2203	Shops
7	4	1.2203	Variety (Brands)
8	48	1.206	Cinema
9	12	1.1229	Spacious
10	37	1.0962	Location
11	71	1.0572	Parking lot size
12	9	0.9946	The decorations
13	65	0.9466	Favorite outlets/brands
14	76	0.9174	Entertainment options
15	110	0.9062	Great customer service
16	3	0.9002	Cleanliness (General)
17	101	0.8731	Safety

Input closeness degrees of the significant nodes in the network of attributes respondents liked about the mall are close to each other. "Food court", "Parking", "Environment", "Variety of Shops" and "the atmosphere" are the most central nodes in the network.

Table 65. Input Closeness for three Attributes Respondents Idealized in a Mall

Rank	Vertex	Value	Response
1	23	2.1029	Cleanliness (General)
2	97	1.9546	Good lighting
3	33	1.8431	Safety
4	49	1.7846	Spacious
5	22	1.6427	Food court
6	170	1.5962	Organized
7	158	1.574	Play area (children)
8	131	1.5523	Size (Big)
9	195	1.5108	Well furnished
10	32	1.4953	Variety (Shops)
11	104	1.4677	Prayer area
12	110	1.4658	Friendly customer service
13	192	1.4311	Greenery/plants inside mall
14	66	1.423	Clothing outlets/stores/shops
15	21	1.3969	Decorations (Interior)
16	168	1.3965	High ceilings
17	139	1.3914	Clean

Input closeness degrees of the significant nodes in the input closeness for three attributes respondents idealized in a mall are close to each other. Cleanliness (General), Good lighting, Safety, Spacious and Food court are the most central nodes in the network.

Table 66. Input closeness for Shopping Reasons

Rank	Vertex	Value	Response
1	42	1.5019	Cinema
2	20	1.4497	Cleanliness
3	5	1.4159	Close to my house
4	99	1.3551	Not crowded
5	120	1.3303	Play place (children)
6	46	1.2421	Good Environment
7	12	1.2272	Availability (Brands)
8	24	1.1553	Spacious
9	59	1.1413	Food court
10	49	1.1138	Variety (Shops/outlets)
11	60	1.1002	Events
12	6	1.0343	Favourite outlets/brands
13	21	1.0343	Great food
14	36	1.0215	The kind of people that visit the mall
15	35	0.9714	Parking spot easy to find
16	15	0.9592	Good security measures
17	105	0.8997	Has a grocery store

Input closeness degrees of the significant nodes in the input closeness for shopping reasons are close to each other. cinema, Cleanliness, Close to my house, not crowded and Play place (children) are the most central nodes in the network.

Table 67. Input closeness for dislike reasons for the Least Favorite Mall

Rank	Vertex	Value	Response
1	27	2.6758	Parking issues
2	6	2.0311	It is small
3	188	1.9949	Outdated stocks
4	5	1.9601	It is dirty
5	164	1.8792	Not enough brand outlets
6	74	1.876	Cheap crowd
7	24	1.7815	Congestion
8	231	1.7011	Not a good variety of shops
9	108	1.6927	Very few shops
10	194	1.6927	Small food court
11	10	1.6241	Lacks variety
12	207	1.6204	Has more outlets for eating than buying clothes or shoes from
13	211	1.6181	Unorganized food courts
14	199	1.6181	Shops don't have a lot of merchandise
15	183	1.6181	Very few food chains to choose from
16	161	1.582	People use foul language
17	213	1.5694	Food court isn't there

Input closeness degrees of the significant nodes in the network of dislike reasons for the least favourite mall are close to each other. Parking issues, it is small, Outdated stocks, it is dirty and Not enough brand outlets are the most central nodes in the network.

Table 68. Input closeness for Don't Want To See

Rank	Vertex	Value	Response
1	16	1.5741	Trash
2	93	1.5323	Unattended children
3	1	1.3759	A large crowd
4	15	1.3514	Garbage
5	24	1.3273	Litter
6	105	1.2804	Single boys/ men
7	164	1.211	Untidy
8	112	1.1803	Dull environment
9	36	1.1803	Dirty washroom/rest room
10	18	1.1696	People that stare
11	121	1.1381	Uneducated people
12	142	1.1139	Damaged escalators
13	173	1.1094	Expensive brands/products
14	19	1.0872	Disrespectful customers
15	27	1.0576	Children
16	125	1.0311	Noise
17	25	1.0218	Dim lights

Input closeness degrees of the significant nodes in the network of attributes which respondents didn't want to see at the malls were close to each other. Parking issues, it is small, Outdated stocks, it is dirty and Not enough brand outlets are the most central nodes in the network.

Table 69. Input Closeness for Want To See

Rank	Vertex	Value	Response
1	40	2.4159	Overall cleanliness
2	72	2.0895	Friendly staff
3	17	2.0773	Live performances
4	191	1.9994	Clear directions to shops
5	20	1.9947	Lighting oriented
6	41	1.972	Good safety measures
7	143	1.8427	Azaan
8	151	1.7702	Variety of brands
9	209	1.7592	Festivals
10	10	1.7532	More entertainment options
11	183	1.7498	Equal treatment for everyone
12	161	1.722	Dustbins
13	30	1.7154	Sales
14	34	1.6677	Disabled Person Support
15	218	1.6173	More wheel chairs
16	210	1.6173	Nice brands
17	207	1.6173	Good restaurants

Input closeness degrees of the significant nodes in the network of want to see are close to each other. Overall cleanliness, Friendly staff, Live performances, Clear directions to shops and Lighting oriented are the most central nodes in the network.

Table 70. Input closeness for Don't Want To Hear

Rank	Vertex	Value	Response
1	7	1.6931	Abusive language
2	18	1.5462	Adults and or children screaming
3	5	1.5183	Loud music
4	25	1.2635	Arguments
5	14	1.2402	Rude comments
6	2	1.2402	Children crying
7	17	1.2173	Noise
8	8	1.1947	Eye teasing
9	29	1.1076	Fighting
10	53	1.0058	People speaking loudly
11	16	1.0058	Music/ certain genres
12	28	0.9294	People shouting
13	12	0.911	Babies crying
14	66	0.911	Machinery noise
15	15	0.8749	Songs
16	40	0.7238	Loud chatter
17	13	0.6926	Announcements on PA system

Input closeness degrees of the significant nodes in the Network of Don't want to hear are close to each other. Abusive language, Adults and or children screaming, Loud music, Arguments and Rude comments are the most central nodes in the network.

Table 71. Input Closeness for Want To Hear

Rank	Vertex	Value	Response
1	3	2.1767	Laughter
2	35	1.8043	Announcements about sales and discounts
3	81	1.4214	Birds chirping
4	28	1.3909	Prayer call
5	30	1.2891	People talking politely
6	93	1.2341	Announcements (general)
7	50	1.1683	Sound of water
8	32	1.1303	Light instrumental music
9	14	1.1056	Soft music
10	51	1.1056	Soft chatter of people
11	52	1.0934	Catchy tunes
12	125	1.064	Sound of coffee machines
13	117	1.064	Children's chatter
14	109	1.064	People placing food orders in the food court
15	37	1.0226	Live music
16	126	1.0186	Shopworkers with a professional manner of speaking
17	129	1.0186	Sound of tea being poured

Input closeness degrees of the significant nodes in the network of want to hear are close to each other. Laughter, Announcements about sales and discounts, Birds chirping, Prayer call and People talking politely are the most central nodes in the network.

Table 72. Input Closeness for Want to Touch

Rank	Vertex	Value	Response
1	3	2.1492	Clothes
2	12	1.6724	Food
3	2	1.6263	Cleanliness focused - clean surfaces and items
4	20	1.1539	Shoes
5	25	0.9624	Flowers
6	16	0.9624	Jewelry
7	48	0.9328	Watches
8	56	0.9209	Wallets
9	10	0.9038	Books
10	35	0.9038	Plants
11	1	0.8755	Fabrics
12	15	0.8477	Decorations
13	19	0.8204	Electronic gadgets
14	33	0.8204	Fluffy items
15	40	0.7937	Bags
16	5	0.7675	Touch screens
17	51	0.764	Carpets

Input closeness degrees of the significant nodes in the network of want to touch are close to each other. Clothes, Food, Cleanliness focused - clean surfaces and items, Shoes and Flowers are the most central nodes in the network.

Table 73. Input Closeness for Don't Want to Touch

Rank	Vertex	Value	Response
1	27	2.0237	Dirty Bathroom surfaces
2	1	1.3625	People
3	73	1.3625	Elevator buttons
4	78	1.2912	Dirty railings
5	3	1.2683	Railings
6	87	1.2683	Dirty used tissues
7	15	1.2457	Dirty tables
8	29	1.2457	Dirt
9	9	1.2017	Sticky tables
10	48	1.1909	Dirty glass paraphernalia
11	20	1.1696	Wet things
12	5	1.1486	Dirty surfaces
13	127	1.1242	People passing by
14	23	1.0976	Garbage
15	125	1.0848	Dirty flushes
16	43	1.0582	Stinky food
17	126	1.0561	Escalator railings

Input closeness degrees of the significant nodes in the network of Don't want to touch are close to each other. Dirty Bathroom surfaces, People, Elevator buttons, Dirty railings and Railings are the most central nodes in the network.

Table 74. Input Closeness for Want To Taste

Rank	Vertex	Value	Response
1	26	2.1844	Ice cream
2	17	1.473	Desserts
3	14	1.3002	Chocolate/ chocolate flavored items
4	8	1.28	Street food
5	11	1.2601	Pizza
6	10	1.202	Coffee
7	28	1.1284	Fries
8	9	1.093	Burgers
9	12	1.0757	Popcorn
10	31	1.0612	McDonalds
11	29	1.0587	Steak
12	57	0.9925	Pasta
13	73	0.9925	Variety of cuisine
14	15	0.9608	Cinnamon rolls
15	81	0.9566	Apple pie
16	61	0.9298	Sushi
17	75	0.9266	Continental cuisine

Input closeness degrees of the significant nodes in the network of want to taste are close to each other. Ice cream, Desserts, Chocolate/ chocolate flavoured items, Street food and Pizza are the most central nodes in the network.

Table 75. Input closeness for Don't Want to Taste

Rank	Vertex	Value	Response
1	1	1.5465	Rotten food
2	18	1.5262	Fish
3	4	1.4864	Old food
4	6	1.4475	Salty food
5	61	1.3912	Tasteless food
6	11	1.3728	Oily food
7	13	1.3192	Spicy food
8	3	1.2846	Haraam food
9	12	1.2846	Undercooked food
10	20	1.2846	Food from unsanitary sources
11	62	1.2508	Bland food
12	66	1.2508	Unhealthy food
13	32	1.2015	Overcooked food
14	51	1.1855	Bitter tasting food
15	83	1.1233	Over cooked food
16	58	1.1082	Cold food
17	23	1.0784	Raw food

Input closeness degrees of the significant nodes in the network of Don't want to taste are close to each other. Rotten food, Fish, Old food, Salty food and Tasteless food are the most central nodes in the network.

Table 76. Input Closeness for Want to Smell

Rank	Vertex	Value	Response
1	12	1.7314	Air fresheners
2	6	1.6372	Food
3	1	1.4913	Perfumes
4	5	1.3077	Coffee
5	15	1.2122	Flowers
6	19	1.1011	Fries
7	26	1.0591	Cinnamon
8	13	0.9788	Fresh air
9	27	0.9405	Baked items
10	75	0.908	Books
11	38	0.8146	Fresh food
12	28	0.7977	Popcorn
13	79	0.7944	Sweet scents
14	51	0.7809	Vanilla
15	10	0.7809	Scented candles
16	24	0.7481	Candles
17	36	0.7481	Cleaning materials

Input closeness degrees of the significant nodes in the network of want to smell are close to each other. Air fresheners, Food, Perfumes, Coffee and Flowers are the most central nodes in the network.

Table 77. Input closeness for Don't Want to Smell

Rank	Vertex	Value	Response
1	3	2.1218	Sweat
2	1	1.6338	Bad smell in washrooms
3	20	1.4575	Smelly people
4	11	1.2154	Bad body odour
5	18	1.0433	Cigarettes
6	23	1.0078	Garbage
7	44	0.9562	Poop
8	37	0.9562	Bad odour
9	26	0.9395	Farts
10	34	0.9395	Smelly socks
11	21	0.9229	Dirty diapers
12	9	0.9229	Chemical cleaning products
13	7	0.8905	Dirty mops
14	33	0.8905	Rotten food
15	45	0.8588	Vomit
16	99	0.8376	Over dose of perfume
17	27	0.8127	Fish

Input closeness degrees of the significant nodes in the network of Don't want to smell are close to each other. Sweat, Bad smell in washrooms, Smelly people, Bad body odour and Cigarettes are the most central nodes in the network.

4.9   Output Closeness Analysis

This attribute gauges the distance of the originating lines from one node to the other node. The lengths of these lines have substantial impact on the shape and structure of the network. The most important attributes of output closeness of the network are presented in the subsequent tables below.

Table 78. Output closeness for three Attributes Respondents Liked In Malls

Rank	Vertex	Value	Response
1	12	2.043	Spacious
2	3	1.6688	Cleanliness (General)
3	21	1.6066	Food court
4	6	1.448	Variety of Shops
5	4	1.281	Variety (Brands)
6	32	1.2336	Imported items
7	20	1.1884	Open
8	42	1.1877	The big size
9	36	1.1544	Parking
10	43	1.1136	Stock of all the items that I like
11	52	1.1113	Ventilation
12	7	1.1007	Mall design
13	29	1.1007	Shops
14	5	1.0763	The small size
15	19	1.0096	Good Ambience
16	37	0.9999	Location
17	55	0.9808	Availability (Shops/outlets)

Spacious, Cleanliness (General), Food court, Variety of Shops and Variety (Brands) have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 79. Output closeness for three Attributes Respondents Idealized in a Mall

Rank	Vertex	Value	Response
1	49	2.2175	Spacious
2	23	2.0796	Cleanliness (General)
3	1	1.9883	Parking easily available
4	22	1.8531	Food court
5	74	1.807	Nicely designed resting area
6	2	1.7447	A lot of people
7	11	1.7447	Good atmosphere
8	16	1.6652	A lot of entertainment
9	12	1.6444	Friendly people
10	32	1.6306	Variety (Shops)
11	75	1.6124	Escalators
12	39	1.5412	Festive
13	80	1.5148	More choices of shops
14	46	1.506	Big food court
15	30	1.4902	Articles of clothing displayed in an organized manner
16	38	1.4902	More jewelry shops
17	44	1.4707	Big parking area

Spacious, cleanliness (general), parking easily available, food court and nicely designed resting area have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 80. Output Closeness for Shopping Reasons

Rank	Vertex	Value	Response
1	5	2.5775	Close to my house
2	6	1.892	Favourite outlets/brands
3	13	1.7209	Convenient
4	49	1.6103	Variety (Shops/outlets)
5	4	1.548	Competitive prices
6	15	1.4597	Good security measures
7	20	1.4132	Cleanliness
8	10	1.4041	Fulfills my needs
9	12	1.3861	Availability (Brands)
10	46	1.3422	Good Environment
11	29	1.3414	Quick service
12	16	1.3414	Clean washrooms
13	28	1.3373	Beauty of the mall (in general)
14	22	1.3336	Friends prefer to visit
15	1	1.3336	Variety (clothing shops/outlets)
16	48	1.3206	Air conditioning
17	18	1.3123	My children like to visit

Close to my house, favorite outlets/brands, convenient, variety (shops/outlets) and competitive prices have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 81. Output Closeness Dislike Reasons for the Least Favorite Mall

Rank	Vertex	Value	Response
1	6	3.0589	It is small
2	27	2.9233	Parking issues
3	13	2.3807	Over crowded
4	52	2.343	No food court
5	10	2.2639	Lacks variety
6	19	2.2334	Not enough security
7	24	2.2067	Congestion
8	20	2.1119	Dark
9	50	2.0107	Crowded
10	89	1.9986	Smells bad
11	35	1.9373	Too big
12	7	1.9277	Cramped
13	58	1.8889	Limited shops
14	8	1.8782	Its dark
15	70	1.8638	It has limited shopping options
16	78	1.8503	Too far
17	145	1.8152	It mostly has cafe's only

It is small, parking issues, over-crowded, no food court and lacks variety have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 82. Output Closeness for Don't Want To See

Rank	Vertex	Value	Response
1	1	2.2613	A large crowd
2	6	2.2486	Cheap crowd
3	16	2.0807	Trash
4	9	1.5611	Animals
5	21	1.5472	Rowdy people
6	27	1.4923	Children
7	18	1.4557	People that stare
8	62	1.4472	Straight corridors
9	24	1.3789	Litter
10	20	1.3654	People I dont like
11	38	1.3654	Dirt
12	32	1.314	My extended family
13	65	1.303	Bad behavior (general)
14	46	1.3004	Rush
15	61	1.2969	Violence
16	8	1.2891	Limited parking space
17	63	1.283	Wanderers

A large crowd, cheap crowd, trash, animals and rowdy people have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 83. Output Closeness for Want To See

Rank	Vertex	Value	Response
1	40	2.8509	Overall cleanliness
2	41	2.0909	Good safety measures
3	1	2.078	Discipline
4	20	2.0576	Lighting oriented
5	25	2.0212	Happy individuals
6	74	1.9429	Welcoming staff
7	50	1.9117	Pets/Animals
8	52	1.8651	Classy interior
9	3	1.8584	Educated customers
10	43	1.8584	Chandeliers
11	7	1.8441	Friendly people
12	14	1.8441	Mirrors
13	38	1.7903	Peaceful environment
14	42	1.7778	Stores
15	112	1.7302	Cafes
16	48	1.7302	Play area
17	69	1.7302	Air conditioners

Overall cleanliness, good safety measures, discipline, lighting oriented and happy individuals have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 84. Output closeness for Don't Want To Hear

Rank	Vertex	Value	Response
1	17	1.8704	Noise
2	5	1.8055	Loud music
3	12	1.7845	Babies crying
4	2	1.645	Children crying
5	7	1.5007	Abusive language
6	18	1.4017	Adults and or children screaming
7	14	1.2376	Rude comments
8	28	1.2237	People shouting
9	13	1.1964	Announcements on PA system
10	16	1.1053	Music/ certain genres
11	8	1.0093	Eye teasing
12	24	0.9865	Yelling
13	15	0.9753	Songs
14	29	0.8999	Fighting
15	39	0.8422	Adults and or children
16	38	0.8422	Cringe sounds
17	30	0.8392	Inappropriate songs

Noise, loud music, babies crying, children crying and abusive language have the highest output closeness values. the arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 85. Output closeness for Want To Hear

Rank	Vertex	Value	Response
1	14	1.9576	Soft music
2	3	1.748	Laughter
3	28	1.6932	Prayer call
4	16	1.6149	Good music
5	4	1.5407	Pleasant music
6	6	1.4592	Relaxing music
7	37	1.3825	Live music
8	1	1.3383	Music
9	18	1.3202	Friendly chatter
10	17	1.2854	Songs
11	9	1.2792	Upbeat music
12	35	1.2707	Announcements about sales and discounts
13	8	1.261	Latest music
14	15	1.2419	Light music
15	30	1.2419	People talking politely
16	2	1.2138	Quranic verses
17	34	1.1904	AI systems providing guidance

Soft music, laughter, prayer call, good music and pleasant music have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 86. Output closeness for Want To Touch

Rank	Vertex	Value	Response
1	3	1.9449	Clothes
2	1	1.9228	Fabrics
3	25	1.7581	Flowers
4	2	1.7011	Cleanliness focused - clean surfaces and items
5	12	1.5602	Food
6	34	1.3609	Good quality products
7	16	1.3468	jewelry
8	15	1.3193	Decorations
9	9	1.2661	Soft surfaces
10	20	1.2405	Shoes
11	10	1.1909	Books
12	14	1.134	Sneakers
13	4	1.1207	Items I purchase
14	6	1.0983	Stuffed toys
15	27	1.0549	Make-up products
16	24	1.0485	Pants
17	31	1.0139	Cozy sofas

Clothes, fabrics, flowers, cleanliness focused - clean surfaces and items and food have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 87. Output Closeness for Don't Want To Touch

Rank	Vertex	Value	Response
1	27	2.1214	Dirty Bathroom surfaces
2	1	1.9106	People
3	15	1.7258	Dirty tables
4	22	1.5444	Trash cans
5	21	1.5179	Sticky things
6	5	1.458	Dirty surfaces
7	14	1.385	Animals
8	9	1.3771	Sticky tables
9	56	1.3086	Dirty furniture
10	39	1.2793	Trash
11	57	1.265	Cobwebs
12	45	1.2298	Dirty doors/door handles
13	23	1.216	Garbage
14	30	1.2092	Escalators
15	12	1.189	Dirty chairs
16	34	1.1758	Sticky surfaces
17	36	1.1573	Gum

Dirty Bathroom surfaces, People, Dirty tables, Trash cans and Sticky things have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 88. Output Closeness for Want To Taste

Rank	Vertex	Value	Response
1	26	1.8546	Ice cream
2	5	1.4344	Good food
3	17	1.3965	Desserts
4	6	1.3596	Food samples
5	11	1.2887	Pizza
6	9	1.2379	Burgers
7	10	1.189	Coffee
8	7	1.1574	International cuisine
9	14	1.0673	Chocolate/ chocolate flavored items
10	15	1.0529	Cinnamon rolls
11	21	1.0386	Fresh food
12	12	1.0107	Popcorn
13	28	0.9834	Fries
14	36	0.9566	Milkshakes
15	8	0.9177	Street food
16	29	0.9051	Steak
17	16	0.895	KFC

Ice cream, good food, desserts, food samples and pizza have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 89. Output closeness for Don't Want To Taste

Rank	Vertex	Value	Response
1	3	1.7809	Haraam food
2	36	1.7433	Food that tastes bad
3	4	1.6362	Old food
4	12	1.5158	Undercooked food
5	34	1.4951	Burnt food
6	2	1.4848	Alcohol
7	1	1.4348	Rotten food
8	51	1.4153	Bitter tasting food
9	39	1.3738	Bad quality food
10	14	1.3587	Desi food
11	11	1.3404	Oily food
12	46	1.3314	Expired consumables
13	20	1.2279	Food from unsanitary sources
14	60	1.2197	Vomit
15	8	1.2197	Vegetables
16	18	1.1637	Fish
17	23	1.1559	Raw food

Haraam food, food that tastes bad, old food, undercooked food and burnt food have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 90. Output Closeness for Want To Smell

Rank	Vertex	Value	Response
1	1	2.1437	Perfumes
2	15	1.6341	Flowers
3	6	1.5113	Food
4	12	1.4649	Air fresheners
5	5	1.3765	Coffee
6	3	1.2153	Pleasant smells
7	11	1.1115	Good fragrance
8	26	1.0553	Cinnamon
9	13	1.0387	Fresh air
10	36	1.0223	Cleaning materials
11	4	0.977	Lavender
12	27	0.9746	Baked items
13	10	0.9439	Scented candles
14	19	0.8847	Fries
15	2	0.8562	Ittar
16	28	0.8285	Popcorn
17	31	0.8265	Body wash
18	51	0.8149	Vanilla
19	18	0.8001	Fresh aromas
20	61	0.775	Freshly baked items

Perfumes, flowers, food, air fresheners and coffee have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

Table 91. Output Closeness For Don't Want To Smell

Rank	Vertex	Value	Response
1	3	1.9421	Sweat
2	1	1.4459	Bad smell in washrooms
3	11	1.241	Bad body odour
4	21	1.2252	Dirty diapers
5	9	1.179	Chemical cleaning products
6	2	1.1199	Strong perfumes
7	20	1.1199	Smelly people
8	4	1.1055	Trash
9	37	1.0633	Bad odour
10	34	1.0633	Smelly socks
11	26	1.0226	Farts
12	31	0.9662	Cigarettes
13	18	0.9449	Cigarettes
14	22	0.9201	Smelly feet
15	45	0.8958	Vomit
16	33	0.8958	Rotten food
17	30	0.8721	Strong air fresheners

Sweat, Bad smell in washrooms, Bad body odour, Dirty diapers and Chemical cleaning products have the highest output closeness values. The arcs going from all of the nodes in the table above are meaningful because of their lengths.

4.10 Betweenness Analysis

The betweenness centrality of a vertex is the proportion of all geodesics between pairs of other vertices that include this vertex (De Nooy, Mrvar and Batagelj, 2018). The meaningfulness of a node's relationship with other nodes is depicted by betweenness. Closeness degrees measure and assess the place of the node to send and

receive the lines but betweenness assesses the proportion of cumulative paths of a node between other nodes (Scott and Carrington, 2014). Tables below provide betweenness degrees of all the networks which were analysed in this study.

Table 92. Betweenness for Attributes Respondents Liked In Malls

Rank	Vertex	Value	*Response*
1	21	6.1582	Food court
2	12	4.2943	Spacious
3	6	3.9029	Variety of Shops
4	3	3.8504	Cleanliness (General)
5	4	2.3902	Variety (Brands)
6	29	2.1348	Shops
7	36	1.9757	Parking
8	55	1.3186	Availability (Shops/outlets)
9	48	1.2117	Cinema
10	11	0.9968	The atmosphere
11	27	0.9597	Close to my house
12	54	0.9287	Environment
13	9	0.7453	The decorations
14	65	0.6775	Favorite outlets/brands
15	18	0.6542	Availability (Brands)

Food court, Spacious, Variety of Shops, Cleanliness (General) and Variety (Brands) have the highest betweenness degrees in the network of attributes respondents liked about the mall network. They have the role of transmitting information between two nodes.

Table 93. Betweeneness Degree for three Attributes Respondents Idealized in a Mall

Rank	Vertex	Value	Response
1	23	8.7535	Cleanliness (General)
2	49	4.9627	Spacious
3	16	4.8315	A lot of entertainment
4	22	4.8165	Food court
5	28	3.1869	Smells good
6	97	3.0728	Good lighting
7	2	2.4636	A lot of people
8	1	2.3517	Parking easily available
9	55	1.7099	Good food
10	41	1.5788	Inclusive for all social groups
11	32	1.3226	Variety (Shops)
12	12	1.2403	Friendly people
13	70	1.1762	Shops
14	35	0.7153	Day care for children
15	57	0.6959	Non-designer shops

Cleanliness (General), spacious, a lot of entertainment, food court and smells good have the highest betweenness degrees in the network of attributes which the respondents idealized in a mall. They have the role of transmitting information between two nodes.

Table 94. Betweenness degree for Shopping Reasons

Rank	Vertex	Value	Response
1	5	9.3327	Close to my house
2	46	2.9667	Good Environment
3	6	2.9204	Favorite outlets/brands
4	12	2.5219	Availability (Brands)
5	20	2.1225	Cleanliness
6	49	0.0223	Variety (Shops/outlets)
7	15	1.4673	Good security measures
8	42	1.2387	Cinema
9	4	1.0548	Competitive prices
10	35	0.998	Parking spot easy to find
11	59	0.9234	Food court
12	24	0.8068	Spacious
13	76	0.5947	Availability (general)
14	60	0.5575	Events
15	10	0.4926	Fulfills my needs

Close to my house, good environment, favorite outlets/brands, availability (brands) and cleanliness have the highest betweenness degrees in the network of attributes which the respondents highlighted as the shopping reasons at the mall. They have the role of transmitting information between two nodes.

Table 95. Betweenness degree for dislike reasons for the Least Favorite Mall

Rank	Vertex	Value	Response
1	27	11.8631	Parking issues
2	6	7.5244	It is small
3	20	3.4906	Dark
4	24	2.8086	Congestion
5	50	2.4169	Crowded
6	10	2.1324	Lacks variety
7	5	1.7756	It is dirty
8	74	1.3008	Cheap crowd
9	89	1.3003	Smells bad
10	13	1.274	Over crowded
11	21	1.2266	Few visitors
12	40	0.9321	No variety
13	126	0.3843	Crowd
14	96	0.3777	Uncomfortable environment
15	108	0.2648	Very few shops

Parking issues, it is small, dark, congestion and crowded have the highest betweenness degrees in the network of the attributes which the respondents highlighted as the dislike reasons for the malls. They have the role of transmitting information between two nodes.

Table 96. Betweenness Degree for Don't Want To See

Rank	Vertex	Value	Response
1	16	7.4893	Trash
2	1	7.2892	A large crowd
3	24	3.6055	Litter
4	9	3.1099	Animals
5	6	2.6999	Cheap crowd
6	15	2.6421	Garbage
7	38	1.606	Dirt
8	64	1.302	Creepy men
9	66	1.2141	Judgemental people
10	27	1.2025	Children
11	121	1.1917	Uneducated people
12	52	1.1675	Concerts
13	18	1.0709	People that stare
14	46	1.0563	Rush
15	7	0.8761	Rubbish

Trash, a large crowd, litter, animals and cheap crowd have the highest betweenness degrees in the attributes which respondents didn't want to see at the malls. They have the role of transmitting information between two nodes.

Table 97. Betweenness Degree for Want To See

Rank	Vertex	Value	Response
1	40	11.4248	Overall cleanliness
2	41	5.7802	Good safety measures
3	17	2.9586	Live performances
4	7	2.9143	Friendly people
5	20	2.2651	Lighting oriented
6	143	2.2037	Azaan
7	3	1.9296	Educated customers
8	30	1.8756	Sales
9	16	1.7171	Concerts
10	72	1.6721	Friendly staff
11	10	1.1901	More entertainment options
12	83	1.1164	Religious people
13	82	0.7504	Decently dressed women
14	73	0.6624	Friends
15	90	0.6099	Celebrities

Overall cleanliness, good safety measures, live performances, friendly people and lighting oriented have the highest betweenness degrees in the network of the attributes which the respondents wanted to see at the mall. They have the role of transmitting information between two nodes.

Table 98. Betweenness for Don't Want To Hear

Rank	Vertex	Value	Response
1	5	6.0322	Loud music
2	17	4.1188	Noise
3	7	3.6175	Abusive language
4	2	2.8335	Children crying
5	12	2.5937	Babies crying
6	18	2.307	Adults and or children screaming
7	8	1.8186	Eye teasing
8	14	1.6219	Rude comments
9	16	1.0735	Music/ certain genres
10	28	0.8451	People shouting
11	25	0.7431	Arguments
12	13	0.6612	Announcements on PA system
13	29	0.3431	Fighting
14	19	0.1148	Ill-mannered people
15	66	-0.0285	Machinery noise

Loud music, noise, abusive language, children crying and babies crying have the highest betweenness degrees in the network of the attributes which the respondents didn't want to hear at the malls. They have the role of transmitting information between two nodes.

Table 99. Betweenness Degree for Want To Hear

Rank	Vertex	Value	Response
1	3	7.965	Laughter
2	35	4.5237	Announcements about sales and discounts
3	14	3.7483	Soft music
4	28	3.5993	Prayer call
5	50	2.2595	Sound of water
6	16	2.1298	Good music
7	30	1.3852	People talking politely
8	37	0.9361	Live music
9	18	0.8893	Friendly chatter
10	43	0.7968	Conversations between people
11	6	0.7445	Relaxing music
12	15	0.7346	Light music
13	4	0.7069	Pleasant music
14	32	0.6344	Light instrumental music
15	93	0.5464	Announcements (general)

Laughter, announcements about sales and discounts, soft music, prayer call and sound of water have the highest betweenness degrees in the network of the attributes which the respondents wanted to hear at the malls. They have the role of transmitting information between two nodes.

Table 100. Betweenness for Want To Touch

Rank	Vertex	Value	Response
1	3	6.7041	Clothes
2	2	4.1391	Cleanliness focused - clean surfaces and items
3	12	2.8856	Food
4	1	2.284	Fabrics
5	25	1.7061	Flowers
6	20	1.3929	Shoes
7	15	0.8218	Decorations
8	16	0.7602	jewelry
9	6	0.5498	Stuffed toys
10	9	0.4833	Soft surfaces
11	10	0.3604	Books
12	5	0.2513	Touch screens
13	33	0.2054	Fluffy items
14	19	0.1807	Electronic gadgets
15	13	0.1589	Silk

Clothes, cleanliness focused - clean surfaces and items, food, fabrics and flowers have the highest betweenness degrees in the network of attributes which the respondents wanted to touch at the malls. They have the role of transmitting information between two nodes.

Table 101. Betweenness for Don't Want To Touch

Rank	Vertex	Value	Response
1	27	10.318	Dirty Bathroom surfaces
2	1	3.8942	People
3	15	2.8275	Dirty tables
4	5	2.594	Dirty surfaces
5	21	2.1455	Sticky things
6	9	1.9457	Sticky tables
7	48	1.8154	Dirty glass paraphernalia
8	29	1.4735	Dirt
9	22	1.3779	Trash cans
10	20	1.1864	Wet things
11	23	0.9495	Garbage
12	37	0.9381	Floor
13	14	0.9334	Animals
14	45	0.8368	Dirty doors/door handles
15	17	0.6457	Second-hand clothes

Dirty bathroom surfaces, people, dirty tables, dirty surfaces and sticky things have the highest betweenness degrees in the network of the attributes pertaining to the malls which the respondents didn't want to touch. They have the role of transmitting information between two nodes.

Table 102. Betweenness for Want To Taste

Rank	Vertex	Value	Response
1	26	8.3726	Ice cream
2	17	3.3374	Desserts
3	5	1.7604	Good food
4	11	1.7015	Pizza
5	14	1.2497	Chocolate/ chocolate flavored items
6	21	1.2288	Fresh food
7	8	1.188	Street food
8	6	1.1344	Food samples
9	10	1.0121	Coffee
10	29	0.91	Steak
11	7	0.6792	International cuisine
12	22	0.4297	Water
13	12	0.3753	Popcorn
14	9	0.2541	Burgers
15	73	0.1998	Variety of cuisine

Ice cream, desserts, good food, pizza and chocolate/ chocolate flavoured items have the highest betweenness degrees in the network of attributes which the respondents wanted to taste at the malls. They have the role of transmitting information between two nodes.

Table 103. Betweenness for Don't Want to Taste

Rank	Vertex	Value	Response
1	3	5.0074	Haram food
2	4	4.7904	Old food
3	1	3.8058	Rotten food
4	12	3.6946	Undercooked food
5	20	2.9265	Food from unsanitary sources
6	11	2.299	Oily food
7	47	1.8397	Sweets
8	33	1.6526	Burgers
9	21	1.6501	Onions
10	13	1.6162	Spicy food
11	36	1.5525	Food that tastes bad
12	34	1.4552	Burnt food
13	2	1.414	Alcohol
14	35	1.2884	Chocolate
15	23	1.1775	Raw food

Haram food, old food, rotten food, undercooked food and food from unsanitary sources have the highest betweenness degrees in the network of the attributes which the respondents didn't want to taste at the malls. They have the role of transmitting information between two nodes.

Table 104. Betweenness for Want To Smell

Rank	Vertex	Value	Response
1	1	6.0921	Perfumes
2	6	4.1646	Food
3	12	3.7172	Air fresheners
4	15	2.8734	Flowers
5	5	2.3127	Coffee
6	22	1.1052	Leather
7	13	0.9003	Fresh air
8	10	0.5954	Scented candles
9	26	0.4451	Cinnamon
10	19	0.3727	Fries
11	27	0.3252	Baked items
12	3	0.1615	Pleasant smells
13	39	0.1307	New clothes
14	21	0.0661	Deodorant
15	8	0.0406	Ager batti (perfumed essence)

Perfumes, food, air fresheners, flowers and coffee have the highest betweenness degrees in the network of the attributes which the respondents wanted to smell at the malls. They have the role of transmitting information between two nodes.

Table 105. Betweenness for Don't Want To Smell

Rank	Vertex	Value	Response
1	3	8.5221	Sweat
2	1	3.9853	Bad smell in washrooms
3	21	1.9557	Dirty diapers
4	20	1.6474	Smelly people
5	11	1.4878	Bad body odour
6	9	0.9809	Chemical cleaning products
7	34	0.9099	Smelly socks
8	4	0.7488	Trash
9	26	0.6485	Farts
10	37	0.4841	Bad odour
11	7	0.3997	Dirty mops
12	15	0.2454	Bad breath
13	33	0.1808	Rotten food
14	53	0.1553	Nail polish
15	30	0.1553	Strong air fresheners

Sweat, bad smell in washrooms, dirty diapers, smelly people and bad body odour have the highest betweenness degrees in the network of the attributes which the respondents didn't want to smell at the malls. They have the role of transmitting information between two nodes.

4.11 Total Findings of 8 Dimensions

Nodes for all the networks of the attributes highlighted by the respondents for shopping malls were analysed based on 8 dimensions. Tables of input degree, output degree, input closeness, output closeness and betweenness dimensions include the first 20 important values. Since, dense structures are meaningful in semantic social network analyses. There were certain responses took place in all the measure dimensions, while others were repeated fewer times or never. It is important to note that more number of repeats make a response more prominent in a network.

The tables below summarize all dimensions with number of repeats for each node.

Table 106. Summary of Semantic Network Analysis Findings of Liked Attributes

Response	Repeats	Repeated Dimensions
Variety of Shops	8	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point, Valued core, Clique
Spacious	8	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point, Valued core, Clique
Parking	8	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point, Valued core, Clique
Cleanliness (General)	7	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point, Valued core
Food court	7	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Valued core, Clique
Variety (Brands)	6	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Clique
Shops	5	Input degree, Output degree, Input closeness, Output closeness, Betweenness
Cinema	5	Input degree, Output degree, Input closeness, Betweenness, Articulation point
The atmosphere	5	Input degree, Output degree, Input closeness, Output closeness, Betweenness
Availability (Shops/outlets)	5	Input degree, Output degree, Output closeness, Betweenness, Articulation point
Close to my house	4	Input degree, Output degree, Input closeness, Betweenness
Location	4	Input degree, Input closeness, Output closeness, Betweenness
Availability (Brands)	4	Input degree, Betweenness, Valued core, Valued core
Environment	3	Input degree, Input closeness, Betweenness
Favourite outlets/brands	3	Input degree, Input closeness, Betweenness
The decorations	3	Input degree, Input closeness, Betweenness
Parking lot size	3	Input degree, Input closeness, Valued core

Table 107. Summary of Semantic Network Analysis Findings of Liked Attributes (continued)

Variety	3	Input degree, Betweenness, Valued core,
The big size	3	Output degree, Output closeness, Valued core
Security	3	Output degree, Betweenness, Valued core
Good ambiance	3	Output degree, Output closeness, Betweenness
Safety	2	Input degree, Input closeness
The small size	2	Output degree, Output closeness
Imported items	2	Output degree, Output closeness
Mall design	2	Output degree, Output closeness
The architecture	2	Output degree, Betweenness
Food variety	1	Input degree,
The kind of people that visit	1	Output degree,
Beautiful building (exterior)	1	Output degree
Entertainment options	1	Input closeness
Great customer service	1	Input closeness
Organized	1	Input closeness
Play place for children	1	Input closeness
Open	1	Output closeness
Stock of all the items I like	1	Output closeness
Ventilation	1	Output closeness
It is colourful	1	Output closeness
Accessible	1	Output closeness
Affordable products	1	Articulation point
Staff	1	Articulation point
Lighting	1	Valued core

From a total of 126 collected responses for attributes people liked in their favourite mall, 41 responses were repeated at least once with "variety of shops", "spacious" and "parking" repeated for all 8 dimensions. "Cleanliness" and "food court" was repeated for 7 dimensions whereas "variety (brands)" was repeated for 6 dimensions. Since the responses repeated across dimensions multiple times signify the most connected and central values it may be said that these responses characterize the attributes most liked by consumers within a mall.

Table 108. Summary of Semantic Network Analysis Findings of Idealised Attributes

Response	Repeats	Repeated Dimensions
Cleanliness (General)	7	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation points, Valued core
Spacious	7	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation points, Valued core
Food court	6	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Valued core
Parking easily available	6	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation points
Good lighting	5	Input degree, Output degree, Input closeness, Betweenness, Articulation points
Variety (Shops)	5	Input degree, Input closeness, Output closeness, Betweenness, Valued core
Size (Big)	5	Input degree, Input closeness, Betweenness, Articulation points, Valued core
Play area (children)	4	Input degree, Input closeness, Articulation points, Valued core
Good food	4	Input degree, Output degree, Output closeness, Betweenness
Smells good	4	Input degree, Input closeness, Betweenness, Articulation points
A lot of people	4	Output degree, Output closeness, Betweenness, Articulation point
Big parking area	4	Output degree, Input closeness, Output closeness, Betweenness
Safety	3	Input degree, Input closeness, Betweenness
Non-designer shops	3	Input degree, Betweenness, Articulation points
Not crowded	3	Input degree, Betweenness, Articulation points
Friendly people	3	Output degree, Output closeness, Betweenness
A lot of entertainment	3	Output degree, Output closeness, Betweenness
Big food court	3	Output degree, Output closeness, Articulation point

Table 109. Summary of Semantic Network Analysis Findings of Idealised Attributes (continued)

Escalators	3	Output degree, Output closeness, Articulation point
Greenery/plants inside mall	2	Input degree, Input closeness
Live indoor music performances	2	Input degree, Articulation points
Cafes	2	Input degree, Articulation points
Good atmosphere	2	Output degree, Output closeness
Shops	2	Output degree, Betweenness
Elevators	2	Output degree, Articulation point
Nicely designed resting area	2	Output degree, Output closeness
Fountains	2	Output degree, Betweenness
Modern	2	Output degree, Articulation point
Inclusive for all social groups	2	Betweenness, Articulation point
Good parking	1	Input degree,
Clean	1	Input degree,
A lot of facilities for shoppers	1	Input degree,
Lots of shops	1	Input degree,
Open	1	Output degree
Beautiful architecture	1	Output degree
Organized	1	Input closeness
Well furnished	1	Input closeness
Prayer area	1	Input closeness
Friendly customer service	1	Input closeness
Clothing outlets/stores/shops	1	Input closeness
Decorations (interior)	1	Input closeness
High ceilings	1	Input closeness

Table 110. Summary of Semantic Network Analysis Findings of Idealised Attributes
(continued)

Festive	1	Output closeness
More choices of shops	1	Output closeness
Articles of clothing displayed in an organized manner	1	Output closeness
More jewellery shops	1	Output closeness
There should be trolleys in which we can carry children	1	Output closeness
Articles arranged according to their price range	1	Output closeness
Day care for children	1	Betweenness
Miniso	1	Articulation Point
Sales	1	Articulation Point
Easy access	1	Articulation Point
Lights	1	Articulation Point
Disabled person access	1	Articulation Point
Availability of favourite outlets/shops	1	Articulation Point
Colourful	1	Articulation Point
People	1	Articulation Point
Celebrities	1	Articulation Point
Glass windows/roof	1	Articulation Point
Touch screens	1	Articulation Point
Loud music	1	Articulation Point
Availability (Brands)	1	Articulation Point
Well designed	1	Valued core
Hyperstar	1	Valued core

From a total of 126 collected responses for attributes people idealised in a mall, 64 responses were repeated at least once with "cleanliness (general)" and "spacious" repeated 7 times while "food court" and "parking easily available" repeated 6 times.

None of the responses were repeated for all 8 dimensions. However, the responses repeated across dimensions multiple times signify the most connected and central values it may be said that these responses characterize the attributes idealised by consumers within a mall.

Table 111. Summary of Semantic Network Analysis Findings of Reason for Shopping

Response	Repeats	Repeated Dimensions
Close to my house	7	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point, Valued core
Availability (Brands)	7	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point, Valued core
Cleanliness	5	Input degree, Output degree, Input closeness, Output closeness, Betweenness
Good security measures	5	Input degree, Output degree, Input closeness, Output closeness, Betweenness
Great food	5	Input degree, Output degree, Input closeness, Betweenness, Articulation point
Variety (Shops/outlets)	5	Input degree, Output degree, Input closeness, Output closeness, Betweenness
Good Environment	5	Input degree, Output degree, Input closeness, Output closeness, Betweenness
Favourite outlets/brands	5	Input degree, Output degree, Input closeness, Output closeness, Betweenness
Food court	4	Input degree, Output degree, Input closeness, Betweenness
Cinema	4	Input degree, Input closeness, Betweenness, Valued core
Good Entertainment	4	Input degree, Output degree, Input closeness, Articulation point

Table 112. Summary of Semantic Network Analysis Findings of Reason for Shopping (continued)

Spacious	4	Input degree, Output degree, Input closeness, Betweenness
Competitive prices	4	Input degree, Output degree, Output closeness, Betweenness
Big in size	4	Input degree, Output degree, Betweenness, Articulation point
The kind of people that visit the mall	4	Input degree, Output degree, Input closeness, Betweenness
Events	4	Input degree, Input closeness, Betweenness, Articulation point
Convenient	4	Output degree, Output closeness Betweenness, Articulation point
Fulfills my needs	4	Output degree, Output closeness, Betweenness, Articulation point
Good atmosphere	3	Input degree, Betweenness, Articulation point
Variety (clothing shops/outlets)	3	Output degree, Output closeness, Valued core
Play place (children)	2	Input degree, Input closeness
Not crowded	2	Input degree, Input closeness
Considered safe by family	2	Output degree, Articulation point
Friends prefer to visit	2	Output degree, Output closeness
Parking spot easy to find	2	Input closeness, Betweenness
Variety of products	2	Input closeness, Articulation point
Easily accessible	1	Input degree,
Lots of variety	1	Output degree
Convenient location	1	Output degree
Has a grocery store	1	Input closeness
Safe	1	Input closeness
Quick service	1	Output closeness

Table 113. Summary of Semantic Network Analysis Findings of Reason for Shopping (continued)

Clean washrooms	1	Output closeness
Beauty of the mall (in general)	1	Output closeness
Air conditioning	1	Output closeness
My children like to visit	1	Output closeness
Sufficient stock during sales	1	Output closeness
Well-behaved staff	1	Output closeness
Helpful staff	1	Output closeness
Availability (general)	1	Betweenness
Offers escape from reality	1	Articulation point
Good shops	1	Articulation point
Big parking	1	Articulation point
Prayer area	1	Articulation point
I can see a lot of people from my social background	1	Valued core

From a total of 126 collected responses for reasons for shopping at their favourite mall, 45 responses were repeated at least once with no response repeated for all 8 dimension but repeated for "close to my house" and "availability (brands)" repeated 7 times. Responses were not repeated for 6 dimensions either. Since the responses repeated across dimensions multiple times signify the most connected and central values it may be said that these responses characterize the reasons for shopping by consumers at their favourite mall.

Table 114. Summary of Semantic Network Analysis Findings of Reasons for Disliking

Response	Repeats	Repeated Dimensions
Parking issues	7	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point, Valued core
It is small	7	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point, Valued core
Lacks variety	7	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point, Valued core
Congestion	7	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point, Valued core
Crowded	6	Input degree, Output degree, Output closeness, Betweenness, Articulation point, Valued core
It is dirty	6	Input degree, Output degree, Input closeness, Betweenness, Articulation point, Valued core
Smells bad	5	Input degree, Output degree, Output closeness, Betweenness, Articulation point
Dark	5	Input degree, Output degree, Output closeness, Betweenness, Articulation point
Over crowded	5	Input degree, Output degree, Output closeness, Betweenness, Articulation point
Few visitors	4	Input degree, Output degree, Betweenness, Articulation point
Very few shops	4	Input degree, Input closeness, Betweenness, Articulation point
Cheap crowd	4	Input degree, Input closeness, Betweenness, Articulation point
Bad food	4	Input degree, Betweenness, Articulation point, Valued core
No food court	4	Output degree, Input closeness, Output closeness, Articulation point
Uncomfortable environment	3	Input degree, Betweenness, Articulation point
Crowd	3	Input degree, Betweenness, Articulation point
Too big	3	Output degree, Output closeness, Betweenness
Not enough security	3	Output degree, Output closeness, Valued core
Too far	3	Output degree, Output closeness, Betweenness
No cinema	3	Input closeness, Output closeness, Betweenness
Not enough brand outlets	2	Input degree, Input closeness

Table 115. Summary of Semantic Network Analysis Findings of Reasons for Disliking (continued)

Noisy	2	Input degree, Articulation point
Small food court	2	Input degree, Input closeness
Outdated stocks	2	Input degree, Input closeness
Feel claustrophobic	2	Output degree, Articulation point
Dislike the type of people that visit	2	Output degree, Articulation point
Cramped	2	Output degree, Output closeness
Few food options	2	Output degree, Valued core
No variety	2	Output degree, Betweenness
Far from my house	1	Input degree
Traffic	1	Output degree
Not a good variety of shops	1	Input closeness
Has more outlets for eating than buying clothes or shoes from	1	Input closeness
Unorganized food courts	1	Input closeness
Shops dont have a lot of merchandise	1	Input closeness
Very few food chains to choose from	1	Input closeness
People use foul language	1	Input closeness
Facilities arent up to the mark	1	Input closeness
Approach	1	Input closeness
Limited shops	1	Output closeness
Limited shopping options	1	Output closeness
It mostly has cafes only	1	Output closeness

Table 116. Summary of Semantic Network Analysis Findings of Reasons for Disliking (continued)

Uneducated crowd	1	Output closeness
Major shops closed down	1	Output closeness
Dislike the building	1	Betweenness
Not spacious	1	Articulation point

From a total of 126 collected responses for disliking a mall, 46 responses were repeated at least once with no response repeated for all 8 dimension. However, responses were repeated for 6 dimensions that included "parking issues", "it is small", "lacks variety" and "congestion". While "crowded" and "it is dirty" was repeated for 6 dimensions. Since the responses repeated across dimensions multiple times signify the most connected and central values it may be said that these responses characterize the reasons consumers dislike a particular shopping mall.

Table 117. Summary of Semantic Network Analysis Findings of Don't Want to See

Response	Repeats	Repeated Dimensions
Trash	7	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Valued core, Articulation point
A large crowd	7	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Valued core, Articulation point
Litter	6	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point
Garbage	6	Input degree, Output degree, Input closeness, Betweenness, Valued core, Articulation point
People that stare	6	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point
Cheap crowd	6	Input degree, Output degree, Output closeness, Betweenness, Valued core, Articulation point
Animals	6	Input degree, Output degree, Input closeness, Output closeness, Betweenness, Articulation point
Dirt	5	Input degree, Output degree, Output closeness, Betweenness, Articulation point
Children	5	Input degree, Output degree, Input closeness, Output closeness, Betweenness
Rush	5	Input degree, Output degree, Output closeness, Betweenness, Articulation point
Dirty washroom/rest room	4	Input degree, Input closeness, Betweenness, Articulation point
Judgemental people	3	Input degree, Output degree, Betweenness
Uneducated people	3	Input degree, Input closeness, Betweenness
Concerts	3	Input degree, Betweenness, Articulation point
Disrespectful customers	3	Output degree, Input closeness, Betweenness
Dim lights	3	Output degree, Input closeness, Articulation point
Single boys/ men	2	Input degree, Input closeness
Unattended children	2	Input degree, Input closeness
Dull environment	2	Input degree, Input closeness

Table 118. Summary of Semantic Network Analysis Findings of Don't Want to See
(continued)

Expensive brands/products	2	Input degree, Input closeness
Untidy	2	Input degree, Input closeness
Snobbish people	2	Output degree, Articulation point
Harassment	2	Output degree, Betweenness
Rubbish	2	Output degree, Betweenness
Rowdy people	2	Output degree, Output closeness
People I dont like	2	Output degree, Output closeness
Old people	2	Input closeness, Betweenness
Bad behavior of staff	1	Input degree
Filth	1	Output degree
Rude people	1	Output degree
Pickpockets	1	Output degree
Damaged escalators	1	Input closeness
Noise	1	Input closeness
Loud music	1	Input closeness
Straight corridors	1	Output closeness
My extended family	1	Output closeness
Bad behavior (general)	1	Output closeness
Violence	1	Output closeness
Limited parking space	1	Output closeness
Wanderers	1	Output closeness
Too many branded stores	1	Output closeness
Cheap brands	1	Output closeness
Creepy men	1	Betweenness
Uncivilized people	1	Betweenness
Too many advertisements	1	Articulation point
Game shows	1	Articulation point
Loud sound	1	Articulation point

Table 119. Summary of Semantic Network Analysis Findings of Don't Want to See (continued)

Indecent crowd	1	Articulation point
Cockroaches	1	Articulation point
Rude behavior	1	Articulation point
Traffic	1	Articulation point
Paint peeling off	1	Articulation point

From a total of 126 collected responses for things mall goers don't want to see at a mall, 52 responses were repeated at least once with no response repeated for all 8 dimensions. However, "trash" and "a large crowd" were repeated for 7 dimensions while "litter", "garbage", "people that stare", "cheap crowd" and "animals" was repeated for 6 dimensions. Since the responses repeated across dimensions multiple times signify the most connected and central values it may be assumed that these responses characterize the things consumers don't want to see at a shopping mall.

Table 120. Summary of Semantic Network Analysis Findings of Want to See

Response	Repeats	Repeated Dimensions
Overall cleanliness	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation point, valued core
Good safety measures	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation point, valued core
Lighting oriented	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core
Friendly staff	5	Input degree, input closeness, output closeness, betweenness, articulation point
Friendly people	5	Input degree, output degree, output closeness, betweenness, articulation point
More entertainment options	5	Input degree, output degree, input closeness, betweenness, articulation point
Sales	4	Input degree, output degree, input closeness, betweenness
Families	4	Input degree, output degree, betweenness, articulation point
Educated customers	4	Output degree, output closeness, betweenness, articulation point
Discipline	4	Output degree, output closeness, betweenness, valued core
Live performances	3	Input degree, input closeness, betweenness
Clear directions to shops	3	Input degree, input closeness, articulation point
Variety of brands	3	Input degree, input closeness, articulation point
Happy Individuals	3	Output degree, output closeness, articulation point
Pets/ Animals	3	Output degree, output closeness, articulation point
Events	2	Input degree, betweenness
Seating areas	2	Input degree, articulation point
Dustbins	2	Input degree, input closeness
Food	2	Input degree, output degree
Good food	2	Output degree, articulation point
Attractive displays	2	Output degree, articulation point

Table 121. Summary of Semantic Network Analysis Findings of Want to See (continued)

Fountains	2	Output degree, articulation point
Plants	2	Output degree, articulation point
Book stores	2	Output degree, articulation point
Azaan	2	Input closeness, betweenness
Concerts	2	Input closeness, betweenness
Cafes	2	Output closeness, articulation point
Good restaurants	2	Input closeness, valued core
More restaurants	1	Input degree
People laughing	1	Input degree
Decorations	1	Input degree
Clothes	1	Input degree
Children	1	Input degree
Activities	1	Output degree
More outlets/ stores	1	Output degree
More brands	1	Output degree
Festivals	1	Input closeness
Equal treatment for everyone	1	Input closeness
Disabled person support	1	Input closeness
More wheel chairs	1	Input closeness
Nice brands	1	Input closeness
Flower shops	1	Input closeness
Spacious outlets	1	Input closeness
Welcoming staff	1	Output closeness
Classy interior	1	Output closeness
Chandeliers	1	Output closeness
Mirrors	1	Output closeness
Peaceful environment	1	Output closeness
Stores	1	Output closeness
Play area	1	Output closeness
Air conditions	1	Output closeness

Table 122. Summary of Semantic Network Analysis Findings of Want to See (continued)

Welcoming people	1	Output closeness
Escalators	1	Output closeness
Religious people	1	Betweenness
Decently dressed women	1	Betweenness
Friends	1	Betweenness
Celebrities	1	Betweenness
Immediate family	1	Betweenness
Promotions	1	Betweenness
Comfortable waiting areas	1	Betweenness
Easy access to all shops	1	Betweenness
Decent people	1	Valued core

From a total of 126 collected responses for things mall goers want to see at a mall, 61 responses were repeated at least once with no response repeated for all 8 dimensions. However, "overall cleanliness" and "good safety measures" were repeated for 7 dimensions while "lightening oriented" responses were repeated for 6 dimensions. Since the responses repeated across dimensions multiple times signify the most connected and central values it may be assumed that these responses characterize the things consumers want to see at a shopping mall.

Table 123. Summary of Semantic Network Analysis Findings of Don't Want to Hear

Response	Repeats	Repeated Dimensions
Abusive language	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation point, valued core, clique
Loud music	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation point, valued core, clique
Children crying	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation point, valued core, clique
Adults and or children screaming	7	Input degree, output degree, input closeness, output closeness, output closeness, betweenness, clique
Eve teasing	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation point, valued core
Noise	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation point, clique
Babies crying	6	Input degree, output degree, input closeness, output closeness, betweenness, clique
Music/ certain genres	6	Input degree, output degree, input closeness, output closeness, betweenness, articulation point
Announcements on PA system	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core
Rude comments	5	Input degree, output degree, input closeness, output closeness, betweenness
Fighting	5	Input degree, output degree, input closeness, output closeness, betweenness
People shouting	5	Input degree, output degree, input closeness, output closeness, betweenness
Songs	5	Input degree, output degree, input closeness, output closeness, clique
Arguments	4	Input degree, output degree, input closeness, betweenness
Machinery noise	3	Input degree, input closeness, betweenness

Table 124. Summary of Semantic Network Analysis Findings of Don't Want to Hear (continued)

Bargaining	3	Input degree, input closeness, betweenness
Single men	3	Input degree, betweenness, articulation point
Ill mannered people	3	Output degree, output closeness, betweenness
People speaking loudly	2	Input degree, input closeness
Yelling	2	Output degree, output closeness
Inappropriate songs	2	Output degree, output closeness
Loud people	2	Output degree, output closeness
Loud chatter	2	Output degree, input closeness
Advertisements	2	Output degree, betweenness
Children talking back to their parents	2	Betweenness, articulation point
Animals	1	Input degree
People boasting about their status	1	Input degree
Loud horn sounds coming from outside	1	Input closeness
Children	1	Input closeness
Cringy sounds	1	Output closeness
Foul Language	1	Output closeness, valued core
Cars honking	1	Betweenness
Women laughing very loudly	1	Valued core

From a total of 126 collected responses for sounds mall goers don't want to hear at a mall, 33 responses were repeated at least once with "abusive language", "loud music" and "children crying" repeated for all 8 dimensions. Furthermore, "adults and/or children screaming", "eve teasing" and "noise" was repeated for 7 dimensions while "babies crying", "music/certain genres" and "announcements on PA system" was repeated for 6 dimensions. Since the responses repeated across dimensions multiple times signify the most connected and central values it may be assumed that these responses characterize the sounds consumers don't want to hear at a shopping mall.

Table 125. Summary of Semantic Network Analysis Findings of Want to Hear

Response	Repeats	Repeated Dimensions
Prayer call	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, valued core
Soft music	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, valued core
Laughter	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core
Announcements about sales and discounts	6	Input degree, output degree, input closeness, output closeness, betweenness, articulation points
People talking politely	6	Input degree, output degree, input closeness, output closeness, betweenness, articulation points
Relaxing music	6	Input degree, output degree, output closeness, betweenness, articulation points, valued core
Live music	5	Input degree, output degree, input closeness, output closeness, betweenness
Light instrumental music	5	Input degree, output degree, input closeness, output closeness, betweenness
Good music	5	Output degree, input closeness, output closeness, betweenness, articulation points
Birds chirping	4	Input degree, input closeness, betweenness, valued core
Announcements (general)	4	Input degree, input closeness, betweenness, valued core
Conversations between people	4	Input degree, output degree, betweenness, articulation points
Pleasant music	4	Output degree, output closeness, betweenness, articulation points
Light music	4	Output degree, output closeness, betweenness, articulation points
Quranic verses	4	Output degree, output closeness, betweenness, valued core
Upbeat music	4	Output degree, output closeness, articulation points, valued core
Sound of water	3	Input degree, input closeness, betweenness

Table 126. Summary of Semantic Network Analysis Findings of Want to Hear (continued)

Friendly chatter	3	Input degree, output closeness, betweenness
Concerts	3	Input degree, output degree, betweenness
Music	3	Output degree, output closeness, articulation points
Catchy tunes	2	Input degree, input closeness
Soft chatter of people	2	Input degree, input closeness
People speaking in English	2	Input degree, betweenness
Songs	2	Output degree, output closeness
Soothing music	2	Output degree, output closeness
Latest music	2	Output degree, output closeness
Sound of coffee machines	2	Input closeness, input closeness
Pleasant conversations	2	Betweenness, articulation points
Positive comments	1	Input degree
Wind chimes	1	Input degree
No shouting	1	Input degree
Nice songs	1	Output degree
Children's chatter	1	Input closeness
People placing food orders in the food court	1	Input closeness
Shop workers with a professional manner of speaking	1	Input closeness
Sound of tea being poured	1	Input closeness
People praising products	1	Input closeness
AI systems providing guidance	1	Output closeness
Popular songs	1	Output closeness
Whispering	1	Betweenness

Table 127. Summary of Semantic Network Analysis Findings of Want to Hear (continued)

Loud music	1	Articulation points
Old Pakistani songs	1	Articulation points
Singing	1	Articulation points
Advertisements	1	Valued core

From a total of 126 collected responses for things mall goers want to hear, 44 responses were repeated at least once with no response repeated for all 8 dimensions. However, "prayer call" and "soft music" were repeated for 7 dimensions while "laughter", "announcements about sales and discounts", "people talking politely" and "relaxing music" were responses that were repeated for 6 dimensions. Since the responses repeated across dimensions signify the most connected and central values it may be assumed that these responses characterize the things consumers want to hear at a shopping mall.

Table 128. Summary of Semantic Network Analysis Findings of Want to Touch

Response	Repeats	Repeated Dimensions
Cleanliness focused - clean surfaces and items	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, valued core, clique
Clothes	7	Input degree, output degree, input closeness, output closeness, betweenness, valued core, clique
Food	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, valued core
Shoes	7	Input degree, output degree, input closeness, output closeness, betweenness, valued core, clique
Fabrics	7	Input degree, output degree, input closeness, output closeness, betweenness, valued core, clique
Jewellery	7	Input degree, output degree, input closeness, output closeness, betweenness, valued core, clique
Books	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core
Flowers	6	Input degree, output degree, input closeness, output closeness, betweenness, clique
Soft surfaces	5	Input degree, output degree, output closeness, betweenness, valued core
Decorations	5	Input degree, output degree, input closeness, output closeness, betweenness
Touch screens	5	Input degree, output degree, input closeness, betweenness, articulation points
Bags	5	Input degree, input closeness, output closeness, valued core, clique
Plants	5	Input degree, output degree, input closeness, output closeness, betweenness
Fluffy items	4	Input degree, output degree, input closeness, betweenness
Stuffed toys	4	Output degree, output closeness, betweenness, articulation points

Table 129. Summary of Semantic Network Analysis Findings of Want to Touch
(continued)

Watches	3	Input degree, input closeness, betweenness
Electronic gadgets	3	Input degree, input closeness, betweenness
Make-up products	2	Input degree, betweenness
Wallets	2	Input degree, input closeness
Silk	2	Output degree, betweenness
Items I purchase	2	Output degree, output closeness
Good quality products	2	Output degree, output closeness
Stationary	2	Output degree, output closeness
Cozy sofas	2	Output degree, output closeness
Birds	1	Input degree
New products	1	Input degree
Carpets	1	Input closeness
Cats	1	Input closeness
Curtains	1	Input closeness
Bean bags	1	Input closeness
Make-up products	1	Output closeness
Pants	1	Output closeness
Glass doors	1	Betweenness
Gadgets	1	Betweenness

From a total of 126 collected responses for sounds mall goers want to touch at a mall, 34 responses were repeated at least once with only "cleanliness focused – clean surfaces and items" was repeated for all 8 dimensions. While, "clothes", "food", "shoes", "fabrics" and "jewellery" was repeated for 7 dimensions and "books" and "flowers"

was repeated for 6 dimensions. Since the responses repeated across dimensions multiple times signify the most connected and central values it may be assumed that these responses characterize the surfaces or items consumers want to touch at a shopping mall.

Table 130. Summary of Semantic Network Analysis Findings of Don't Want to Touch

Response	Repeats	Repeated Dimensions
Dirty Bathroom surfaces	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, valued core
Dirty tables	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, valued core
Dirty surfaces	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, valued core
Dirty glass paraphernelia	6	Input degree, output degree, input closeness, betweenness, articulation points, valued core
People	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core
Wet things	6	Input degree, output degree, input closeness, input closeness, betweenness, articulation points
Trash cans	5	Input degree, output degree, output closeness, betweenness, valued core
Sticky things	5	Input degree, output degree, output closeness, betweenness, articulation points
Animals	5	Input degree, output degree, output closeness, betweenness, valued core
Dirty items	5	Input degree, output degree, betweenness, articulation points, valued core
Dirty doors/ door handles	5	Output degree, output closeness, betweenness, articulation points, valued core
Garbage	5	Output degree, input closeness, output closeness, betweenness, valued core
Dirt	4	Input degree, input closeness, betweenness, articulation points
Dirty railings	4	Input degree, input closeness, output closeness, betweenness
Escalators	4	Input degree, output degree, input closeness, output closeness
Sticky tables	4	Output degree, input closeness, output closeness, betweenness

Table 131. Summary of Semantic Network Analysis Findings of Don't Want to Touch (continued)

Dirty chairs	4	Output degree, output closeness, betweenness, articulation points
Dirty used tissues	3	Input degree, input closeness, valued core
Railings	3	Input degree, input closeness, betweenness
Elevator buttons	3	Input degree, input closeness, valued core
Dirty furniture	3	Output degree, output closeness, valued core
Cobwebs	3	Output degree, output closeness, valued core
Wet surfaces	2	Input degree, articulation points
Dirty flushes	2	Input degree, input closeness
Dirt	2	Output degree, valued core
Trash	2	Output closeness, valued core
Dirty	1	Input degree
Floor	1	Input degree
Insects	1	Output degree
Dirty walls	1	Output degree
Stinky food	1	Input closeness
Sticky surfaces	1	Output closeness
Gum	1	Output closeness
Waste	1	Output closeness
Rough walls	1	Output closeness
Floor	1	Betweenness
Second hand clothes	1	Betweenness
Sticky door handles	1	Betweenness
Cheap quality items	1	Articulation points
Wet tissues	1	Articulation points
Rough things	1	Articulation points
Spilled Soda	1	Articulation points
Dirty food trays	1	Valued core
Counters	1	Valued core
Litter	1	Valued core
Excreations	1	Valued core
Dirty interior	1	Valued core

From a total of 126 collected responses for things mall goers don't want to touch, 46 responses were repeated at least once with no response repeated for all 8 dimensions. However, "dirty bathroom surfaces", "dirty tables" and "dirty surfaces"

was repeated for 7 dimensions while "dirty glass "paraphernalia", "people" and "wet things" were responses that were repeated for 6 dimensions. Since the responses repeated across dimensions signify the most connected and central values it may be assumed that these responses characterize the things consumers don't want to touch at a shopping mall.

Table 132. Summary of Semantic Network Analysis Findings of Want to Taste

Response	Repeats	Repeated Dimensions
Ice cream	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, valued core, clique
Chocolate/ chocolate flavored items	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, valued core, clique
Desserts	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, clique
Pizza	7	Input degree, output degree, input closeness, output closeness, betweenness, valued core, clique
Coffee	7	Input degree, output degree, input closeness, output closeness, betweenness, valued core, clique
Popcorn	7	Input degree, output degree, input closeness, output closeness, betweenness, valued core, clique
Burgers	7	Input degree, output degree, input closeness, output closeness, betweenness, valued core, clique
Good food	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, valued core
Street food	5	Input degree, input closeness, output closeness, betweenness, valued core
Fries	5	Input degree, output degree, input closeness, output closeness, betweenness
Food samples	5	Input degree, output degree, output closeness, betweenness, valued core

Table 133. Summary of Semantic Network Analysis Findings of Want to Taste (continued)

Steak	5	Input degree, output degree, input closeness, output closeness, betweenness
Cinnamon rolls	5	Input degree, output degree, input closeness, output closeness, valued core
Fresh food	5	Input degree, output degree, output closeness, betweenness, articulation points
Pasta	4	Input degree, input closeness, betweenness, clique
McDonalds	4	Input degree, input closeness, betweenness, articulation points
International cuisine	4	Input degree, output degree, output closeness, betweenness
Milkshakes	4	Output degree, input closeness, output closeness, articulation points
Variety of cuisine	3	Input degree, input closeness, betweenness
Delicious food	3	Output degree, output closeness, valued core
Desi food	2	Output degree, output closeness
Sugar free cinnabon	2	Input closeness, articulation points
Water	2	Betweenness, articulation points
Chinese cuisine	1	Input degree
Snacks	1	Input degree
Fresh salads	1	Output degree
Donuts	1	Output degree
Quality food	1	Output degree
Apple pie	1	Input closeness
Sushi	1	Input closeness
Continental cuisine	1	Input closeness
KFC	1	Output closeness
Dry fruit	1	Output closeness
Baked items	1	Betweenness
Snacks	1	Betweenness
Wholesome meals	1	Articulation points
Thai food	1	Articulation points
Lasagna	1	Articulation points

Table 134. Summary of Semantic Network Analysis Findings of Want to Taste (continued)

Responsibly sourced meat	1	Articulation points
Tasty beverages	1	Articulation points
Hotshots	1	Articulation points
Smoothies	1	Articulation points
Baby corn	1	Articulation points
Tea	1	Articulation points
Hot soup	1	Articulation points
Specific restuarant name	1	Articulation points

From a total of 126 collected responses for items mall goers want to taste at a mall, 46 responses were repeated at least once with "ice cream" and "chocolate/chocolate items" was repeated for all 8 dimensions. While, "desserts", "pizza", "coffee", "popcorn", "burgers" and "good food" was repeated for 7 dimensions and no dimension was

was repeated 6 times. Since the responses repeated across dimensions multiple times signify the most connected and central values it may be assumed that these responses characterize the items consumers want to taste at a shopping mall.

Table 135. Summary of Semantic Network Analysis Findings of Don't Want to Taste

Response	Repeats	Repeated Dimensions
Old food	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core
Rotten food	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core
Haraam food	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core
Food from unsanitary sources	6	Input degree, output degree, input closeness, output closeness, betweenness, articulation points
Bitter tasting food	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core
Oily food	6	Input degree, output degree, input closeness, output closeness, betweenness, articulation points
Alcohol	6	Input degree, input closeness, output closeness, betweenness, articulation points, valued core
Spicy food	5	Input degree, output degree, input closeness, betweenness, articulation points
Undercooked food	5	Input degree, output degree, input closeness, output closeness, betweenness
Raw food	5	Input degree, output degree, input closeness, output closeness, betweenness
Fish	4	Input degree, input closeness, output closeness, betweenness
Burnt food	4	Input degree, output degree, output closeness, betweenness
Tasteless food	3	Input degree, input closeness, valued core
Salty food	3	Input degree, input closeness, betweenness
Unhealthy food	3	Input degree, input closeness, output closeness
Onions	3	Input degree, output degree, betweenness
Over cooked food	3	Input degree, input closeness, input closeness
Food that tastes bad	3	Output degree, output closeness, betweenness
Sour consumables	3	Output degree, betweenness, articulation points
Vegetables	3	Output degree, output closeness, betweenness
Bland food	2	Input degree, input closeness
Cold food	2	Input degree, input closeness

Table 136. Summary of Semantic Network Analysis Findings of Don't Want to Taste (continued)

Fried food	2	Input degree, input closeness
Expired consumabes	2	Output degree, output closeness
Burgers	2	Output degree, betweenness
Desi food	2	Output degree, output closeness
Sushi	1	Output degree
Fast food	1	Output degree
Smelly food	1	Input closeness
Bad quality food	1	Output closeness
Vomit	1	Output closeness
Expensive food	1	Output closeness
Unappealing food	1	Output closeness
Sweets	1	Betweenness
Chocolate	1	Betweenness
Ketchup	1	Articulation points
Dirt	1	Articulation points
Soda	1	Articulation points
Juices	1	Articulation points
Yoghurt	1	Articulation points
Dry cake	1	Articulation points
Frozen food	1	Articulation points
Dark chocolate	1	Articulation points
Poop	1	Articulation points
Bad tea	1	Articulation points
High salt	1	Articulation points
Sweet rice	1	Articulation points
Fanta	1	Articulation points
Chemicals	1	Articulation points

From a total of 126 collected responses for items mall goers want to taste at a mall, 49 responses were repeated at least once with no responses repeated for 7or 8 dimensions. While, "old food", "rotten food", "haram food", "food from unsanitary sources", "bitter tasting food", "oily food" and "alcohol" repeated for 6 dimensions. Since the responses repeated across dimensions multiple times signify the most

connected and central values it may be assumed that these responses characterize the items consumers don't want to taste at a shopping mall.

Table 137. Summary of Semantic Network Analysis Findings of Want to Smell

Response	*Repeats*	*Repeated Dimensions*
Air fresheners	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, clique, valued core
Food	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, clique, valued core
Coffee	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, clique, valued core
Flowers	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, clique, valued core
Perfumes	7	Input degree, output degree, input closeness, output closeness, betweenness, clique, valued core
Fresh air	7	Input degree, output degree, input closeness, output closeness, betweenness, clique, valued core
Cinnamon	7	Input degree, output degree, input closeness, output closeness, betweenness, clique, valued core

Table 138. Summary of Semantic Network Analysis Findings of Want to Smell (continued)

Baked items	6	Input degree, output degree, input closeness, output closeness, betweenness, clique
Scented candles	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core
Fries	5	Input degree, output degree, input closeness, output closeness, betweenness
Popcorn	5	Input degree, output degree, input closeness, output closeness, betweenness
Pleasant smells	4	Output degree, output closeness, betweenness, valued core
Cleaning materials	4	Output degree, input closeness, output closeness, clique
Leather	3	Input degree, betweenness, articulation points
Fresh food	3	Input degree, input closeness, betweenness
Chocolate	3	Input degree, betweenness, valued core
Sweet scents	3	Input degree, input closeness, articulation points
Lavender	3	Output degree, output closeness, valued core
Books	2	Input degree, input closeness
Vanilla	2	Input degree, clique
New clothes	2	Input degree, betweenness
Mint	2	Input degree, articulation points
Good fragrance	2	Output degree, output closeness

Table 139. Summary of Semantic Network Analysis Findings of Want to Smell (continued)

Fresh aromas	2	Output degree, output closeness
Ittar	2	Output degree, output closeness
Cologne	2	Output degree, betweenness
Ager batti	2	Output degree, betweenness
Vanilla	2	Input closeness, output closeness
Lemon grass	2	Input closeness, articulation points
Sugary desserts	2	Input closeness, articulation points
Axe deodrant	1	Output degree
Cotton candy	1	Input closeness
Body wash	1	Output closeness
Freshly baked items	1	Output closeness
Deodrant	1	Betweenness
Good quality food	1	Betweenness
Baby powder	1	Articulation points
Air conditioner smell	1	Articulation points
Fried food	1	Articulation points
Freshly mopped floors	1	Articulation points
Zinger chicken	1	Articulation points
Exotic food	1	Articulation points
Good perfumes	1	Articulation points

Table 140 Summary of Semantic Network Analysis Findings of Want to Smell (continued)

Fresh salads	1	Articulation points
Herbs and exotic spices	1	Articulation points
Tea	1	Articulation points

From a total of 126 collected responses for sounds mall goers want to smell at a mall, 46 responses were repeated at least once with "air fresheners", "food", "coffee" and "flowers" repeated for all 8 dimensions. While, "perfumes", "fresh air", and "cinnamon" was repeated for 7 dimensions and "baked items" and "scented candles" was repeated for 6 dimensions. Since the responses repeated across dimensions multiple times signify the most connected and central values it may be assumed that these responses characterize the items consumers want to smell at a shopping mall.

Table 141. Summary of Semantic Network Analysis Findings of Don't Want to Smell

Response	Repeats	Repeated Dimensions
Sweat	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, clique, valued core
Smelly people	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, clique, valued core
Bad body odour	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, clique, valued core
Smelly socks	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, clique, valued core
Bad odour	8	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, clique, valued core
Bad smell in washrooms	7	Input degree, output degree, input closeness, output closeness, betweenness, clique, valued core
Dirty diapers	7	Input degree, output degree, input closeness, output closeness, betweenness, articulation points, valued core
Chemical cleaning products	7	Input degree, output degree, input closeness, output closeness, betweenness, clique, valued core
Dirty mops	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core

Table 142. Summary of Semantic Network Analysis Findings of Don't Want to Smell (continued)

Farts	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core
Smelly feet	6	Input degree, output degree, input closeness, output closeness, betweenness, valued core
Rotten food	5	Input degree, input closeness, output closeness, betweenness, clique
Cigarettes	5	Input degree, output degree, input closeness, output closeness, clique
Strong air fresheners	5	Output degree, output closeness, betweenness, articulation points, valued core
Strong perfumes	4	Input degree, output degree, output closeness, valued core
Poop	4	Input degree, output degree, input closeness, betweenness
Trash	4	Input degree, output degree, output closeness, betweenness
Vomit	4	Output degree, input closeness, output closeness, valued core
Garbage	3	Input degree, output degree, valued core
Garbage	3	Input closeness, output closeness, betweenness
Fish	2	Input degree, betweenness
Bad breath	2	Output degree, betweenness
Overdose of perfume	2	Input closeness, articulation points
Cinnamon	2	Input closeness, articulation points

Table 143. Summary of Semantic Network Analysis Findings of Don't Want to Smell (continued)

Smelly food	2	Betweenness, articulation points
Strong cologne	1	Input degree
Garlic	1	Input degree
Coffee	1	Output degree
Fish	1	Input closeness
Cheap perfume	1	Input closeness
Achaar	1	Output closeness
Nail polish	1	Betweenness
Stale air	1	Articulation points
Curdled milk	1	Articulation points
Coconut oil in women's hair	1	Articulation points
Stuffy air	1	Articulation points
Mouldy air	1	Articulation points
Sewage	1	Articulation points
Detoll	1	Articulation points
McDonalds	1	Articulation points
Urine	1	Articulation points
Smelly shops	1	Articulation points
Paint	1	Valued core
Vinegar	1	Valued core
Burnt food	1	Valued core

From a total of 126 collected responses for sounds mall goers don't want to smell at a mall, 45 responses were repeated at least once with "sweat", "smelly

people", "bad body odour", "smelly socks" and "bad odour" repeated for all 8 dimensions. While, "bad smell in washroom", "dirty diapers" and "chemical cleaning products" was repeated for 7 dimensions with "dirty mops", "farts" and "smelly feet" repeated for 6 dimensions. Since the responses repeated across dimensions multiple times signify the most connected and central values it may be assumed that these responses characterize the items or things consumers don't want to smell at a shopping mall.

CHAPTER 5: EVALUATION OF FINDINGS AND DISCUSSION

The goals of the current research, are based on the foundation that senses are experienced phenomenologically, understood culturally and recreated socially (Nichter, 2008). Research suggests that capturing the sensory experience of consumers is a complicated process as there appears to be a lack of techniques available to capture the interrelations, contradictions and wholeness of sensory experiences (Scott and Uncles, 2018). Therefore, the current research is an attempt at answering the call for a thorough application of qualitative methodology by using the semantic network analysis techniques for the development of theories and also to provide information for successful decision making.

Semantic network analysis, a form of social network analysis, investigates the relationship between various nodes. For the current study the data was run through 8 dimensions; valued core, clique, input degree, output degree, input closeness, output closeness, betweenness and articulation point. Each measure provides unique insights for the interpretation of data and highlights the interrelation and possible contradictions within it. Each of these measures provides key insights into the meaning of consumers' sensory expectations of shopping malls. This research also attempts to counter the insufficiency of data in the Pakistani market and to analyse the self-reported experiences of consumers that frequent shopping malls with a specific focus on the participants' sense of sight, smell, taste, touch and sound in mind.

Research suggests that Pakistan has the highest rate of urbanization in South Asia, with approximately 40% of the population living in urban areas as of 2021. Experts forecast that by the year 2025 more than half the population would have made the shift to urban locations (UNDP, 2018). Due to the steady rate of urbanization in the country, an increase in the construction of shopping malls has also been observed. Unfortunately, consumer research from within Pakistan, regarding consumer preferences and expectations, was found to be rudimentary. Even though shopping mall owners have access to research conducted in international markets, a review of the literature revealed that sensory stimuli is heavily influenced by the culture of a place. Therefore, items that would appeal to the senses of an American or European would not necessarily have the same impact on someone from Pakistan. Therefore, data collected from the relevant market would be beneficial for crafting of marketing communication messages and also in tailoring the shopping experience according to

the inclinations and preferences of consumers. Furthermore, data relating to other aspects that influence experience were also collected. The reason for doing so was to gain a complete understanding of a consumers shopping experience and to ensure that the findings are not restrictive. As a result, the results could potentially provide shopping mall management, marketing professionals and retailers with invaluable information regarding the preferences of their customers.

The shared semantic associations for attributes consumers liked at shopping malls and the responses that were deemed important for all eight dimensions were "variety of shops", "spacious" and "parking".

For the valued core analysis the lowest value is the most insightful as it provides researchers with information that had the lowest frequency. This information would otherwise be lost within raw data. However, the valued core analysis allows these infrequently mentioned nodes with an opportunity to be highlighted by identifying responses of the outliers. Since sensory experiences are personal in nature (Bertil, 2011; Hulten, 2020) and find their root in phenomenology (lived experiences) which looks at individual reactions when encountering the same stimuli (Biemel and Spiegelberg, 2017) the valued core analysis provides researchers with unique responses. As a result, "cleanliness (general)" and "variety of shops" were nodes that were considered important for the liked attributes of shopping malls.

The clique analysis for the liked attributes at a shopping mall show a group of values that are connected to every other and are densely connected. For the responses of the clique analysis "food court", "parking", "variety (brands)", "variety of shops" and "spacious" were highlighted. These values are the most important for a majority of the respondents that visit a shopping mall. The responses "variety (brands)" and "variety of shops" is in line with the concept of commoditization presented in the literature. Accordingly, commoditization asserts that industries that offer similar products to a consumer base (that is price-sensitive) may easily (without an added cost) shift to purchasing from another supplier (Reimann, Schilke and Thomas, 2010). For this to occur variety is a prerequisite. This response is in line with the expectation of consumers within an experience economy for attributes that they like in a mall.

A link between memory, sense of smell and taste was also discovered during the review of the literature (Linstrom, 2010; Rozin and Hormez, 2010). Since free associations are based primarily on memory (Cheng-Hsui Chen, 2001), the response of "food court" for the "liked attributes" at a shopping mall in the clique analysis is fitting. Similarly, the response of "parking" alludes to the parking lots available at shopping malls which is in-line with Victor Gruen's (1960, p. 23) vision of shopping malls in which it is defined as:

"a conveniently accessible, amply stocked shopping area with plentiful and free parking."

This research question was designed to illicit general responses from consumers regarding their perception of an ideal shopping mall. The objective was to gauge consumer responses free of any preconceived notions or influences. Operating on the assumption that the world is explored and understood by consumers based on their lived experiences and the use of their five senses. The responses highlighted some contradictions within the data, which is expected in sensory research since sense perception is highly personal yet culturally interpreted. An attribute of an ideal mall was "a lot of people", however, "not crowded" was also recorded. This highlights the diversity of the data and reinforces the information from the literature that experiences are uniquely personal (Krishna, 2012a).

"Cleanliness", "spacious" and "food court" again were dimensions that were deemed important for the respondents due to the number of times they were repeated in each dimension. Thus displaying the attributes present in an ideal mall.

Reasons for shopping at a particular mall provides an insight into the minds of the respondents and highlights the main reason, according to them, for frequenting a shopping mall. The most important values of this response were "close to my house" and "availability of brands". When reasons for shopping are compared with the liked attributes of a shopping mall another contradiction within the responses is highlighted. Pakistan is a densely populated country where the urban landscape does not allow for space to exist within urban areas (UNDP, 2018). This means that when respondents describe the liked attribute of "spacious" and "parking" and idealised attribute of "close to my house", for these two to exist in the same place appears to be a paradox.

Therefore, the literature reflects that attempts have been made to counter this by developers by purchasing large residential plots and converting them in to shopping malls (Rana and Bhatti, 2018). This allows for the availability of shopping malls that are "close to my house" while also being "spacious" with ample "parking".

The responses of consumers for attributes consumers disliked in a shopping mall are in line with the two previous questions; liked attributes and idealised attributes. The significant responses regarding things consumers dislike at shopping malls were "parking issues", "it is small", "lacks variety" and "congestion". These responses provide further reinforcement for the previous question.

The network of the shared semantic associations of things consumers don't want to see at shopping malls highlighted "trash", "a larger crowd" and "litter" as significant responses. It is important to distinguish between "trash" and "litter"; where the former is indicative of worthless material and the latter represents items that are carelessly discarded. These responses are in line with the information provided within the literature that is directly in line with the objectives of a shopping mall i.e. clean, temperature controlled, secure and provides a large variety of stores (Bloch, Ridgway and Dawson, 1994). Furthermore, "a larger crowd" highlights the social dimension of shopping malls which portray them as community hubs (Wall, 2007). This research question was designed specifically to make a distinction between things consumers do not wish to see visually, where "trash", "litter" and "a larger crowd" are perceived visually, they do not provide insight into influence of other senses on the sense of sight as mentioned in the literature. Although, trash and litter could imply that the sense of smell is at play but that association has not been made clearly. Furthermore, "people that stare" and "cheap crowd" emerged as important responses as well. However, these responses focus more on the social context than they do on the visual.

The responses for shared semantic associations of things consumers want to see at the mall were more sight motivated than the responses for do not want to see. Again "overall cleanliness" emerged as an important response. Another was "good safety measures" which had not been previously highlighted in the literature. It may be argued that an individuals' sense of security may be perceived by the measures they see implemented, like CCTV cameras, presence of security personnel and check-points at the entrance of a shopping mall.

"Lighting" was also identified as an important response for things respondents want to see at shopping mall. This response is in line with the literature that analyses the role lighting plays in store atmospherics and the positive impact that it has on consumer behaviour and purchasing decisions (Roggeveen, Grewal and Schweiger, 2020). Furthermore, bright lights are associated with lively environments and pleasantness while dim lights are considered to create romantic moods (Ozkul et al., 2019). However, the response "lighting" does not provide additional information regarding the type of lighting that consumers are alluding to. Given the sensitivity of some consumers to harsh lighting and for some consumers aversion to dim lighting (Linstrom, 2010; Hulten, 2020), more data is required.

The research question for highlighting the shared semantic associations of things consumers do not want to hear "abusive language", "loud music" and "children crying" emerged as important responses that were repeated for all 8 dimensions. "Adults and/or children screaming", "eve teasing" and "noise" also emerged as important as they were repeated for 7 dimensions. Comparing these findings to the literature revealed that the sense of sound is closely linked with human emotions since sound is processed in the amygdala; a part of the human limbic system responsible for managing emotions (Elias, 2010). Therefore, it may be deduced that the responses are in line with the claim that identified sounds negatively influence human emotions. Therefore, the respondents are averse to these sounds.

The important semantic associations for sounds consumers want to hear at shopping malls were "prayer call" and "soft music". With "laughter", "announcements about sales and discounts", "people talking politely" and "relaxing music" also being significant. These responses attest to the culture of the participants. Much like the other senses, the sense of sound is also influenced by the background and values of the population (Varman and Belk, 2012). This shows the value attributed with certain sounds like the "prayer call" and "soft music" that appears to be a preference for the respondents.

For the shared semantic associations of things consumers want to touch the responses were "cleanliness focused – clean surfaces and items" as the most important with 8 repeats. Followed by "clothes", "food", "shoes", "fabrics" and "jewellery". These responses are in line with the literature since the review highlighted that the

sense of touch is product-category focused (Peck and Childers, 2003; Peck, Barger and Webb, 2013). This means that the responses identified the products that were sensitive to touch for their evaluation. Another important point that the responses indicate is the need of consumers to appraise a product by touching it which is in line with prior research (Reb and Connolly, 2007) since it suggests that the value of a product increases in the eyes of the consumers when they are allowed to touch it. This phenomenon is commonly referred to as the endowment effect.

The responses for things consumers do not want to touch presented "dirty bathroom surfaces", "dirty tables" and "dirty surfaces". With "dirty glass paraphernalia", "people" and "wet things" following with a repeat for 6 dimensions. Where most of the responses do not attest to the Pakistani culture as being touch-averse, the response of "people", repeated for 6 dimensions, suggests that it holds true to a certain extent. Furthermore, none of the respondents for either one of the 8 dimensions mentioned that they would like to be touched at a shopping mall. This observation contradicts the finding in the literature that suggests that people respond positively to human touch, especially when it comes to persuading them to purchase an item and for strengthening bonds with a brand or an outlet (Ellingsen et al., 2014). This response suggests that the Pakistani consumer may not respond positively to being touched at a shopping mall.

The shared semantic association for things consumers do not want to taste at shopping malls essentially highlighted the food groups that they would like to consume. With "ice cream" and "chocolate/chocolate flavoured items" being highlighted as the most important as they were repeated for all 8 dimensions. With "desserts", "pizza", "coffee", "popcorn", "burgers" and "good food" following suit with a repeat of 7 dimensions. It may be ascertained from the responses that the respondents preferred consuming food that was flavoured as sweet. However, the distinctions between the flavours were not made in the responses as suggested by prior research. In addition, the argument evidenced in the literature pertaining to food outlets providing food that is in-demand and not necessarily healthy hold true (Cornwell and McAlister, 2011) since a majority of the responses requested fast-food items.

The semantic associations for food items consumers did not want to taste none of the measure were repeated for all 8 dimensions. The responses of "old food", "rotten

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food", "haram food", "food from unsanitary sources", "bitter tasting food" and "oily food" were repeated for 8 dimensions. The responses of the participants did, however, highlight an important aspect of food expectation from shopping malls i.e. most consumers associate fast food with shopping malls and also demand for it to be present. The responses also provide insight into the cultural mindset of the consumers when it comes to food preferences where the influence of the west may be observed. Furthermore, the fact that consumers would mention that they would not like to taste rotten, haram or old food highlights a concern that they suspect that it could be a possibility or they might have experienced so in the past.

The semantic associations of things consumers want to smell at a shopping mall were repeated in 8 dimensions for "air fresheners", "food", "coffee" and "flowers". With "perfumes", "fresh air" and "cinnamon" repeated for 7 dimensions. These responses depict the connection between the sense of smell and taste as mentioned in previous research (Khanna and Mishra, 2012; Sendra and Carbonell-barrachina, 2017). The responses also points out that consumers do not make a distinction between the two aforementioned senses; taste and smell. For example, the association made with coffee is generic and related to the item that is tasted, even though the question was specific to the sense of smell. They could have responded with the unique characteristics of the smell of coffee, like the bitterness or the added sweetness of caramel or chocolate. Yet they chose to respond with the name of a food group and its' smell.

For the semantic associations of things consumers don't want to smell at shopping malls "sweat", "smelly people", "bad body odour", "smelly socks" and "bad odour" were mentioned for 8 dimensions. The responses provide a valuable insight in to the mindset of mall goers. The rapid rate of urbanization has resulted in the construction of shopping malls within cities, most of these shopping malls are constructed in posh areas and are also visited by people who have shifted to the bigger cities from areas that were previously agricultural lands. Research suggests that characteristics and body odours of people from other areas are markedly different from those of the homogenous population (MacPhee, 1992). This causes the local population to disassociate themselves from the new commers who are often perceived to be of a lower status, diseased and are not welcome. The aforementioned responses

could be a reflection of these beliefs. These responses, therefore, are in-line with the literature.

A few interesting themes also came to light during the data collection procedure. Respondents of the survey mentioned *"women laughing loudly"* as a response to things that they do not want to hear. Furthermore, in responses for *"don't want to see",* some respondents replied that *"women without dupatta's".* A *dupatta,* is a piece of clothing much like the hijab that women in Pakistan use to as a means to cover themselves up. Unlike some Islamic countries, the *dupatta* is not mandatory in Pakistan. It is an optional clothing attire.

Similarly, other culturally significant insights revealed that responses for "don't want to see" included people who stare, cheap crowd, judgemental people, single boys/men, unattended children, harassment and creepy men. Responses for "want to see" included decently dressed women, women wearing dupatta's and religious people. Responses for "don't want to hear" included eve teasing, single men, people boasting about their status and women laughing very loudly and responses for "want to hear" included prayer call, Quranic verses, people speaking in English.

CHAPTER 6: CONCLUSION

Human beings rely heavily on their senses to experience the world around them. From a research perspective, the role of the senses play in memorable experiences was largely ignored with some academics labelling it as insignificant, inconsequential and even superficial (Schmitt, 1997). However, due to the popularity of the experience economy and consumer demands for experiences that,

> "*dazzle their senses, touch their hearts, and stimulate their minds*" (Schmitt, 1999, p. 57)

a shift was observed in research and marketing practices. Sensory marketing, as a result, emerged as a phenomenon where companies attempted to market their products in a way that stimulated the senses of the target market in an attempt to differentiate them from the competition by making their products unforgettable. Sensory marketing was also seen as a means of strengthening consumer-brand relationships by involving consumers on an emotional level.

The review of the literature showed an important characteristic of sensory experiences; their cultural significance and their resulting evaluations. It was revealed that the culture of the people experiencing the brand stimuli, heavily impacts their perceptions. For example, while marketing a food item to a Muslim population there exists a need to clearly mark the ingredients as Halal. Similarly, the type of smells that the locals consider appealing will differ, in some cases exponentially, from those of people residing in another area. The same theme appeared for visual, auditory and gustative experiences where the marketing also demands being embedded in the culture.

The responses of the consumers showcased their sensory expectations regarding shopping malls within Pakistan which was explored by the applied semantic network analysis. The findings of this thesis may be used as a basis for crafting marketing communication messages at shopping malls and to ascertain the most effective interplay between the senses for the manufacturing of experiences that resonate with the target market. The responses related to "liked attributes", "reasons for shopping", "idealised attributes" and "disliked attributes" all provide valuable information regarding things consumers expect from a shopping mall. Thus allowing

mall owners and their subsequent marketing departments with the necessary information related to consumer demands. Furthermore, the responses might also help the concerned parties for identifying the elements missing at a given shopping mall and make attempts to rectify it. The results also highlighted the interplay between the senses and their impact on consumers.

6.1 Limitation

There were a number of limitations for this study. For starters, the data was collected between January - February 2019, at the height of the global Corona Virus scare. The number of patrons visiting shopping malls was at a decline. In addition, the economic instability suspected as a result of the corona virus caused people from lower income groups to avoid spending on consumer goods. Therefore, the responses could not be collected from them. Furthermore, the mall visitors that were approached to fill out the questionnaire were mindful of maintaining a distance. As a result, this did not allow for any further explanations or provision of information from the researcher for the clarification of the questions. This resulted in the respondents not completing some of the questions. A total of 400 respondents were given the questionnaire. However, only 126 of the responses were complete and useable.

Furthermore, data was collected on site at two large malls in the city of Lahore. There is a strong likelihood that the sensory expectations of consumers from other cities would be different. For instance, Karachi is a metropolitan city and the lifestyle of the people living there is considerably different from those living in Lahore or Islamabad. Therefore, it may be argued that to gain a complete understanding of sensory expectations the data should include responses from different geographical locations.

Another limitation of the study was the generic demographics of the sample. Responses were collected from individuals that fell between the ages of 11-72 years of age. Where this allowed for diversity of the responses it may be argued that splitting the sample according to their age groups would yield more insights. Thus allowing for information to be gathered that is more specific.

Furthermore, the questionnaire was very extensive and without a benefit to the consumers like a gift card or a small financial gain from the exchange the motivation to answer each question was observed to be low.

Another aspect that became clear during the course of the data collection process was that some questions required further elaboration that could have been

gained via carrying out interviews with a proportion of the participants. This would have shed further light on the sensory expectations of the consumers.

6.2 Contributions

Consumer research within the Pakistani market is lacking. During the course of the literature review only a handful of research papers were discovered that was related to Pakistan, especially for sensory experiences and consumer expectations regarding shopping malls. Since the literature also revealed the important of sensory experiences within shopping malls, this study provides useful insights into the minds of the consumers that frequent shopping malls.

Furthermore, it also provides key information regarding things consumers want to see, hear, touch, taste and smell at shopping malls and things they don't. This information provides shopping mall owners with areas for improvement while also identifying ways in which they may set themselves apart from the competition.

Another important contribution of this study is that it provides a starting point for future research related to sensory expectations of consumers and may be replicated, with a few minor adjustments, in other cities. Since experiences are influenced by culture it would be interesting to see the manner in which it differs within the country.

6.3 Future Research

This study lays a foundation for the exploration of consumers' sensory expectations regarding a shopping mall. The demographics of the consumers that were given questionnaires was very diverse. They belonged to different income groups, educational backgrounds, age groups and gender. Future research could potentially focus on either men or women to gauge the difference in their sensory expectations. A further distinction may be made between millennials, Gen Z, Gen Y and boomers to yield specific information as well. Further studies may be carried out to answer questions like "what role does culture play on the sensory expectation of millennial/ baby boomers or generation Z?"

Furthermore, as observed in the literature culture plays an important role in the interpretation of sensory stimuli. It would be interesting to compare the data from Pakistan with that of another country. The comparison could be between cultures that are similar to Pakistan and also those that are different with the line of questioning

being "What are the semantic similarities and differences between the sensory expectations of consumers from Pakistan and Turkey?"

Another avenue for future research could be the semantic differences in sensory expectations between social classes, educational backgrounds or income groups. Such a research would provide key insights into the sensory expectation of different groups of people thus enriching data.

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