Effect of photographs on shopping behavior of consumers

by

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Abstract

With increasing global e-commerce scenario, online shopping has become a part of our day-to-day life for products ranging from food to clothing and electronics. With globalization on one hand and tremendous change in the lifestyle of people, on the other hand, eating food outside of the home has also become an inevitable part of life nowadays. This study was designed to understand how photographs and information of the products influence the purchase behavior of consumers, to increase the purchase intent and liking of clothing sold online and food in a restaurant.

The objectives of this study were to determine which type of photograph/description would have higher liking and purchase intent by consumers when they are shopping for clothes online and when ordering food in a restaurant. It also aimed to use different types of product descriptions to find any differences in overall liking, product perception, and purchase intent.

An online survey was conducted with Indian women (n=600) through Qualtrics software. Data about demographics, overall liking, purchase intent and level of information gained based on the photographs were inquired for different type of photographic presentation of saris and Indian curries in two different sections. ANOVA, Correspondence Analysis (CA), frequency count analysis and descriptive statistics were employed for data analysis using XLSTAT software.

In case of online shopping for clothing, especially saris, the results revealed that adding photographs of a model with/without a description to be a better presentation method as it acts as a virtual representation of the seller and is believed to establish trust between the consumers and the sellers. This thereby would lead to significantly higher overall liking, level of being informed and purchase intent. Similarly, in the case of restaurant shopping for food where the effect of photographs on a restaurant menu was studied, adding photographs of the food along with the sides

with/without description was found to be a better presentation method. This was in turn related to significantly higher overall liking, level of being informed and purchase intent. Though there are no differences in the type of description added to the picture, adding information about the product was still found to be a critical factor for higher liking and purchase intent in both cases.

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Acknowledgements

Count your blessings; name them one by one,
Count your blessings, see what God has done!
Count your blessings; name them one by one,
And it will surprise you what the Lord has done.
-   Johnson Oatman. Jr

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Dedication

To you ma and papa, I love you!

Chapter 1 - Literature Review

Global E-commerce Scenario

With booming popularity of internet usage and the advancements in information technology, online shopping is becoming inevitable for products ranging from electronics, household appliances and books to clothing, beauty products and food as a part of everyone's day-to-day activity. Internet availability and globalization play a vital role in flourishing online/retail markets along with providing opportunities to start-ups. Convenience of buying goods and services anywhere-anytime is attracting a large number of consumers to use internet for shopping. However, the internet was not the most common method in B2B (Business to Business) and B2C (Business to consumer) until now (Akhlaq A, 2014). Online shopping occupies eight percentage of the total internet usage time of consumers (Mander, 2017 and Zhang et al., 2017).

The online shopping trend has been exponentially growing in countries such as Australia, Canada and Mexico along with US, UK, France, Hong Kong, and Japan with advanced level of market maturation. In contrast, China has reached to a saturation level with no further growth with almost 96% digitally empowered consumers who shop online on a daily, weekly or monthly basis (Andrew Woodman, 2013). The frequency of online purchases increases by 2% every year and it is also expected that online shopping will keep growing with higher amounts spent on apparel shopping (Kazuya et al., 2004). Global e-retail sales accounted for USD 2.3 trillion by 2017 (Statista, 2018).

Despite the global presence of online shopping, a few countries are still lagging behind in terms of online transaction acceptance. Consumers' perception and buying behavior varies with geographical placements. For example: US students are comparatively more satisfied than Irish students, even though Irish students spend more buying fewer items. Whereas, Indian youth seem more comfortable doing cash transactions than online transactions probably due to web threats and

security issues. Online shopping websites are considered to be a good choice for analyzing and comparing product features, pricing and retail information (Akhlaq, 2014)

Factors affecting online shopping

Product purchase intention is influenced by many factors such as price, type, quality, information availability and discount level.

Different researchers have examined factors affecting buying behavior of consumers in online shopping environments which includes design and ambience factors (Kawaf & Tagg, 2012), search and navigation features (Lohse & Spiller, 1999), image, color, and backgrounds (Ha, Kwon, & Lennon, 2007). Studies have also been done to understand the effect of music (Kim et al., 2009), product presentation factors (Kim, Minjeong & Lennon, 2008), and product interactivity factors on online shopping behavior of consumers mainly for fashion apparel (Ashman & Vazquez, 2012; McCormick & Livett, 2012). In light of social factors, research has been done on virtual sale assistants and avatars, which represent the roles of sales representatives to help consumers with their purchase decisions during online shopping (Haubl & Trifts, 2000).

Customer's personality, product characteristics, previous experiences and situations are equally as important as convenience, utility and satisfaction to form customers' attitude towards online shopping (Perea et al., 2004).

Gender also plays a major role in online shopping with the existing social construct. Shopping experiences are different for men and women (Cho & Workman, 2011). Women tend to orient towards the "shopping for fun" category, spending more time browsing, more mental energy researching available options, compiling information from various sources in order to make an informed decision, and buying more clothing than men who tend to be quick shoppers and have more trust in online shopping than women (Hansen & Møller Jensen, 2009). Women are positively related to fashion opinion leadership and have scored high for a need for touch when making purchase decisions (Cho

& Workman, 2011). Goldsmith & Flynn (2005) in their study mentioned that women are more likely to buy apparel either from online, brick-and-mortar stores or catalogs when compared to men. Their study also revealed that women choose more than one purchase channel to buy apparel.

Online shopping for clothing

Research shows that for clothing and apparel, visual information like color, shape, texture and handling of fabrics are key factors that determine the customer purchase intent. A recent study by Pandey & Chawla (2018) revealed that in addition to the visual engaging factors, e-convenience and e-enjoyment features also ensure a better shopping experience for the consumers. With online shopping, the texture and the handling of fabrics are evaluated only by the visual sensation and the information given on the shopping websites (Kazuya et al., 2004). Internet shopping for clothing is riskier than traditional shopping as it involves decision making on fit, quality and hand feel and it is difficult to evaluate those features on a virtual basis (Kim, Jiyeon & Forsythe, 2009).

Color

A previous study by Park & Gunn (2016) revealed that consumers mentioned that thumbnails and full-page photographs were very important for online shopping of apparel. In addition, depicting the exact color to make sure consumers get what they see decides the success of an online shopping market. Consumers tend to rely on media that accurately portrays product categories, and this makes it crucial to ensure perfection in every presentation method chosen to sell a product (Park & Gunn, 2016). Color, even as an atmospheric cue in addition to being a product feature has a positive influence on the product display (Ballantine, Jack, & Parsons, 2010). Other research studies examined the effect of color as a component of product display. Kerfoot et al. (2003) in their research mentioned that according to consumers, color is an important presentation element rather than color of the environment itself. The use of wide ranges of colors in product displays would increase the attractiveness and the appeal of the product display. The

influence of color in combination with price, store ambience and purchase goals of consumers have been studied (Spies, Hesse, & Loesch, 1997and Koelemeijer & Oppewal, 1999). It is apparent that color affects consumers' purchase decision in many possible ways.

Need for touch

Consumers face dissatisfaction in shopping online sometimes when they have difficulties in understanding the fabrics of the apparel they are purchasing. Research study on handling evaluated by visual information mentioned that the decision made by consumers when handling only by visual cues is different from that of handling by other means. This study also suggested that three-dimensional image such as a picture of a draped fabric rather than a one-dimensional image can give a clear idea to the web-consumers. This is also very important to capture the texture and handling of the clothing to be purchased (Kazuya et al., 2004).

Touch is one of the senses that covers the entire body and can be used to relate to the understanding people have with the environment around them (Bamarouf et al., 2009). Some consumers grab the products they tend to buy while others touch them to experience the product before making a purchase decision (Peck & Childers, 2003). This sensation is however, limited with online shopping (non-touch shopping) where touching or running your hands through the product is not a possibility. Many technology-based developments try to minimize this limitation. They try to use knowledge and other presentation methods of the products to overcome the impact of the absence of touch in consumers' online shopping experience. This is a very crucial constraint for clothing purchase where touching the product is a part of the decision-making process (Roy Dholakia & Zhao, 2010). Rodrigues et al. (2018) investigated the importance of the textual haptic on online clothing shopping by understanding the relationship between need for touch (NFT), textual haptic information and purchase intent of clothing online. There existed a positive relation between NFT and the textual haptic information, which allows the consumer to form more realistic

perceptions of the product. The study suggested that it is very important include textural haptic information when presenting their products online, which many companies fail to do. The study recommends that adding textural information to the product presentation will increase the online sales.

Product display

An important but understudied area in the realm of e-commerce is product display. It is significant because it communicates the information about the product directly to the consumer (Ogle & Schofield-Tomschin, 2002). Studies reveal that consumer choice of purchasing online is influenced by product image, appearance and the information provided to them (Creusen & Schoormans, 2005). Product image and impression are identified to be as important as performance in their perception of usability. The three categories of image/impressions dimensions are 1) basic sense, 2) description of the image and 3) evaluative feeling/attitude (Han et al., 2000). Shape, color, brightness, translucency, texture, balance, heaviness, and volume are some of the characteristics of basic sense. The description of the image is the way users would describe a product based on its appearance and dimensions, including metaphoric design images, elegance, elaborateness, harmoniousness, luxuriousness, magnificence, neatness, rigidity, salience, and dynamicity. Evaluative feelings correspond to the feelings or attitudes consumers refer to about a product's usability and includes acceptability, comfort, convenience, reliability, attractiveness, preference, and satisfaction (Han et al., 2000).

The utilitarian aspects of product display include display quality, availability of information, ease of use and transaction convenience (Khare & Rakesh, 2011). Overby & Lee (2006) revealed that utilitarian values were more important than the hedonic values for consumer's purchase motivation. Hedonic motives of products directly affect the consumer's purpose to look for information about the product and indirectly influences the purchase decision. Convenience,

cost saving, and availability of information are some of the factors related with the utilitarian product motives. "Availability of information about product influences their purchase intention in the first phase, followed by pricing in the second phase", (Chen, 2009). The information about product and promotions are critical key factors that help consumers with the information search when shopping products online (Chen, 2009).

Mass merchandisers invest largely in building their product display profile in the virtual market because of its importance (Wu et al., 2013). However, with small-scale industries or individual sellers who try to sell their product online, this is still a challenge to be worked upon. Most of them even neglect the importance of product display. Not much work has been done to study the best method to display products and the effectiveness of photographs used in online merchandising. This research focuses on figuring out the best method of photograph presentation of the clothing along with information of the product to increase the liking and purchase intent of the consumer.

Online shopping behavior on an Indian consumers' context

As a rising economy, India displays a potential market for e-retailers (Khare & Rakesh, 2011). Among the 51 million active Internet users in India, 97% are regular users and 79% are daily users (Khare & Rakesh, 2011). Agrawal, (2018) proposed that the number of internet users in India was expected to reach 500 million by June 2018 as per the report by Internet and Mobile Association of India (IAMAI). The same report issued on February 20, 2018, says, "Urban India with an estimated population of 455 million already has 295 million using the internet. Rural India, with an estimated population of 918 million as per 2011 census, has only 186 million internet users leaving out potential 732 million users in rural India. Internet penetration in Urban India was 64.84% in December 2017 as compared to 60.6% in December 2016. In comparison, rural internet

penetration has grown from 18% in December 2016 to 20.26% in December 2017". Given these statistics, there is a huge prospect for online retailing of products in India.

Many studies have been done on the online shopping behavior of Indian consumers (Gupta, Handa, & Gupta, 2008; Jain, Goswami, & Bhutani, 2014; Khare, Singh, & Khare, 2010; Khare & Rakesh, 2011; Khare, 2016; Sinha J, 2012). An empirical study with Indian consumers on shopping style and online shopping by Khare (2016) found that "convenience" and "information" can be considered as the two important shopping styles to predict the preference of Indian consumers. While impulsive shoppers preferred convenience, fashion-conscious and impulsive shoppers preferred information.

The shopping behavior of Indian women and men differ significantly, as the variety of products available for online shopping is more for men than for women (Khare & Rakesh, 2011). Khare (2016) mentioned that most online shopping websites in India are not available in regional languages. Popular shopping websites like Myntra, Flipkart, Jabong, Snapdeal, Olx etc. use English as the language of trade. This might be a limiting factor to Indians who are not conversant with English to shop online.

A research study among Indian youth by Khare et al., (2010) found that young Indians consider online shopping websites to be sources of information for specific attributes, such as product features, pricing, retailer information, and store comparisons. The reason to use online shopping websites is largely governed by convenience, flexibility, and temporal factors. Indians feel more comfortable using cash for transactions, because online transactions are considered insecure. A majority of financial transactions in India are done with cash, and credit card use is still restricted to a small section of the society. This research also recommended to extend this study to be conducted with young working Indians between 25 and 40 years of age to understand their attitude toward online shopping.

Though many studies have been done on understanding the Indian consumer's behavior when shopping online, none of them has studied the importance of photographs and information related to the product. The current research explores the importance of photographs and description of the products on online clothing shopping behavior of consumers with Indian women as the target participants.

Artisans in India: a special mention

India is a country of rich cultural heritage of which handicraft (crafts made by hands) industry constitutes a major part. The history of handicrafts traces back to several centuries. Wooden ware, metal ware, textile weaving & printing, marble & stone crafts, leather works, jewelry etc. are some of the handicrafts done by Indian artisans which have been handed down to them from generation to generation as a family tradition (Jadhav, 2013). Ernst & Young (2012) mentioned that the Indian handicraft rural sector accounts for 78.2% of the units produced and 76.5% of the artisans. A high percentage of this sector are women and low-income groups. The Industries Conference 1947, identified five major problems that small-scale industries which include the handicrafts sector face: 1. Lack of finance, 2. Outdated techniques of manufacturing, 3. Defective Marketing, 4. Non-availability of raw materials and 5. Competition from mechanized goods whether imported or locally made (Jadhav, 2013). The low-wage condition of the artisans makes it impossible for them to develop and improve their skillset by training. The lack of technological 'how to's' also affect the quality of production as there is no upgrade in the artisan's technological skillset (Ghouse, 2012 and Sarvamangala, 2012).

Though the government takes many steps to improve the quality of life of the artisans through a number of organizations, there is still a huge need to help the artisans to sell their products in an efficient way. There is not enough research done to provide adequate evidence on how to display their handicrafts in an efficient manner to attract customers and have a reasonable

profit. To support the artisans who sell their products on websites or social media platforms, this research aims to educate them with the best way of product display with photographs and descriptions to increase their sales.

Restaurant shopping for food on an Indian Consumers context

Food is a significant part of India's rich cultural heritage. Indians, in general, prefer to eat at their home which is thought of as a social and cultural practice rather than eating food cooked outside of home (Ali & Nath, 2013). At earlier times, Indians preferred to eat food cooked at home for the entire family by the female member (Goyal & Singh, 2007). Due to changes in the lifestyle, per capita income, education and many more factors, the food eating habits of Indians have changed (Ali & Nath, 2013). Technology development and westernization has a huge impact on the traditional food practices of Indians.

Due to these changes, eating at restaurants or "eating out" has become a new trend that is growing in a fast pace. The results from a study by Ali & Nath (2013) reported that the expenditure on food-away-from-home (FAFH) has slightly contributed more than the expenditure on food-at-home (FAH) by Indian consumers. The percentage of meals eaten at home has been reduced over time. The study also mentioned that most of respondents prefer eating outside at least once a month as they would like to enjoy the ambience provided by the restaurants with their friends or family members on the special occasions or holidays instead of spending time in the kitchen. This denotes a huge shift of thought in the mindset of Indian consumers nowadays.

One of the fastest growing drivers of the Indian economy is the hospitality industry. It supports around 2.2% to the Gross Development Product (GDP) and the expected growth rate is 6.6% (CII - Technopak, 2009). The Indian restaurant industry is expected to grow to US $85 billion by 2022 (Jashnani, 2018). The two main contributors of the hospitality industry are hotels and

restaurants. Parsa et al. (2012) quoted, "The restaurant sector is attractive for investments and is expected to be a $10 billion USD market by the year 2018".

With the statistics of the growth of the restaurant industry being known, there are a wide range of factors that influence the restaurant shopping behavior of Indian consumers. Prior research has been conducted on impact of service quality which is considered as an 'important antecedent for customer satisfaction' (Qin & Prybutok, 2008). Service quality is referred to the judgement of the consumer based on the overall service excellence (Zeithaml, 1988). Researchers have studied food service quality (Qin & Prybutok, 2008; Zeithaml, 1988), food quality (Ryu & Han, 2010), ambiance of the restaurant (Parsa et al., 2012; Ryu & Han, 2010), price of the food (Price et al., 2016), prior exposure to restaurant menu choice (Chang & Hou, 2015), menu design (Bacon & Krpan, 2018; Kwong, 2005; Magnini, 2016; Wansink & Love, 2014) and other interrelated factors such as socio-economical, environmental and cultural factors as related to consumer purchase choice in restaurants (Señorans, Ibáñez, & Cifuentes, 2003).

In case of effect of the menu card on consumer's purchase choices, only limited peer-reviewed literature is available to-date. The names of the food and the pictures associated with them on the menu are important as it the very first signal that communicates the restaurant experience to the customers (Hou, Yang, & Sun, 2017; Magnini, 2016). Hou et al. (2017) in their research mentioned, that pictures enhance consumer's attribute and boosts their purchase intensions. A study by Yang et al. (2009) found that there is a difference in purchase behavior when the monetary cues were presented differently in the menu cards in restaurants. Even though there are a lot of existing literature about the factors affecting the restaurant food eating behavior of consumers, none of the research has studied the importance of photographs on the menu to increase customer satisfaction.

Problem statement and Objectives

Indian women are well known for their multitasking ability and the crucial role they play in the lives surrounding them in social, cultural and professional aspects. Though women in India are stepping up in many fields, there are still a lot of them who lack the privilege of displaying their valuable presence in the world. These women are slowly making notable progress in showing their talents and creativity to the world. Selling saris is popular among the women who also try to make a living out of it. Finding a better way to present the sari is still a challenge to them, especially when they try to sell it online. There are inconsistencies in the presentation style of saris even in popular online shopping sites.

Artisans in India and all around the world who sell their handicrafts online face a similar problem. This is because of the fact that the artisans lack training in salesmanship and small-scale industries like handicrafts gets very little attention from consumers. Small-scale entrepreneurs such as restaurant owners have issues in presenting their food in the menu, which is the reason for poor sales. Stimulating the senses through pictures plays a major role in product liking and purchase decisions of consumers.

In order to address and overcome these issues, the present study is designed to better understand which type of product presentation will satisfy consumers to make purchase decisions. In the scope of helping Indian women, artisans all around the globe and small entrepreneurs, the study has the following objectives:

    i)   To determine which type of photograph/description would give the highest purchase intent by consumers when they are shopping for clothes online and when ordering food in a restaurant.

    ii)   To use different types of product descriptions to find any differences in overall liking, product perception, and purchase intent.

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Chapter 2 - Effect Photographs of Online Clothing Shopping Behavior of Consumers

Introduction

In this fast-moving technological world, e-commerce has become a paramount tool for a business to flourish and grow. Approximately eight percent of the time consumers spend on the internet is occupied by online shopping (Mander, 2017; Zhang et al., 2017). Global e-retail sales accounted for US $2.3 trillion by 2017 (Statista, 2018). The frequency of online purchases increases by 2% every year and it is also expected that online shopping will keep growing and apparel shopping would top the category of products that are shopped online (Kazuya, Naomi, & Hiroko, 2004).

A lot of research has been done to understand the factors affecting purchase behavior of consumers in an online shopping environment. A recent study by Pandey & Chawla (2018) revealed that attractive photographs improve visual engagement of online shopping. This study also suggests that in addition to making the websites visually engaging, it is important to ensure e-convenience and e-enjoyment factors are included for a better online shopping experience for consumers. Studies have been conducted to understand the influence of design and ambience factors (Kawaf & Tagg, 2012), search and navigation features (Lohse & Spiller, 1999), image, color, and backgrounds (Ha et al., 2007), and music (Kim et al., 2009), product presentation factors (Kim & Lennon, 2008), and product interactivity factors mainly for clothing (Ashman & Vazquez, 2012; McCormick & Livett, 2012).

Studies have also been done to understand the influence of color (Ballantine et al., 2010), the need for touch (Roy Dholakia & Zhao, 2010) and product display (Creusen & Schoormans, 2005). Though product display is a crucial factor in determining the purchase decision of consumer

(Creusen & Schoormans, 2005), fewer studies have been conducted to try to understand the influence that photographs have on online shopping behavior for clothing. Adding photographs and information to the product tends to increase the customer's trust in the seller, which may help them make confident purchase decisions (Pandey & Chawla, 2018). Sadly, big sellers, small-scale industries and individual sellers who try to sell their product online are ignoring this fact.

Goswami & Khan (2015), in their study mentioned that among the profitable domains of e-commerce in India, apparel ranks first in all high-tech cities. Chennai ranks first in shopping for clothing and jewelry while Bengaluru closely follows (Tiwari, 2014). Singh, Chaudhuri, & Verma (2017), in their research findings mentioned that among the Indian online shoppers, majority are young adults (22-25 years) and they are prominently shopped apparel online. Bearing this scenario in mind, it is highly important to understand the factors that cause the change in the trend moving from a bricks and mortar store to online shopping. Previous research has addressed other factors related to online shopping, but none was found concerning online shopping behavior with respect to display styles of saris in photographs.

The Sari is a cultural wear that defines the clothing of Indian women. It signifies Indian unity and culturally shows the loyalty to the nation (Barrios, 2014). The present study focuses on understanding the effect that a particular photographic presentation style of sari has on the liking and purchase intent for online shopping behavior. This research was specifically designed with the Indian artisans in mind who are struggling to sell their saris in the competitive online market.

Materials and Methods

Focus Group Study

The primary purpose of this focus group was to help the researchers develop consumer friendly terms specifically related to saris in the Indian market.

Participants

A group of four Indian women, each representing a different state of India took part in the focus group study. They had to have purchased saris online at least once a year and be 18 years of age or older in order to participate in the study. Since the main study was planned to be launched in India, the participants chosen were Indian women living in Manhattan, Kansas, USA. They were given a compensation of US $15 for their time and input.

Setting

The focus group was conducted at the Center for Sensory Analysis and Consumer Behavior, Manhattan, Kansas. The session was led by a trained moderator with the help of a discussion guide (Appendix H) and lasted for an hour. The focus group started with an introduction and then each participant was asked to share their experiences of wearing a sari and how comfortable they were wearing it. This served as an icebreaker to make sure the participants felt free to express their thoughts. Then the participants were presented a casual wear and a party wear sari. They were then asked to note down the attributes they perceived about the sari in the worksheet given to them, what they liked or disliked about the sari, the feel/texture of the sari, color etc. They were also asked what was important to them when purchasing a sari. The participants discussed what they had written about the saris. The online questionnaire was written based on information from this focus group.

Internet Survey

Questionnaire Procedure

The survey was conducted online using Qualtrics software accessible by a computer or a mobile phone. No translation was required as the study was conducted in English. The Kansas State University Human Subjects Review Board reviewed and approved the study protocol. The study was launched and completed in July 2018.

Participants

The participants (n=615) for the study were Indian women. They were recruited through Qualtrics software with the help of a screener (Appendix A). The participants had to be Indian women: who were 18 years or older and who purchased saris online at least once a year.

Online survey

An online survey was designed to investigate consumer preferences/impressions on different types of photographic presentations of saris, with or without information about the product. Qualtrics software (Qualtrics, Provo, UT, USA) licensed for Kansas State University was used to conduct the online survey. The survey was launched in India and the responses were collected. The survey questionnaire had three main sections. The first section was a screener (Appendix A). This section contained an "attention filter" that was placed as a question to make sure the participant was reading all the question and options provided carefully before answering them.

Once the participant completed the screener, they received the second section of the questionnaire. This contained the demographic questions that gathered data such as gender, age, education, occupation and number of people in the household. Additional questions were asked specific for saris such as types of clothing purchased online, purchase frequency, number of saris owned, favorite sari color, and amount spent on annually on saris.

The third section of the questionnaire concentrated on the sari (Appendix B). Each participant saw six different photographs of saris displayed one at a time with questions below each of the photograph (Appendix F). The six different photographic presentations were photographs of folded sari, folded sari with a description, sari on a mannequin, sari on a mannequin with a description, sari on a model and sari on a model with a description. See figures 2.1, 2.2, 2.3, 2.4, 2.5 and 2.6. The questions that followed included overall liking, level of comfort feeling, purchase intent and the level of being informed about the sari. The responses were collected on a 9-point hedonic scale. A check-all-that-apply (CATA) questionnaire was included to choose how they felt about the product based on the displayed.

Figure 2.1 Photographic presentation of Party-wear folded sari

(a)

A heavy saree with a lot of detail work done on it. It is perfect for formal events and parties/ festivals.

(b)

- Heavy saree
- Lot of detail work done on it
- Perfect for formal events and parties/ festivals

(c)

a: Photograph of the folded sari, b: Photograph of the folded sari with paragraph description, c: Photograph of the folded sari with bulleted description

Figure 2.2 Photographic presentation of Party-wear Sari on a mannequin

(d)

A heavy saree with a lot of detail work done on it.
It is perfect for formal events and parties/festivals.

(e)

- Heavy saree
- Lot of detail work done on it
- Perfect for formal events and parties/festivals

(f)

d: Photograph of the sari on a mannequin, e: Photograph of the sari on a mannequin with paragraph description, f: Photograph of the sari on a mannequin with bulleted description

Figure 2.3 Photographic presentation of Party-wear Sari on a model

A heavy saree with a lot of detail work done on it.
It is perfect for formal events and parties/festivals.

- Heavy saree
- Lot of detail work done on it
- Perfect for formal events and parties/festivals.

(g) (h) (i)

g: Photograph of the sari on a model, h: Photograph of the sari on a model with paragraph description, i: Photograph of the sari on a model with bulleted description

Figure 2.4 Photographic presentation of Casual-wear folded sari

A light weight saree which is a comfortable regular/work wear. It is a perfect ethnic Indian wear for formal events and casual parties.

- Light weight saree which is a comfortable regular/work wear.
- Perfect ethnic Indian wear.
- Fit for formal events and casual parties.

(a)   (b)   (c)

a: Photograph of the folded sari, b: Photograph of the folded sari with paragraph description, c: Photograph of the folded sari with bulleted description

Figure 2.5 Photographic presentation of Casual-wear Sari on a mannequin

A light weight saree which is a comfortable regular/work wear.
It is a perfect ethnic Indian wear for formal events and casual parties.

- Light weight saree
- Comfortable regular/work wear
- Perfect ethnic Indian wear for formal events and casual parties

(d)   (e)   (f)

d: Photograph of the sari on a mannequin, e: Photograph of the sari on a mannequin with paragraph description, f: Photograph of the sari on a mannequin with bulleted description

Figure 2.6 Photographic presentation of Casual-wear Sari on a model

(g)

A light weight saree which is a comfortable regular/work wear.
It is a perfect ethnic Indian wear for formal events and casual parties.

(h)

- Light weight saree
- Comfortable regular/work wear
- Perfect ethnic Indian wear for formal events and casual parties

(i)

g: Photograph of the sari on a model, h: Photograph of the sari on a model with paragraph description, i: Photograph of the sari on a model with bulleted description

Two saris types were chosen for the study: a casual-wear sari and a party-wear sari. There were two description types for each: paragraph description and bulleted description. Four different blocks were developed from the different combinations of sari and description type. Participants received the demographic question and one block in random order. Approximately 75 participants per block were assigned. The design block for the study is given in Figure 2.7 below.

Figure 2.7 Design block for different combinations of sari and description type.

For all the questions, the participants were asked to give answers based only on the photograph displayed to them. They were informed to assume that in the case of sari, the color, the brand and the price would be of their liking. They were told not to bias their answers based on any factor external to the photograph shown to them.

There was a soft launch of the survey with 60 consumers to check the validity of the questionnaire. After the soft launch, the main survey was launched and 615 responses were collected. Incomplete questionnaires were eliminated and 600 responses were analyzed. All

participants were rewarded through Qualtrics and no monetary compensation was given for taking the survey.

Data Analysis

The data analysis was done using XLSTAT-Sensory which is a sensory analysis statistical software in Excel (Version 19.4 2017.06.19, Addinsoft, New York, USA). Analysis of Variance (ANOVA) was used to evaluate significant differences in the data of questions that investigated overall liking, level of comfort, appeal liking, purchase intent and level of being informed based on each photograph. Each photograph and description type was evaluated for significance with respect to the two different types of saris presented. Significant differences were found out for p-value < 0.05 for different photographic presentations using Fischer's LSD test.

For all the Check-at-that-apply (CATA) questions, Correspondence Analysis (CA) was used to illustrate the relationship between the photographs and the attributes perceived based on them. Symmetric biplots were constructed considering the chi-square distances. The question on choosing what the consumers like/dislike/what doesn't matter to them from the photographic presentation was analyzed with frequency count analysis with Microsoft Excel 2010 and graphs were plotted. The demographic data was summarized using descriptive statistics.

Results and Discussions

Respondents' Demographics

Table 2.1 Demographic information of the participants for the online survey (n=600)

Demographics	Percentage %	No of respondents
Age		
18-30	56.10	345
31-50	40.00	246
51-70	3.90	24
Education		
Less than high school	0.16	1
High school graduate	2.44	15
Some college	5.04	31
Bachelor's degree	35.28	217
Master's degree	36.26	223
Professional degree	20.16	124
Doctorate degree	0.65	4
Occupation		
Employed full time	68.46	421
Employed part time	15.12	93
Unemployed looking for a job	6.34	39
Unemployed not looking for a job	3.58	22
Retired	0.65	4
Student	5.37	33
Disabled	0.49	3
No of members in the household		
1	0.16	1
2-4	57.89	356
4-6	36.26	223
7 or more	5.69	35

Table 2.2 Clothing shopping behavior of the participants of the online survey (n=600)

Clothing shopping behavior	Percentage %
Frequency of buying clothes online	
Once or more a month	54.47
Once or more in 2-3 months	34.96
Once or more in 6 months	7.97
Once or more in a year	2.60
Never	0.00
Type of clothing bought online	
Trousers, shorts, skirts	21.42
Saris and blouses	28.51
T-shirts, sweaters, sweat shirts	21.56
Underwear	12.61
Jackets, coats	13.86
Others (please specify)	2.04
Frequency of sari purchase online	
Once or more a month	26.83
Once or more in 2-3 months	44.07
Once or more in 6 months	22.76
Once or more in a year	6.34
Once in 2 years	0.00
Number of saris owned	
0-10	12.85
11-30	37.56
31-50	26.99
51 or more	22.60
Amount spent on saris annually (in rupees)	
0 – 1000	6.02
1000 – 2500	13.82
2500 – 5000	23.25
5000 - 10,000	28.94
More than 10,000	27.97

The demographic information for the participants can be found in table 2.1 and their shopping behavior for clothing can be found in table 2.2.

Purchase Intent

Table 2.3 Purchase intent of saris based on photographs/description.

Photo type	Party-wear Sari Para	Casual-wear Sari Para	Party-wear Sari Bullet	Casual-wear Sari Bullet
Model + Description	6.79	7.28 a	6.84	6.94 a
Model	6.72	7.16 ab	6.84	6.92 a
Mannequin + Description	6.62	6.80 bc	6.63	6.61 a
Mannequin	6.50	6.56 c	6.77	6.50 ab
Folded sari + Description	6.31	6.42 cd	6.50	6.10 b
Folded sari	6.22	6.09 d	6.18	5.56 c
Pr > F(Model)	0.146	< 0.0001	0.060	< 0.0001
Significant	No	Yes	No	Yes
Pr > F(Phototype)	0.146	< 0.0001	0.060	< 0.0001
Significant	No	Yes	No	Yes

(Folded sari: Photograph of folded sari, Folded sari + Description: Photograph of folded sari + description, Mannequin: Photograph of sari on a mannequin, Mannequin + Description: Photograph of sari on a mannequin + description, Model: Photograph of sari on a model, Model + Description: Photograph of sari on a model + description). *Different letters denote significant differences at $p < 0.05$.

Purchase intent was higher with more realistic imaging and information (Table 2.3). Higher scores for purchase intent were observed for the photograph of the model along with the description in three sari/description types (casual-wear sari – paragraph, bulleted description and party-wear sari-paragraph description). The folded sari presentation style was the least likely to be purchased in all the sari/description photograph types. The results confirmed that adding a face to the presentation type give the consumers a quasi-social bond which makes them relate themselves more to the product and thereby increasing the urge to buy the product. It establishes a window to ensure trust on the seller and their products (Riegelsberger & Sasse, 2001). This is an

important factor to consider in online shopping as it almost like a virtual representative of the company or the entrepreneur who sells the product (Steinbrück et al., 2002). Significant differences were found in the purchase intent scores on both description types of casual-wear saris.

Level of feeling informed

Table 2.4 The level of information gathered on saris based on photographs/description.

Photo type	Party-wear Sari Para	Casual-wear Sari Para	Party-wear Sari Bullet	Casual-wear Sari Bullet
Model + Description	7.02 a	7.28 a	7.11 a	7.12 ab
Model	6.99 ab	7.16 ab	7.03 a	7.16 a
Mannequin + Description	6.92 ab	6.83 bc	6.86 ab	6.73 abc
Mannequin	6.67 abc	6.78 bc	6.82 abc	6.70 bc
Folded sari + Description	6.55 bc	6.52 cd	6.52 bc	6.31 cd
Folded sari	6.41 c	6.12 d	6.37 c	5.90 d
Pr > F(Model)	0.025	< 0.0001	0.008	< 0.0001
Significant	Yes	Yes	Yes	Yes
Pr > F(Phototype)	0.025	< 0.0001	0.008	< 0.0001
Significant	Yes	Yes	Yes	Yes

(Folded sari: Photograph of folded sari, Folded sari + Description: Photograph of folded sari + description, Mannequin: Photograph of sari on a mannequin, Mannequin + Description: Photograph of sari on a mannequin + description, Model: Photograph of sari on a model, Model + Description: Photograph of sari on a model + description). *Different letters denote significant differences at $p < 0.05$.

Interestingly, the level of being informed was higher in all the sari/description types in the photographs with description (Table 2.4). Folded sari presentation had significantly low scores for the level of being informed. It is believed that with more information provided, consumers will tend to feel confident about their purchase decision. As important as it sounds, significantly higher scores on the level of being informed matches with the higher overall liking and higher purchase intent. This result finding provided strong support for the idea that availability of information about product influences the purchase decisions of consumers (Pandey & Chawla, 2018).

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Their overall liking and the feel of comfort scores (Appendix C) were consistent with the research finding of Ogle and Friore (2000) who found that products featured on the body gives consumers a virtual "try on" feel by elevating the shopping experience to a lifestyle oriented experience. This helps the shoppers imagine what they wear in a better way. The results align with the fact that product images provide effective sensory or aesthetic information when presented on body forms (Won et al., 2009). Interestingly, the added description did not produce statistically increased scores for any of the photographic images. This suggests that the information provided in the description was not relevant or did not give any additional understanding to the consumers. The liking and feel of comfort data did not provide any additional information other than what is noted from the purchase intent and the level of being informed.

Participants indicated that blue and red were the most liked color choices for saris. However, these color choices had no impact on their responses for the shopping behavior (Appendix E).

Like/Dislike/ Doesn't matter – Attribute perceptions

Figure 2.8 and 2.9 show the graph representing different sensory attributes related to the sari that consumers liked, disliked or mentioned that it did not matter to them for photograph/description of sari with paragraph type description. Similarly, Figure 2.10 and 2.11 display the graph plot for the attributes consumers liked, disliked or said it did not matter to them for photograph/description of sari with bulleted description. The attributes like color, pattern/design, weight, trend, transparency, detail work done on the sari, overall look and texture/feel were evaluated in this section. It is clear from the graph that regardless of the description type, more people liked the attributes when more details were added to the description of the sari. This was most evident between the model with/without description and the folded sari. Overall, the frequency counts for disliking decreased with addition of details to the photograph of the sari. The attributes that were denoted as those that "doesn't matter" to the consumers stayed in

the lower frequency count range (below 20) in all photographic segments. The trend was similar in all sari photograph and description types. The results indicate that with more details added to the sari photograph, there was an increase in the liking of attributes, which may influence a more positive purchase decision.

Party-wear sari and paragraph description

Figure 2.8 Attributes that are liked, disliked or did not matter to the consumers with respect to six photograph/ paragraph description combination of the party-wear sari
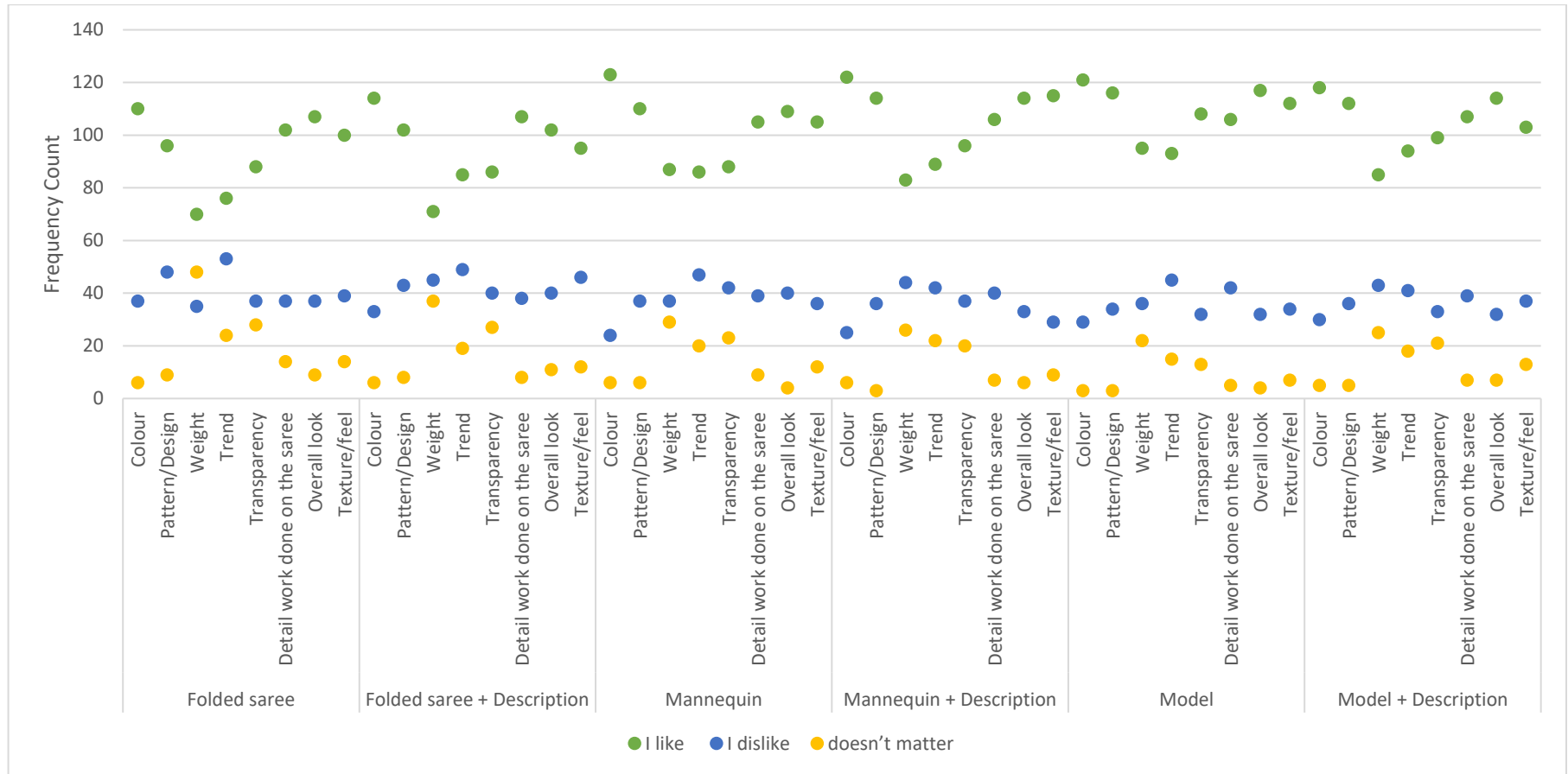
(Folded sari: Photograph of folded sari, Folded sari + Description: Photograph of folded sari + description, Mannequin: Photograph of sari on a mannequin, Mannequin + Description: Photograph of sari on a mannequin + description, Model: Photograph of sari on a model, Model + Description: Photograph of sari on a model + description).

Figure 2.9 Attributes that are liked, disliked or did not matter to the consumers with respect to six photograph/ paragraph description combinations of the casual-wear sari
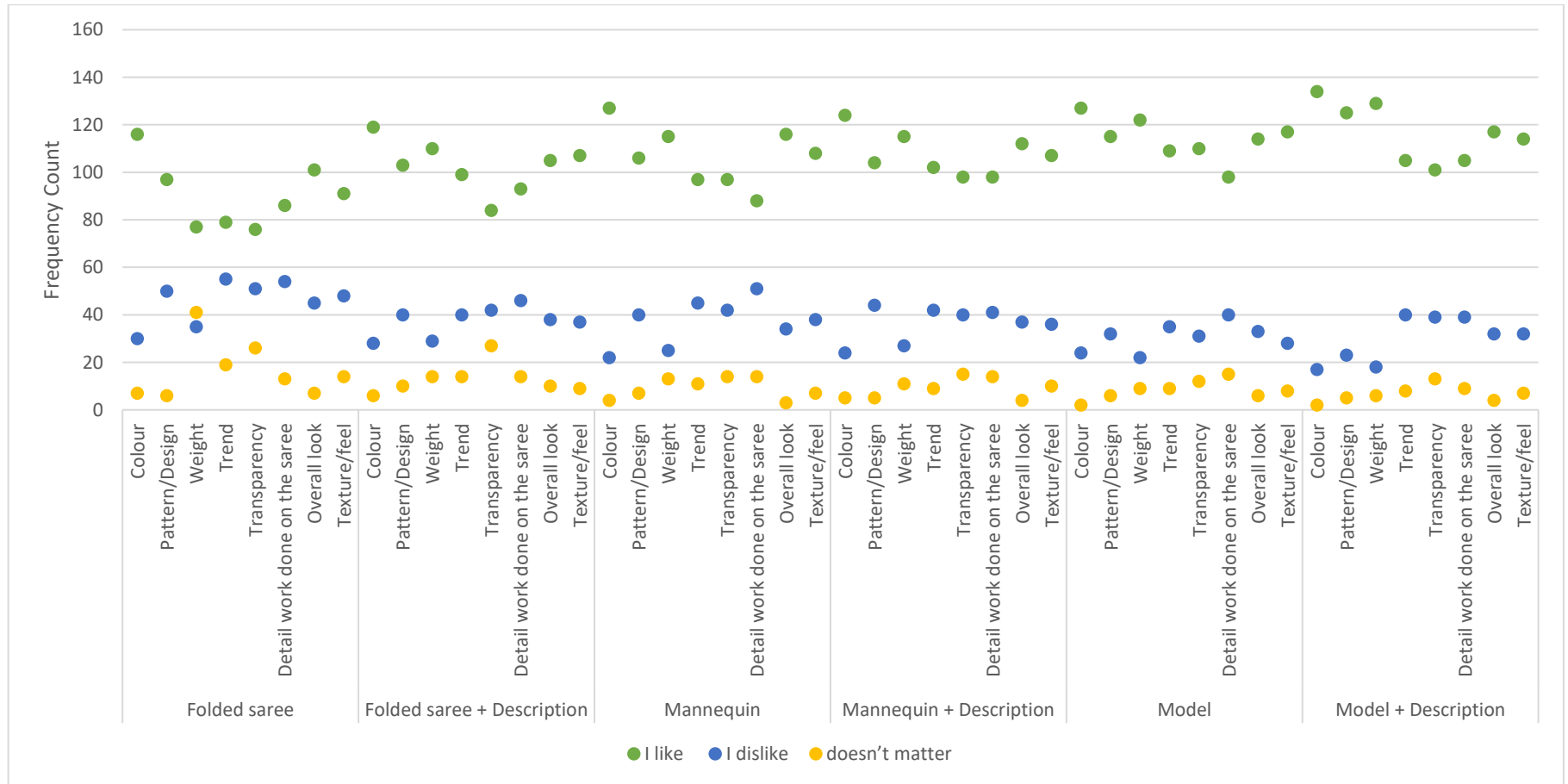
(Folded sari: Photograph of folded sari, Folded sari + Description: Photograph of folded sari + description, Mannequin: Photograph of sari on a mannequin, Mannequin + Description: Photograph of sari on a mannequin + description, Model: Photograph of sari on a model, Model + Description: Photograph of sari on a model + description).

Figure 2.10 Attributes that are liked, disliked or did not matter to the consumers with respect to six photograph/bulleted description combinations of the party-wear sari
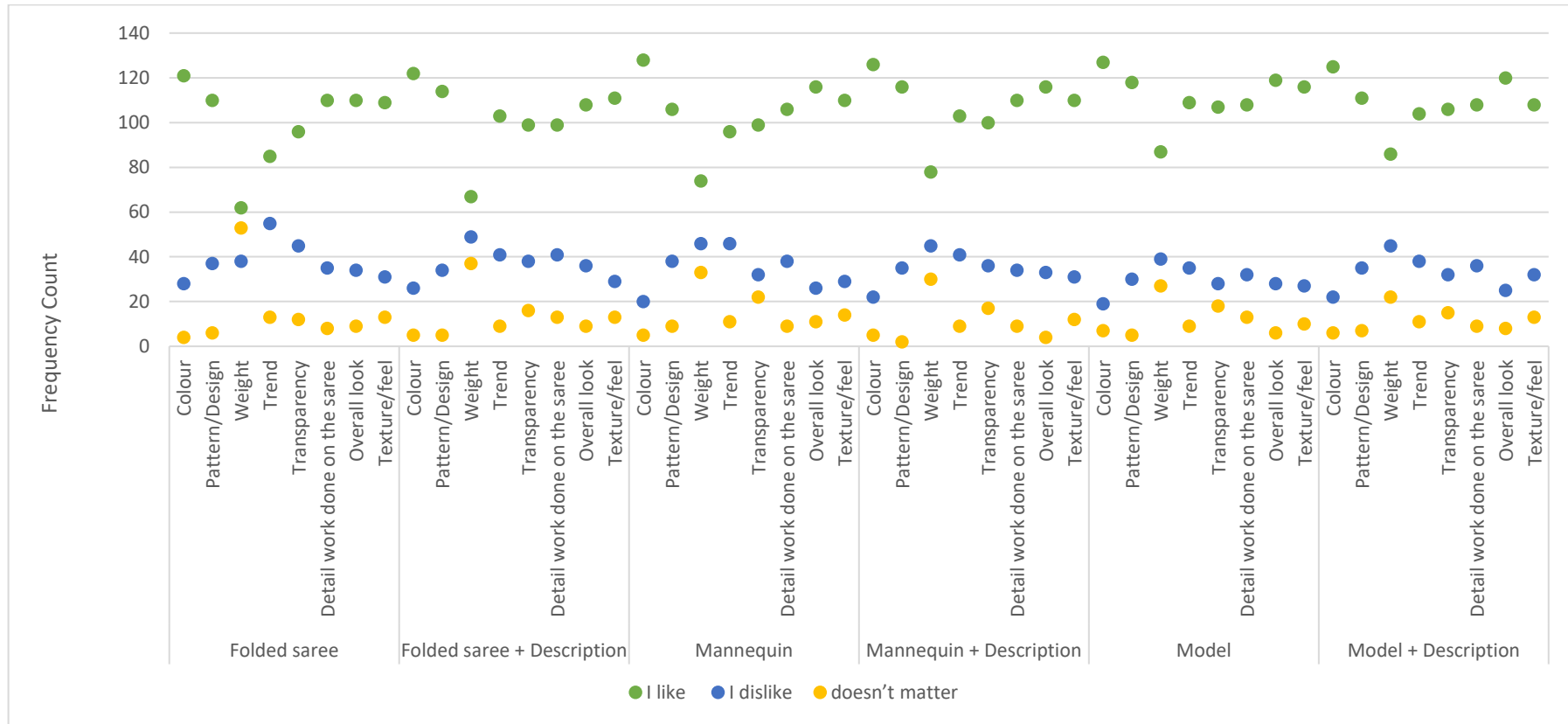
(Folded sari: Photograph of folded sari, Folded sari + Description: Photograph of folded sari + description, Mannequin: Photograph of sari on a mannequin, Mannequin + Description: Photograph of sari on a mannequin + description, Model: Photograph of sari on a model, Model + Description: Photograph of sari on a model + description).

Casual-wear sari and bulleted description

Figure 2.11 Attributes that are liked, disliked or did not matter to the consumers with respect to six photograph/bulleted description combinations of the casual-wear sari

(Folded sari: Photograph of folded sari, Folded sari + Description: Photograph of folded sari + description, Mannequin: Photograph of sari on a mannequin, Mannequin + Description: Photograph of sari on a mannequin + description, Model: Photograph of sari on a model, Model + Description: Photograph of sari on a model + description).

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Relating Photograph/information with product attributes

Figure 2.12 and Figure 2.13 show the relation between the photograph/description with the different attributes as assessed by the consumers on the correspondence analysis factor map, for photographs of saris with paragraph type description.

Based on these plots, participants found differences in the perception of the sari based on the photograph/description presentation mode. As seen on Figure 2.12, for a party-wear sari with a lot of details done on it, the photograph of the folded sari was associated with light weight attribute even though it was a heavy sari. In contrast, the photograph of the model with/without description were related more towards attributes like shiny, thick, cool, stiff, flowing and heavy. Similarly, from Figure 2.13, for a casual-wear sari, the photograph of the folded sari was associated with rough, thick and not enough detail done even though it was a simple and lighter weight sari. In contrast, photograph of the model with/without description were related with more number of attributes like shiny, cool, light-weight, soft flowing and warm.

Figure 2.14 and 2.15 similarly present the consumers' association of different attributes with the photograph/description of saris with bulleted type description. It was noted from the plot in Figure 2.14, for a party-wear sari, photograph of the folded sari was associated with light weight even though it was a heavy sari. A similar case was noted with paragraph description as well. However, photographs of the model with/without description were related more toward attributes like rough, stiff, flowing and too much detail done on the sari, which were close to the true features of the sari. The same trend was found for a casual-wear sari in Figure 2.15. The photograph of the folded sari was associated with not enough detail done and light weight. In contrast, the photograph of the model with/without description were related towards more attributes like thin, stiff, rough and flowing.

These results confirm that the presence of photographs of the model with/without description was a critical factor for the association of attributes with the products being sold which will assist the consumers to make the purchase decisions. A similar trend was found in all the different sari types and description types where the photograph of the model with/without description was correlated with more attributes that closely represent the true features of the sari. In contrast, the folded sari presentation type with/without description was not well representative of the features of the sari. It was observed that showing a product in a static way is not a helpful presentation type as it gives the consumers wrong sense and misrepresentative information of the product.

Party-wear sari and paragraph description

Figure 2.12 Correspondence Analysis factor map representing the six photographic presentations of party-wear sari and paragraph description and the corresponding attributes perceived.

This factor map represented 74.66% of the total variance with factor 1 contributing 51.60% and factor 2 covering 17.06% of the variation respectively.

(Folded sari: Photograph of folded sari, Folded sari + Description: Photograph of folded sari + description, Mannequin: Photograph of sari on a mannequin, Mannequin + Description: Photograph of sari on a mannequin + description, Model: Photograph of sari on a model, Model + Description: Photograph of sari on a model + description)

Casual-wear sari and paragraph description

Figure 2.13 Correspondence Analysis factor map representing the six photographic presentations of casual-wear sari and paragraph description and the corresponding attributes perceived.

This factor map represented 88.79% of the total variance with factor 1 contributing 78.84% and factor 2 covering 9.95% of the variation respectively.

(axes F1 and F2: 88.79 %)

● Attributes Perceived
● Photo type

(Folded sari: Photograph of folded sari, Folded sari + Description: Photograph of folded sari + description, Mannequin: Photograph of sari on a mannequin, Mannequin + Description: Photograph of sari on a mannequin + description, Model: Photograph of sari on a model, Model + Description: Photograph of sari on a model + description)

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Figure 2.14 Correspondence Analysis factor map representing the six photographic presentations of party-wear sari and bulleted description and the corresponding attributes perceived.

This factor map represented 86.52% of the total variance with factor 1 contributing 64.81% and factor 2 covering 21.71% of the variation respectively.

(Folded sari: Photograph of folded sari, Folded sari + Description: Photograph of folded sari + description, Mannequin: Photograph of sari on a mannequin, Mannequin + Description: Photograph of sari on a mannequin + description, Model: Photograph of sari on a model, Model + Description: Photograph of sari on a model + description)

Casual-wear sari and bulleted description

Figure 2.15 Correspondence Analysis factor map representing the six photographic presentations of casual-wear sari and bulleted description and the corresponding attributes perceived.

This factor map represented 86.52% of the total variance with factor 1 contributing 64.81% and factor 2 covering 21.71% of the variation respectively.
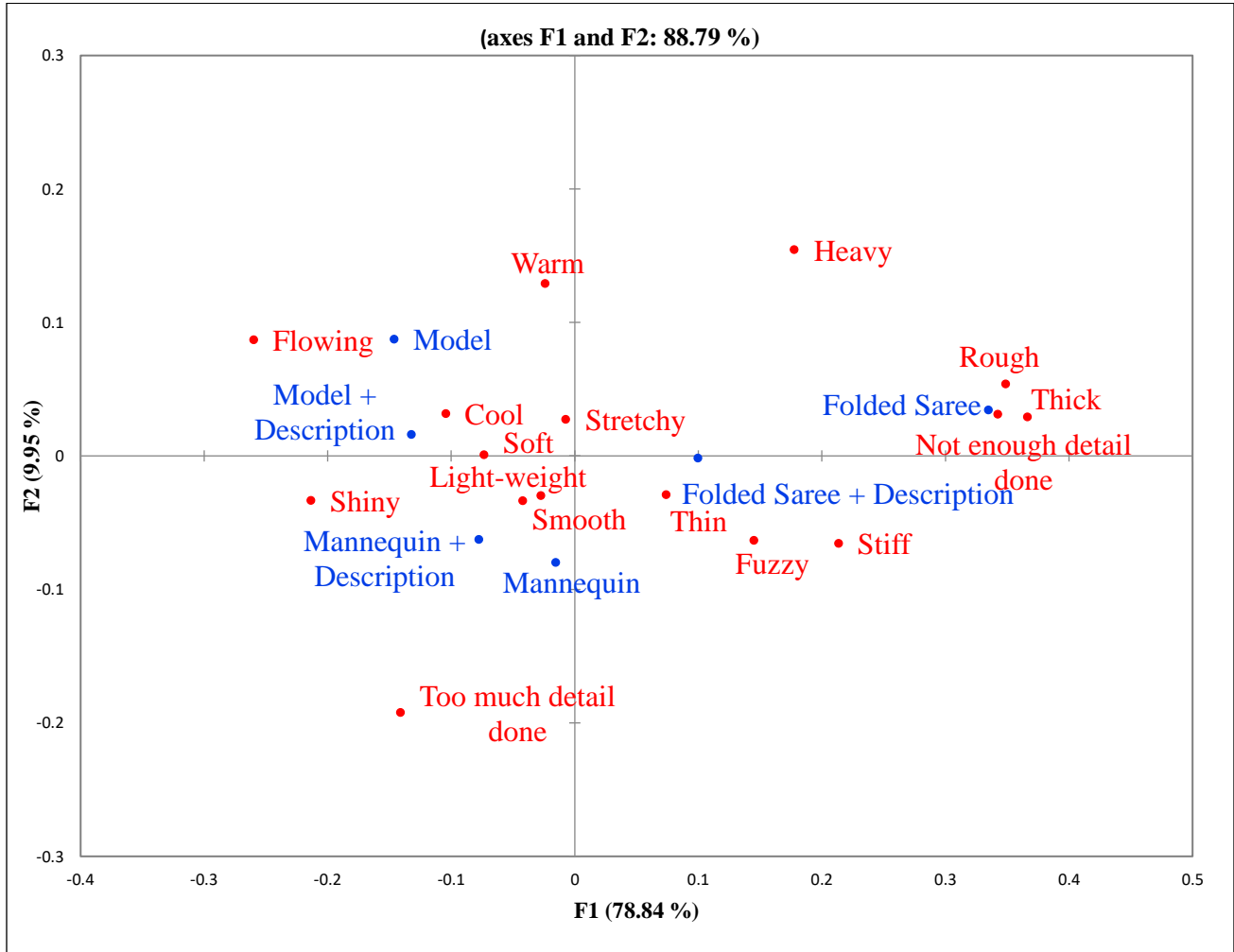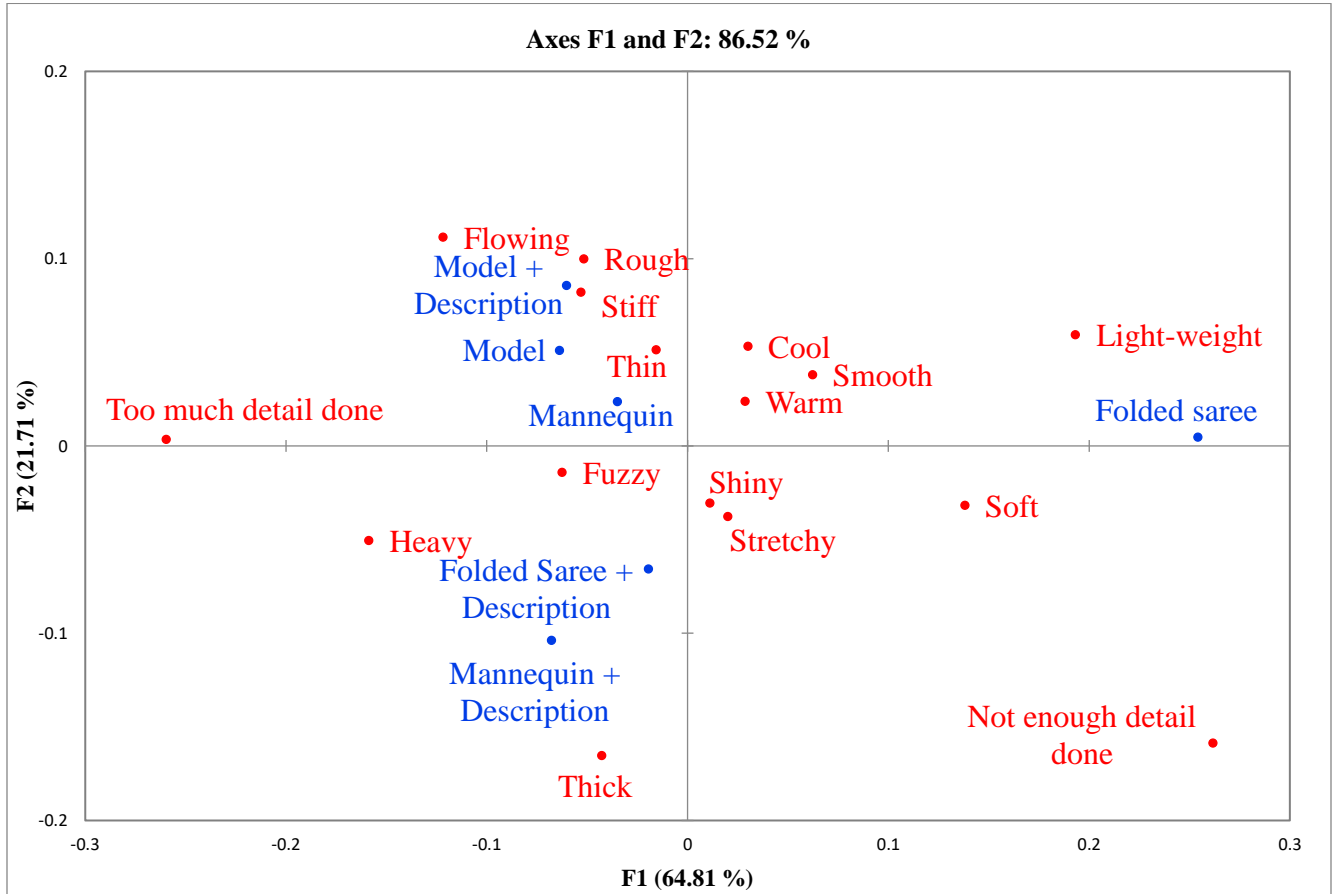

(Folded sari: Photograph of folded sari, Folded sari + Description: Photograph of folded sari + description, Mannequin: Photograph of sari on a mannequin, Mannequin + Description: Photograph of sari on a mannequin + description, Model: Photograph of sari on a model, Model + Description: Photograph of sari on a model + description)

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Conclusion

Majority of previous studies have conducted research on the different types of factors that affect the online shopping behavior of consumers. A very few studies have concentrated on the product presentation types and the importance of photographs for online shopping behavior of consumers. The present study concentrates on how different photographic presentation along with information of the product could influence and establish customer trust, which thereby will lead to a positive purchase decision. Since Indian women were chosen to be the target consumers for this study, six different types of photographic presentation of sari was evaluated. Based on the results, the higher overall liking was observed in the photograph of the model with or without description in comparison to the photograph of just the folded sari. The results also confirmed that adding a face to the presentation type establishes a virtual trust relationship between the seller and the consumer and allows them to relate themselves more to the product and thereby increasing the urge to buy the product. Interestingly, the level of being informed was significantly higher in all the sari/description types on photographs of model along with description. It is believed that with more information provided, consumers will tend to feel confident about their purchase decision. The results also found that with more details added to the sari photograph, there was an increase in the frequency count of liking of attributes of the sari and a simultaneous decrease in the disliking which would influence a positive purchase decision. The photograph of the model with/without description was correlated more with more features true to the sari which was contrary in the case of folded sari presentation as it was related with misrepresentative attributes by the consumers. Thus, this study concludes that for online selling of saris, adding photographs of the model with/without description to be a better presentation method as it was a tool for a virtual representation of the seller and also believed to establish trust between the consumers and the

sellers. This thereby would lead to significantly higher overall liking, level of being informed and purchase intent.

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Chapter 3 - Effect of Photographs on Restaurant Food Purchase Behavior of Consumers

Introduction

With increasing globalization and technology development eating out has become a trend that is time saving and ensures convenience for people around the world. India being a culturally strong country is being influenced by this changing mindset (Ali & Nath, 2013).

The food service sector is witnessing a steady growth in a global level (Filimonau & Krivcova, 2017). India's hospitality industry, primarily comprised of hotels and restaurants (CII - Technopak, 2009) is estimated to grow to US $85 billion by 2022 (Jashnani, 2018). The change in Indians' food consumption behavior has tremendously helped the growth of restaurant industry in India (Kumar & Rina Initha, 2015). Indians spend more on food-away-from-home (FAFH) than on expenditure for food eaten at home (FAH) (Ali & Nath, 2013). This promises a healthy growth for the restaurant sector in India.

Researchers have studied food service quality (Qin & Prybutok, 2008; Zeithaml, 1988), food quality (Ryu & Han, 2010), ambiance of the restaurant (Parsa et al., 2012; Ryu & Han, 2010), price of the food (Price et al., 2016), prior exposure to restaurant menu choice (Chang & Hou, 2015), menu design (Bacon & Krpan, 2018; Kwong, 2005; Magnini, 2016; Wansink & Love, 2014) and other interrelated factors such as socio-economical, environmental and cultural factors as related to consumer purchase choice in restaurants (Señorans et al., 2003).

Menu psychology is the way in which consumers relate and react to various menu elements and it is used by restaurants to understand ways to increase the profit (Wansink & Love, 2014). The names of the food and the pictures associated with it on the menu are critical as it the very first signal that communicates the restaurant experience to the customers (Hou et al., 2017;

Magnini, 2016). Hou et al. (2017) in their research mentioned, that pictures enhance consumer's attribute and boosts their purchase intensions. Yang et al. (2009) studied the difference in the purchase intent with changing the presentation method of the monetary cues on the menu card. In contrast, research also has explored that pictures with verbal information could be ineffective in some contexts (Wyer Jr & Hong, 2010).

The original research studies in this area traces back to the 1980s but peer-reviewed literature is very limited research until date (Filimonau & Krivcova, 2017). To address the gap in this research area, the present study aims to understand the effect of photographs on restaurant shopping behavior of consumers when presented on the menu. This study also focuses to understand the best photograph/information presentation method to be added on the menu in order to increase the liking as well as the purchase intent of Indian consumers towards to food.

Materials and Methods

Focus Group Study

A focus group study was conducted as a preparatory study to help the researchers understand where consumers would like to see photographs of food presented to them in order to make purchase decisions of food especially in the context of Indian food market.

Participants

Four Indian women residing in Manhattan, Kansas, USA, each representing a different state of India took part in the focus group study. They had to be above 18 years of age to be able to participate in the study. Indian women were chosen for the study as the main study was planned to be launched in India. All participants were compensated with US $15 for sharing their time and ideas about the research questions inquired of them.

Setting

The focus group was conducted at the Center for Sensory Analysis and Consumer Behavior, Manhattan, Kansas. A trained moderator led the focus group discussion and the session lasted for an hour. The focus group started with introductions and then moved towards talking about the associations with photographs of food. The moderator also asked them to describe the factors that were important to them while they bought food. When the participants mentioned that they would like to see photographs of food presented in the menu card of restaurants, they were asked to mention what type of food they would like to see in menu cards. This helped to determine the food type to be used in the main study. The participants summarized their thoughts about the food and photographs related to them. The main online survey questionnaire was developed based on the data from this focus group.

Internet Survey

Questionnaire Procedure

The online survey for the study was conducted using Qualtrics software which was accessible by a computer or a mobile phone. The survey was in English and so there was no requirement for translation. The Kansas State University Human Subject Review reviewed and authorized the study. The survey was done in July 2018.

Participants

Women from India women (n=615) were recruited through an international database of approximately 800,000 participants in India sourced through Qualtrics (Provo, Utah, USA) through an online screener (Appendix A). Indian women who were above 18 years of age and who ate at restaurants at least once a month participated in the study.

Online survey

To investigate and understand consumer preferences/impressions on different types of photographic presentations of food, with or without information about the product, an online survey was designed. The survey was conducted online using Qualtrics licensed for Kansas State University. The survey was only available in English because that is the typical language of on-line commerce in India. The survey was launched, and responses were collected from all over India.

There were three main sections in the survey questionnaire. The first section was the screener (Appendix A). To ensure that participants were reading the question and options given carefully before answering them, this section also had an "attention filter" question.

After qualifying based on the screener, each participant received the second section of the questionnaire where data was collected on their demographic information. Gender, age, education, occupation and number of people in the household were some of the demographic information collected in the survey. Additional questions were asked particular for type of food eaten at restaurants, foods purchased online (if any), frequency of online purchase of food and amount spent monthly on food at restaurants and online.

The final section of the questionnaire had the main food questions. There were six different types of photographs displayed one after the other and each picture had different questions following them (Appendix G). For the display of the food, photographs with just the name of the food, just the name of the food with a description, the food in the portion being served, the food in the portion being served with a description, the food with the sides and the food with the sides and a description were presented (Figures 3.1, 3.2, 3.3, 3.4, 3.5 and 3.6). Photographs with descriptions included descriptions in paragraph form or in bulleted text. Following each photograph of food, the questionnaire recorded details about overall liking, visual appeal liking, purchase intent and

the level of being informed about the food on a 9-point hedonic scale (Appendix B). The participants were also asked what they liked, disliked and what did not matter to them for certain product attributes. The attributes tested were appearance, quantity of the food, spice level, picture/description of it, ingredients and presentation style. To understand how the consumers perceived product features based on the photographs, they were asked to answer a check-all-that-apply (CATA) question.

Figure 3.1 Photographic presentation of just the name of Butter Chicken Masala

(a)

(b)

(c)

a: Photograph of the name of the food, b: Photograph of the name of the food with paragraph description, c: Photograph of the name of the food with bulleted description

Figure 3.2 Photographic presentation of Butter Chicken Masala to be served in the right portion

(d)

(e)

(f)

d: Photograph of just the food in the right portion to be served, e: Photograph of just the food in the right portion to be served with paragraph description, f: Photograph of just the food in the right portion to be served with bulleted description

Figure 3.3 Photographic presentation of Butter Chicken Masala with sides

(g)

(h)

(i)

g: Photograph of just the food in the right portion to be served, h: Photograph of just the food in the right portion to be served with paragraph description, i: Photograph of just the food in the right portion to be served with bulleted description

Figure 3.4 Photographic presentation of just the name of Paneer Butter Masala

Paneer Butter Masala

(a)

Paneer Butter Masala

A rich creamy Indian dish where the paneer gets cooked in tomato gravy with a lot of butter. It has a mild, sweet and buttery flavor.

(b)

Paneer Butter Masala

- Rich creamy Indian dish
- Paneer gets cooked in tomato gravy with a lot of butter
- It has a mild, sweet and buttery flavor.

(c)

a: Photograph of the name of the food, b: Photograph of the name of the food with paragraph description, c: Photograph of the name of the food with bulleted description

Figure 3.5 Photographic presentation of Paneer butter masala to be served in the right portion

(d)

(e)

(f)

d: Photograph of just the food in the right portion to be served, e: Photograph of just the food in the right portion to be served with paragraph description, f: Photograph of just the food in the right portion to be served with bulleted description

Figure 3.6 Photographic presentation of Paneer butter masala with sides

(g)

Paneer Butter Masala

A rich creamy Indian dish where the paneer gets cooked in tomato gravy with a lot of butter. It has a mild, sweet and buttery flavor.

(h)

Paneer Butter Masala

- Rich creamy Indian dish
- Paneer gets cooked in tomato gravy with a lot of butter.
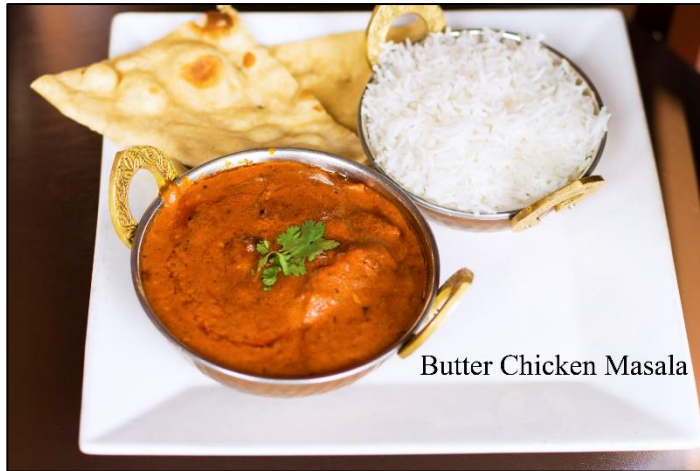- It has a mild, sweet and buttery flavor.

(i)

g: Photograph of just the food in the right portion to be served, h: Photograph of just the food in the right portion to be served with paragraph description, i: Photograph of just the food in the right portion to be served with bulleted description

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Two types of popular Indian curries: Paneer butter masala and butter chicken masala were chosen to be displayed through the different photographs with/without description attached to them. The descriptions attached to the photograph were divided into two types namely paragraph description and bulleted description. There were four blocks created to form different combinations of food and description type. Participants answered the demographic question first and following that one block in random. Each block had 75 participants approximately for the study. Figure 3.7 presents the design block for the study.

Figure 3.7 Design block for different combinations of food and description type.
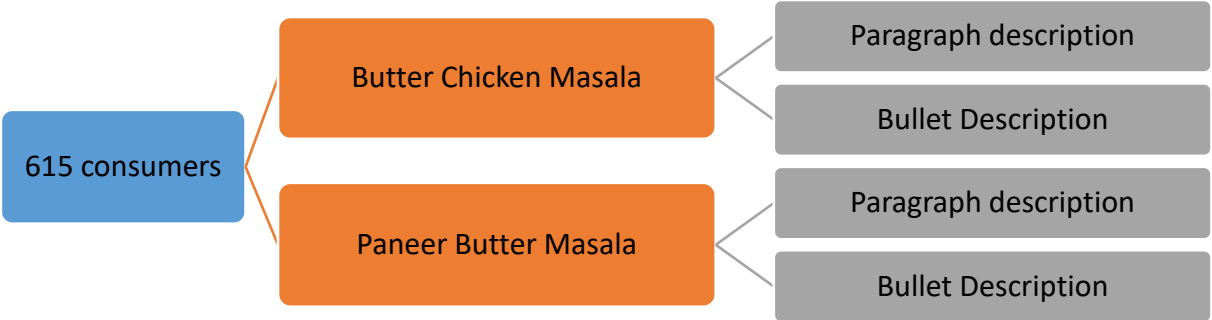
The participants were instructed to give answers with respect to the photograph displayed alone. They were told not to bias their responses based on external factors. Additionally, they had to assume that the choice of food selection and the price were of their preference. A soft launch was conducted with 60 consumers to validate the questionnaire and then the final survey was launched. 615 responses were collected and after deleting the incomplete responses the final dataset contained 600 responses for further analysis. No monetary compensation was given to the consumers as they were rewarded by a special system through Qualtrics.

Data Analysis

All the data analysis for this study was done using XLSTAT- Sensory which is a sensory analysis statistical software in Excel (Version 19.4 2017.06.19, Addinsoft, New York, USA). To evaluate the significant differences, Analysis of Variance (ANOVA) was done for questions which needed responses for overall liking, appeal liking, purchase intent and level of being informed with respect to each photograph. Significance was investigated for each photograph/description type based on the two different types of Indian curries presented in the study. Fischer's protected LSD test was used to determine significant differences (p-value < 0.05) for different photographic presentations.

Correspondence Analysis (CA) was used to demonstrate the correlation between the photographs and the attributes perceived based on them for all the Check-all-that-apply(CATA) questions. Symmetric biplots were plotted for the CA data looking at the chi-square distances. Using Microsoft Excel 2010, frequency count analysis was done, and graphs were plotted for the question evaluating what the consumers like/dislike/what doesn't matter to them based on the photographic presentation and. Descriptive statistics was used to summarize the demographic information of the consumers.

Results and Discussion

Respondents' Demographics

Table 3.1 Demographic information of the participants for the online survey (n=600)

Demographics	Percentage %	No of respondents
Age		
18-30	56.10	345
31-50	40.00	246
51-70	3.90	24
Education		
Less than high school	0.16	1
High school graduate	2.44	15
Some college	5.04	31
Bachelor's degree	35.28	217
Master's degree	36.26	223
Professional degree	20.16	124
Doctorate degree	0.65	4
Occupation		
Employed full time	68.46	421
Employed part time	15.12	93
Unemployed looking for a job	6.34	39
Unemployed not looking for a job	3.58	22
Retired	0.65	4
Student	5.37	33
Disabled	0.49	3
No of members in the household		
1	0.16	1
2-4	57.89	356
4-6	36.26	223
7 or more	5.69	35

Table 3.2 Food purchase behavior of participants of the online survey (n=600)

Restaurant food purchase behavior	Percentage %
Type of food eaten at restaurants	
Bread (roti, naan, etc.) and curry	16.1
Soups	13.3
Rice varieties	15.2
Desserts	14.5
Pizza, pasta etc.	15.2
Hot beverages (coffee, tea, etc.)	11.1
Chat snacks (pani puri, bhel puri, samosa etc.)	13.8
Others	0.8
Frequency of buying food online	
Once or more a week	31.38
Once or more a month	40.16
Once in 2 - 3 months	16.10
Once in 6 months	4.23
Once in a year	1.46
Never	6.67
Type of food purchased online	
Bread (roti, naan, etc.) and curry	19.0
Desserts	15.8
Soups	8.8
Rice varieties	18.3
Pizza, pasta etc.	29.9
Hot beverages (coffee, tea, etc.)	7.1
Others	1.1
Amount spent monthly on eating at restaurants (in rupees)	
0 - 200	1.46
200 - 500	8.13
500 - 1000	24.07
1000 - 2000	33.50
More than 2000	32.85
Amount spent monthly on buying food online (in rupees)	
0 - 200	2.27
200 - 500	17.80
500 - 1000	37.17
1000 - 2000	23.39
More than 2000	19.37

Restaurant: Chinese, Italian and Mexican cuisines, Grilled meat, Burgers, South Indian food
Online: Chinese cuisine, Burgers, Salads, Grocery, Ready to eat/make foods.

The demographic information of 600 participants of the online survey can be noted in Table 3.1 and their food purchase behavior can be found in Table 3.2.

Purchase intent

Table 3.3 Purchase intent of food based on photographs/description.

Photo type	Butter Chicken Paragraph	Paneer Butter Masala Paragraph	Butter Chicken Bullet	Paneer Butter Masala Bullet
Food + Sides + Description	7.39 a	8.01 a	7.84 a	7.97 ab
Food + Sides	7.37 a	8.02 a	7.80 ab	8.06 a
Just the food + Description	7.21 a	7.86 ab	7.47 abc	7.89 ab
Just the food	6.96 ab	7.81 ab	7.37 bc	7.78 ab
Name + Description	6.56 bc	7.53 b	7.24 c	7.65 b
Name	6.28 c	7.13 c	6.62 d	7.09 c
Pr > F(Model)	0.000	< 0.0001	< 0.0001	< 0.0001
Significant	Yes	Yes	Yes	Yes
Pr > F(Phototype)	0.000	< 0.0001	< 0.0001	< 0.0001
Significant	Yes	Yes	Yes	Yes

(Name: Photograph of name of the food, Name + Description: Photograph of name of the food + description, Just the food: Photograph of food on the right portion to be served, Just the food + Description: Photograph of food on the right portion to be served + description, Food + Sides: Photograph of food with sides, Food + Sides + Description: Photograph of food with sides + description). *Different letters denote significant differences at $p < 0.05$.

The ANOVA for the purchase intent of the food based on the different photographic presentations is presented in Table 3.3. Significant differences were found in the purchase intent scores for food/description types. The results showed that with more realistic representation of the food along with information, the purchase intent was higher. The purchase intent was higher for the photograph of the food with sides along with the description displayed in either paragraph or bulleted description for butter chicken masala. In the case of paneer butter masala, the presentation type of just the food with the sides without description was more likely to be purchased. The menu

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description with just the name of the food was least likely to be purchased in all the food/description types.

Level of feeling informed

Table 3.4 The level of information gathered on food based on photographs/description.

Photo type	Butter Chicken Paragraph	Paneer Butter Masala Paragraph	Butter Chicken Bullet	Paneer Butter Masala Bullet
Food + Sides + Description	7.46 a	7.97 a	7.80 a	7.97 a
Food + Sides	7.43 ab	7.99 a	7.77 a	7.97 a
Just the food + Description	7.28 ab	7.84 a	7.52 ab	7.93 a
Just the food	6.92 bc	7.71 ab	7.46 ab	7.82 ab
Name + Description	6.56 cd	7.39 b	7.24 b	7.52 b
Name	6.21 d	6.95 c	6.72 c	7.10 c
Pr > F(Model)	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Significant	Yes	Yes	Yes	Yes
Pr > F(Phototype)	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Significant	Yes	Yes	Yes	Yes

(Name: Photograph of name of the food, Name + Description: Photograph of name of the food + description, Just the food: Photograph of food on the right portion to be served, Just the food + Description: Photograph of food on the right portion to be served + description, Food + Sides: Photograph of food with sides, Food + Sides + Description: Photograph of food with sides + description). *Different letters denote significant differences at $p < 0.05$.

The ANOVA for the level of feeling informed from the photographs and descriptions attached to the food are presented in the Table 3.4. Not surprisingly, the level of being informed was significantly higher with the photograph of the food with sides along with the description in both paragraph and bulleted description types of butter chicken masala. For Paneer butter masala, the level of being informed was significantly higher when the food with the sides were showed without any description attached to it. Just the name of the food without any information or pictures had significantly low scores for the level of being informed. It is evident from the results that when

more information about the food is given, the consumers tend to be confident about their purchase decision. It is also observed from the results that significant differences in the level of being informed probably are related with the higher scores of overall liking and higher purchase intent. The findings were in strong correlation with the previous research finding (Chen, 2009) that the availability of information about product has a major impact on the purchase decisions of consumers.

Liking and visual appeal (Appendix D) follow the same trends as purchase intent and level of feeling informed.

Like/Dislike/ Doesn't matter – Attribute perceptions

Figure 3.8 and 3.9 show the plot for different sensory attributes related to the food and what consumers liked, disliked or mentioned that it did not matter to them for photograph/description of food with paragraph type description. Similarly, Figure 3.10 and 3.11 represent attributes consumers liked, disliked or said it did not matter to them for photograph/description of food with bulleted description. It was observed from the graph that regardless of the different description types, the liking of attributes increased as more details were added to the food. The liking of the attributes was more in the photographs of food with sides with/without description when compared to the photograph showing just the name of the food. The frequency count of disliking on the other hand, reduced as more details were added to the food photograph. Also, the attributes that were denoted as those that did not matter to the consumers, stayed in the lower frequency count range (below 20). The trend was similar in all the different food and description types. The results strongly suggest that with more details added to the food in the menu, items moved from being disliked to being liked rather than to the unimportant category.

Butter Chicken masala and paragraph description

Figure 3.8 Attributes that are liked, disliked and did not matter to the consumers with respect to six photograph/paragraph description combination of the butter chicken masala
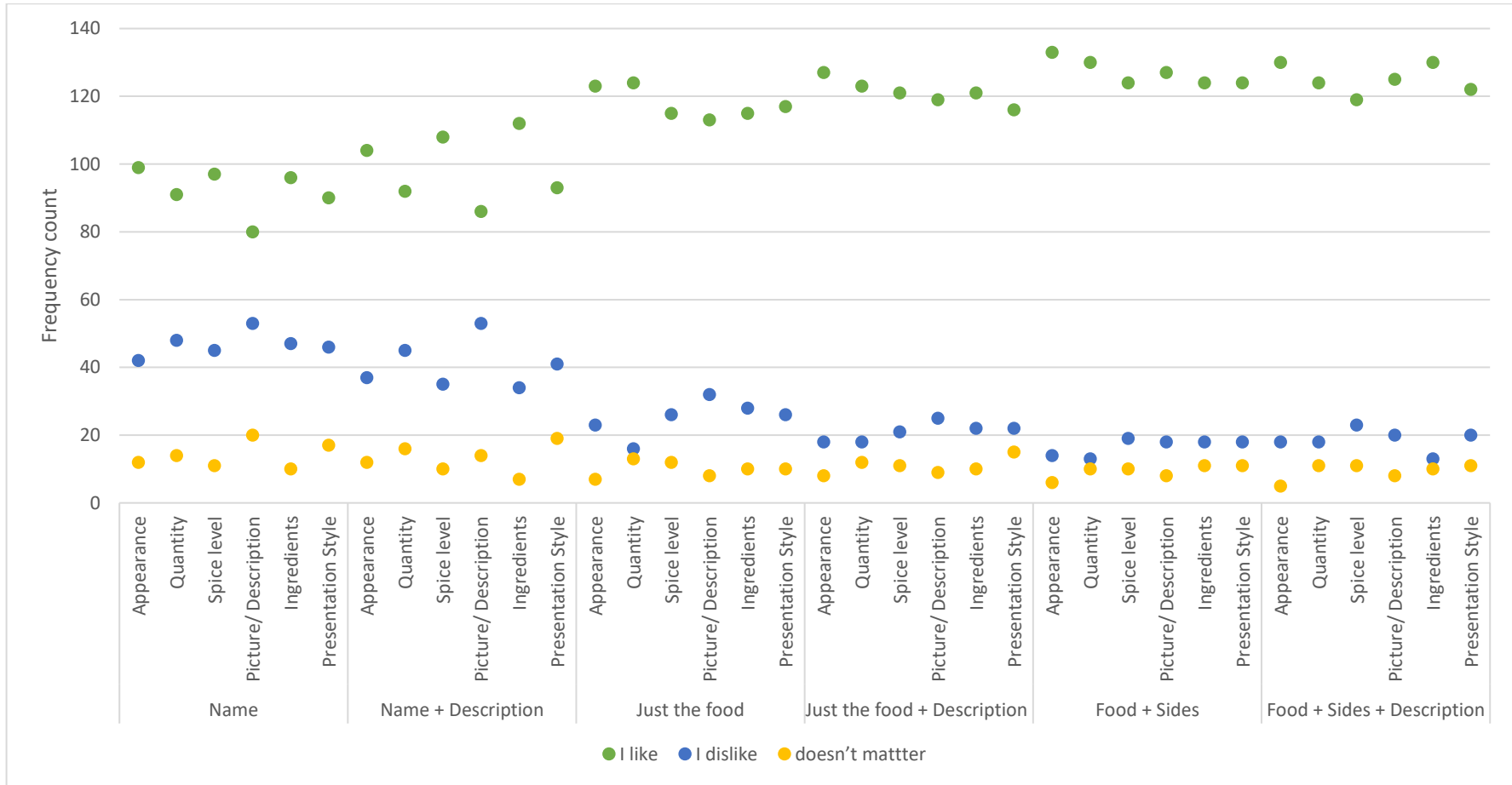
(Name: Photograph of name of the food, Name + Description: Photograph of name of the food + description, Just the food: Photograph of food on the right portion to be served, Just the food + Description: Photograph of food on the right portion to be served + description, Food + Sides: Photograph of food with sides, Food + Sides + Description: Photograph of food with sides + description)

Paneer butter masala and paragraph description

Figure 3.9 Attributes that are liked, disliked and did not matter to the consumers with respect to six photograph/paragraph description combinations of the paneer butter masala.

(Name: Photograph of name of the food, Name + Description: Photograph of name of the food + description, Just the food: Photograph of food on the right portion to be served, Just the food + Description: Photograph of food on the right portion to be served + description, Food + Sides: Photograph of food with sides, Food + Sides + Description: Photograph of food with sides + description)

Butter Chicken masala and bulleted description

Figure 3.10 Attributes that are liked, disliked and did not matter to the consumers with respect to six photograph/bulleted description combinations of the butter chicken masala.
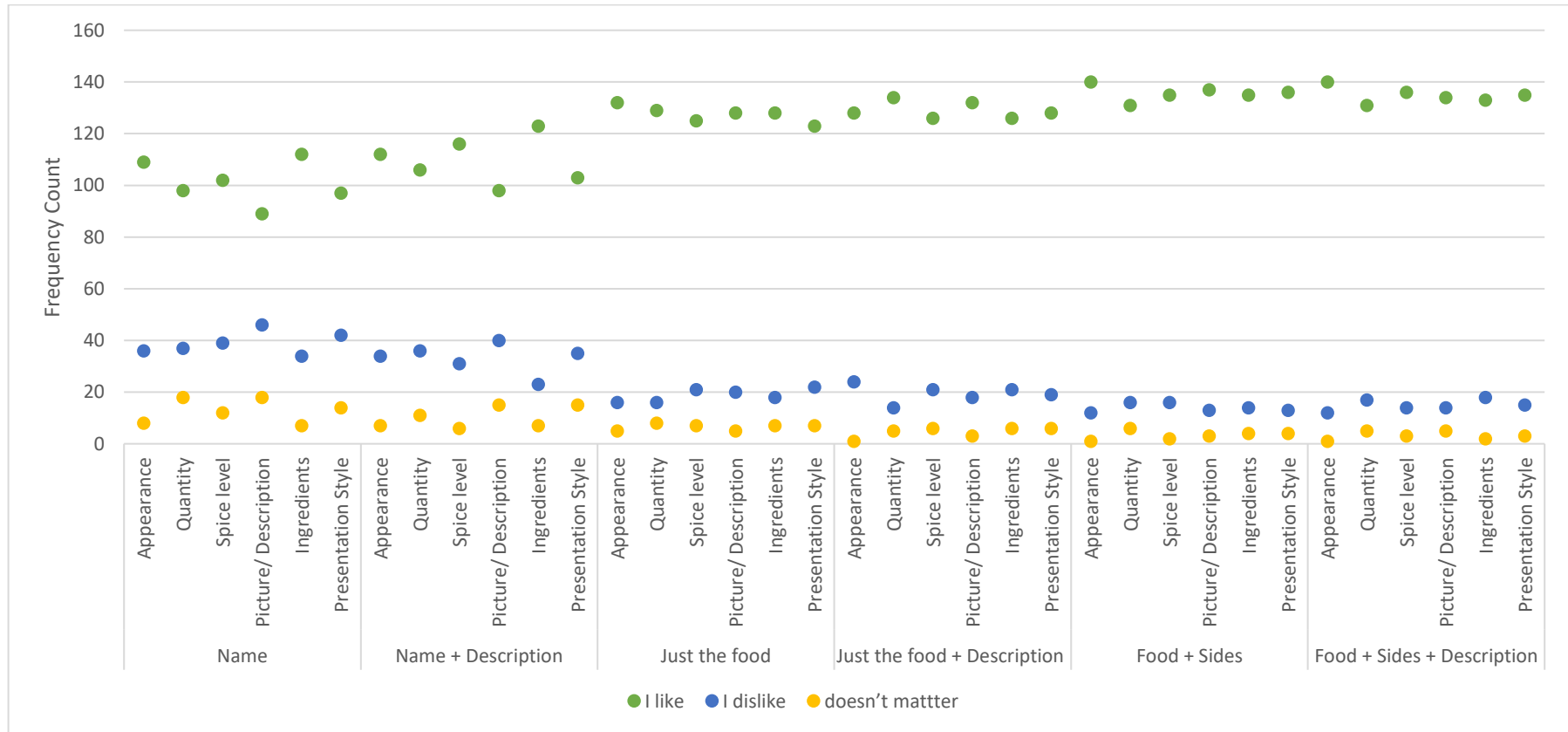
(Name: Photograph of name of the food, Name + Description: Photograph of name of the food + description, Just the food: Photograph of food on the right portion to be served, Just the food + Description: Photograph of food on the right portion to be served + description, Food + Sides: Photograph of food with sides, Food + Sides + Description: Photograph of food with sides + description)

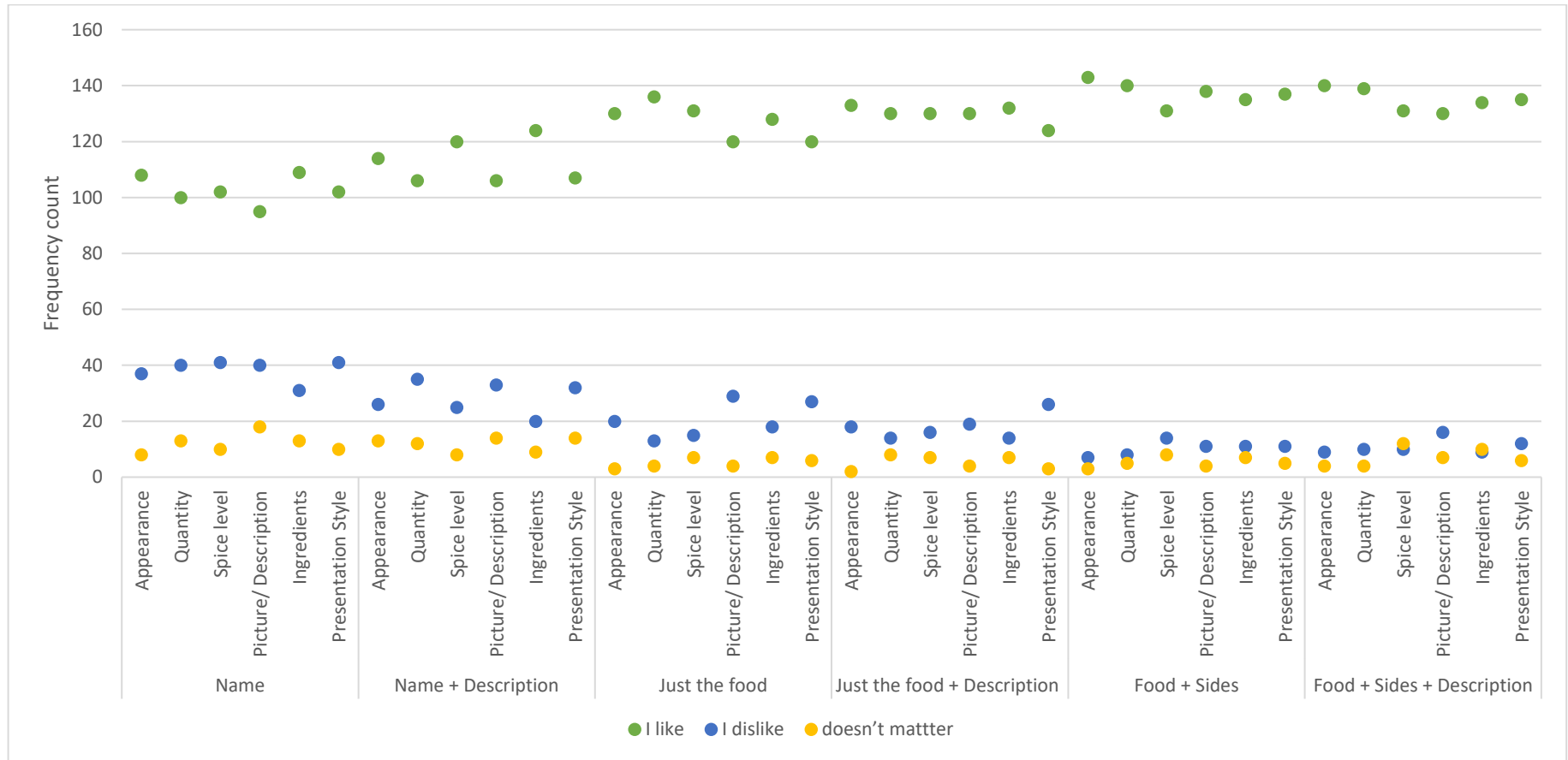*Paneer butter masala and bulleted description*

Figure 3.11 Attributes that are liked, disliked and did not matter to the consumers with respect to six photograph/bulleted description combinations of the paneer butter masala
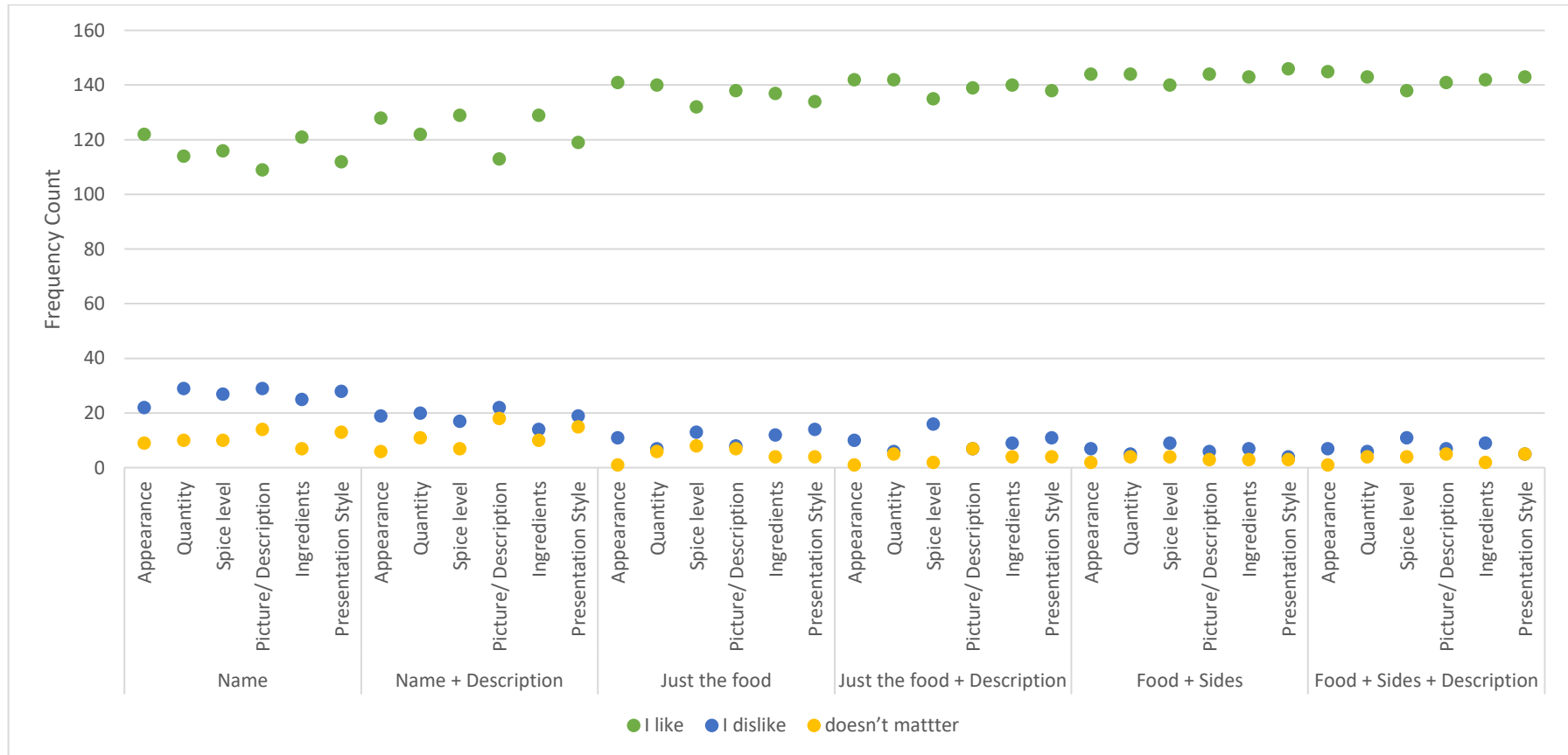
(Name: Photograph of name of the food, Name + Description: Photograph of name of the food + description, Just the food: Photograph of food on the right portion to be served, Just the food + Description: Photograph of food on the right portion to be served + description, Food + Sides: Photograph of food with sides, Food + Sides + Description: Photograph of food with sides + description)

Relating Photograph/information with product attributes

Figure 3.12 and Figure 3.13 show the relation between the photograph/description with the different attributes as assessed by the consumers on the correspondence analysis factor map, for photographs of food with paragraph type description.

Based on these plots, there were differences in the perception of attributes with respect to the photograph/description displayed to the consumers. For a butter chicken masala, a photograph with just the name of the food with/without description was perceived to be oily and spicy (Figure 3.12). Just the photograph of food was related to spicy and creamy, tangy, buttery and juicy. In contrast, the photograph of food with sides with/without description was related with smooth, colorful, freshly prepared and that it will have the right portion size. Similarly, from Figure 3.13, for paneer butter masala, the photograph with just the name of the food with/without description was perceived to be oily, spicy and buttery. In contrast, the photograph of the food along with its sides with/without description was related with smooth, colorful, juicy, tasty, freshly prepared and that it will have the right portion size.

Figure 3.14 and 3.15 present the consumers' association of different attributes with the photograph/description of food with bulleted type description. The correspondence analysis map in Figure 3.14, for butter chicken masala, the photograph with just the name of the food with/without description was perceived to be oily and spicy. The photograph of just the food to be served in the right portion was associated with creamy, tangy and smooth. Interestingly, the photograph of food with its sides with/without description was related with colorful, freshly prepared and that it will have the right portion size. A very similar trend was also noted in Figure 3.15, for paneer butter masala, the photograph with just the name of the food with/without description was perceived to be oily, spicy and buttery. In contrast, the photograph along with its sides with/without description was found to be correlated with colorful, freshly prepared and that

it will have the right portion size by the consumers. Just the photo of the food was perceived to be tasty and juicy.

These findings strongly confirm that the presence of just the photograph of the food could increase the liking of the food to a higher level. It was also understood that adding photographs of the food could be a crucial factor to determine the purchase decision by increasing liking. This also contributes to the fact that with photographs of the food, the attributes related to them were freshly prepared and will have the right portion were more positive towards a purchase decision. With just the name of the food displayed, the consumers were relating to the attributes that were not representative of the food. The trend was constant in all the different food and description types where the photograph of the food along with the sides with/without description was correlated with more attributes that closely represent the true features of the food. It was observed that adding a photograph to the food establishes trust and it acts as a virtual representative of the food made in the restaurant which will be very helpful to make confident purchase decision.

Butter Chicken masala and paragraph description

Figure 3.12 Correspondence Analysis factor map representing the six photographic presentations of Butter chicken masala and paragraph description and the corresponding attributes perceived.

(Name: Photograph of name of the food, Name + Description: Photograph of name of the food + description, Just the food: Photograph of food on the right portion to be served, Just the food + Description: Photograph of food on the right portion to be served + description, Food + Sides: Photograph of food with sides, Food + Sides + Description: Photograph of food with sides + description)

Paneer butter masala and paragraph description

Figure 3.13 Correspondence Analysis factor map representing the six photographic presentations of Paneer butter masala and paragraph description and the corresponding attributes perceived.

(Name: Photograph of name of the food, Name + Description: Photograph of name of the food + description, Just the food: Photograph of food on the right portion to be served, Just the food + Description: Photograph of food on the right portion to be served + description, Food + Sides: Photograph of food with sides, Food + Sides + Description: Photograph of food with sides + description)

Butter chicken masala and bulleted description

Figure 3.14 Correspondence Analysis factor map representing the six photographic presentations of Butter chicken masala and bulleted description and the corresponding attributes perceived.

(Name: Photograph of name of the food, Name + Description: Photograph of name of the food + description, Just the food: Photograph of food on the right portion to be served, Just the food + Description: Photograph of food on the right portion to be served + description, Food + Sides: Photograph of food with sides, Food + Sides + Description: Photograph of food with sides + description)

Paneer butter masala and bulleted description

Figure 3.15 Correspondence Analysis factor map representing the six photographic presentations of Paneer butter masala and bulleted description and the corresponding attributes perceived.

- Attributes Perceived
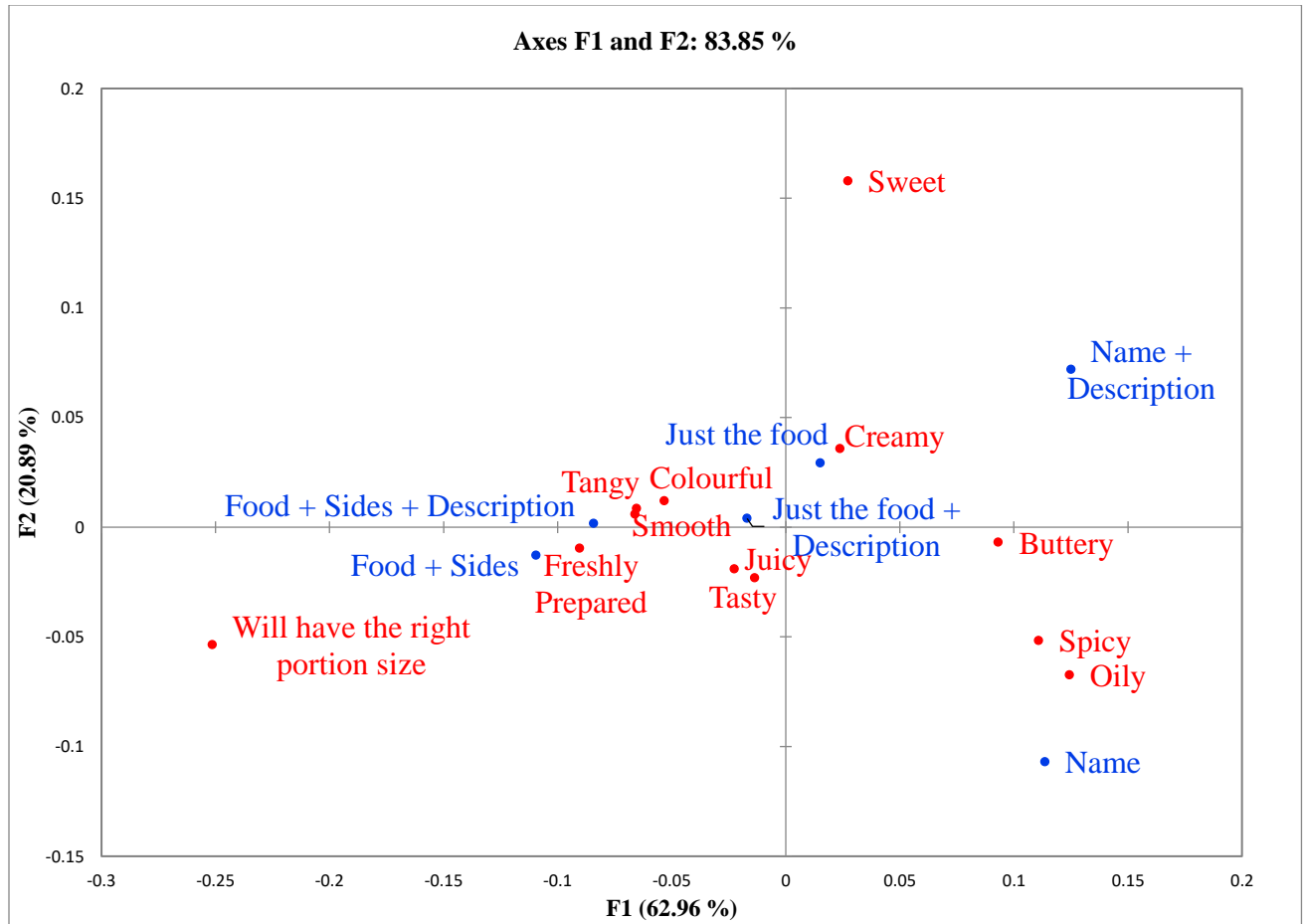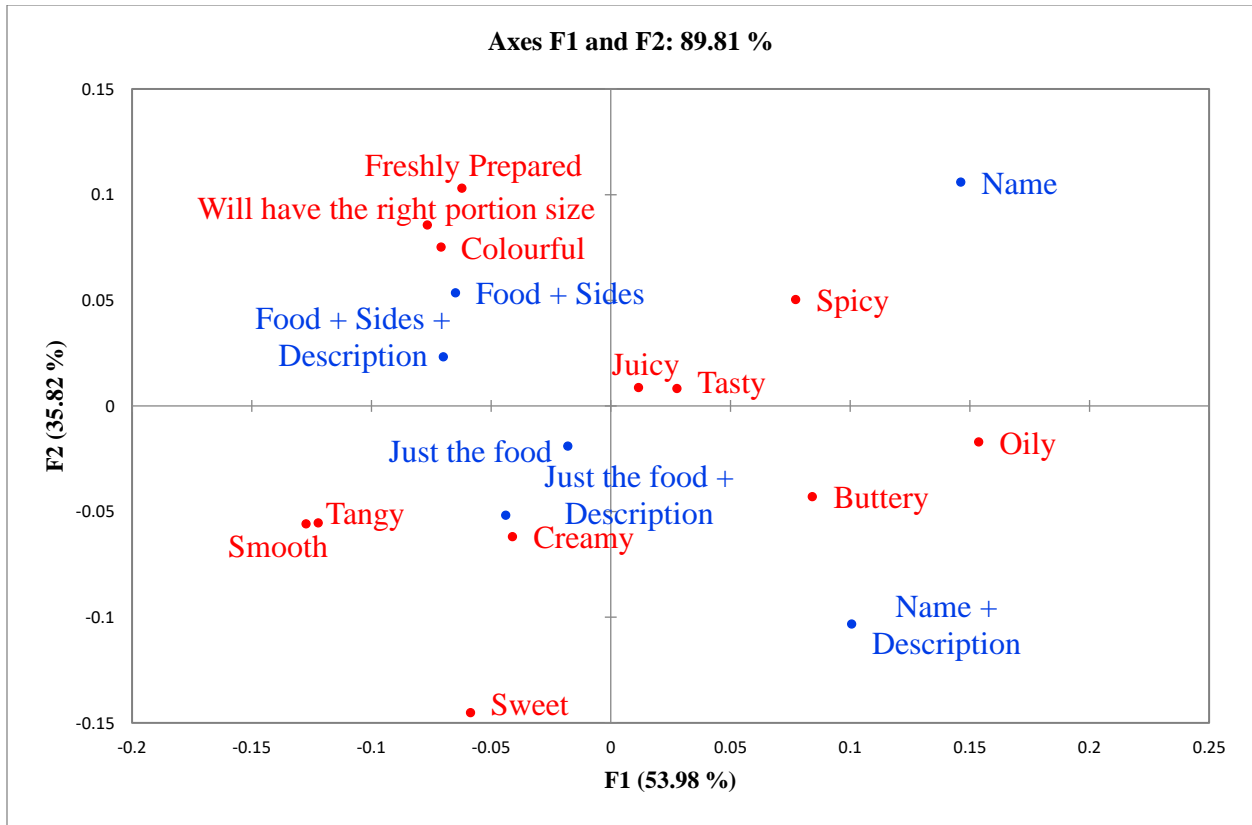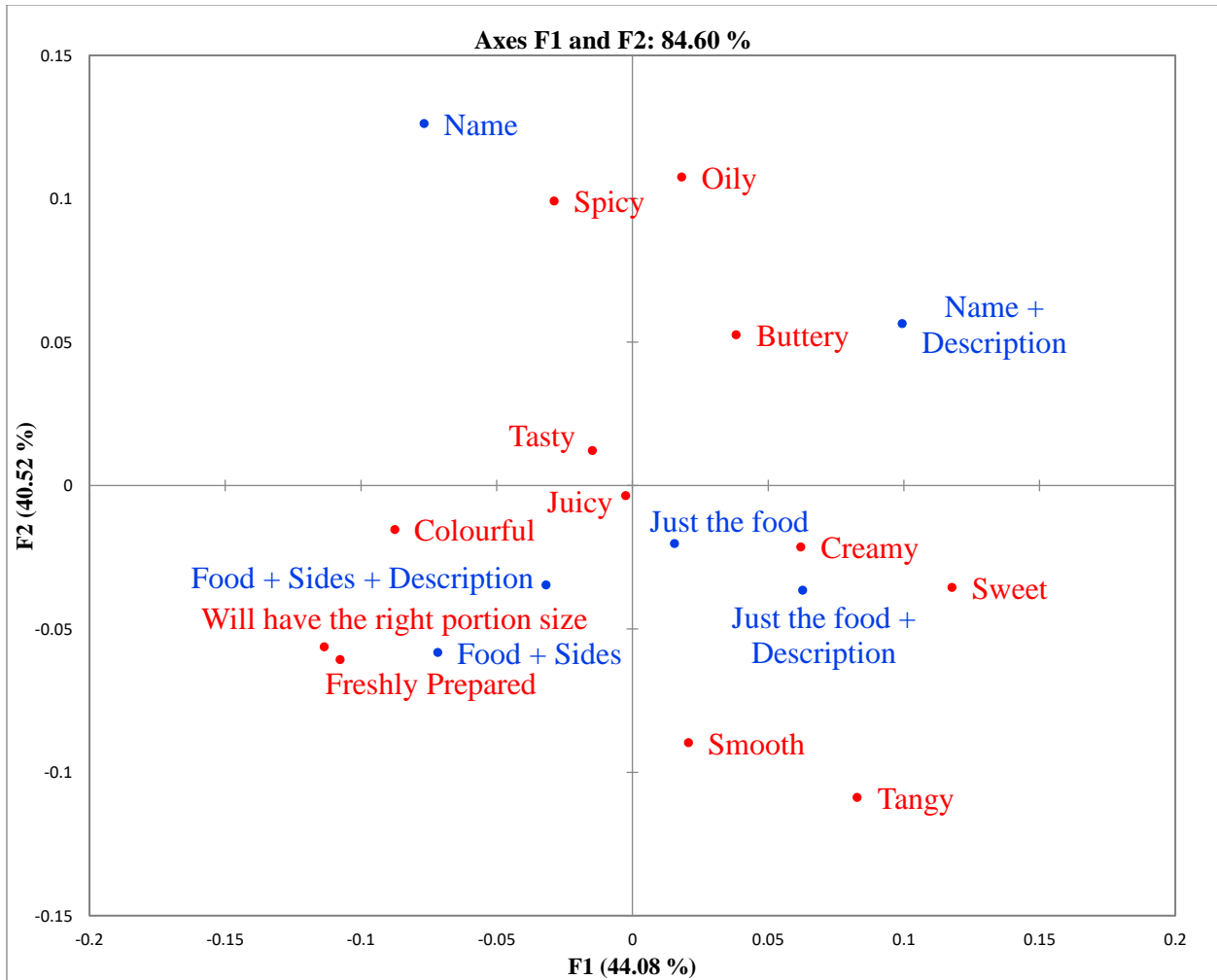- Photo type

(Name: Photograph of name of the food, Name + Description: Photograph of name of the food + description, Just the food: Photograph of food on the right portion to be served, Just the food + Description: Photograph of food on the right portion to be served + description, Food + Sides: Photograph of food with sides, Food + Sides + Description: Photograph of food with sides + description)

Conclusion

A lot of extant literature to study the restaurant shopping behavior of consumers has concentrated on factors like quality of the food, ambience of the restaurant, service factors etc. Very little research has been conducted on the food presentation on the menu, which is the first point of contact about the food for the consumers. This study focused on different types of photographic presentations of food on the menu and evaluating the best presentation method in order to educate restaurants about consumers preferences and liking about the types of information provided: food names, photographs, and descriptions. Because Indian women were chosen to be the target consumers for this study, six different types of photographic presentation of Indian curries were evaluated. Based on the results, the overall liking and purchase intent was observed to be higher in the photograph of the food along with the sides with/without description when compared to just presenting the name of the food in the menu. It was evident from the results that when more information about the food is given, the consumers tend to be confident about their purchase decision. Significantly higher scores in the level of being informed could be related with the higher of overall liking and higher purchase intent. The photograph of the food with sides with/without description were related in the consumers' minds with freshly prepared dishes that will have the right portion size, which are positive attributes that can increase the purchase intent of the consumers. In contrast, presenting just the name of the food was associated with attributes like spicy, oily etc. which are not the true representation of the features of the food. Thus, this study concludes that for a restaurant menu, adding photographs of the food along with the sides with/without description is a better presentation method, which was associated with significantly higher overall liking, level of being informed and purchase intent.

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9780199541850-e-37

Chapter 4 - Summary

Overall, this study helps us understand that how adding photographs could influence purchase behavior of consumers. Based on the results, the sari on a model was found to have higher liking and purchase intent. It is understood that the photographs of the sari on a model acted as a virtual representative and helped the consumers relate themselves with the sari. Presenting the sari in a static way (folded sari) was misrepresentative of the true features of the sari whereas photograph of the sari draped on a model was associated to the real attributes of the sari. Women and artisans who try to sell their products online would benefit from this when they understand how the photographs and presentation method influences the purchase behavior of the consumers.

For the small entrepreneurs who own restaurants, it is recommended that photographs of the food along with the sides that go with it would be a better way to present the food on the menu. The menu having just the name of the food was least liked and it is understood that adding photographs provide a better sensory experience which leads to higher liking and purchase intent. Adding photographs to the menu helps consumers relate the food to its true characteristics and it can potentially avoid the consumers relating the food with features that are not true of the food.

Even though there were no significant differences in the type of description provided, adding a description did have a higher liking, higher purchase intent and made the consumer feel informed about the product. It is suggested to the entrepreneurs and artisans to consider these factors while selecting the photographic presentation style suitable to the product of sales to increase consumer liking and purchase intent of the product.

Chapter 5 - Limitations and Recommendations for future studies

Though there were a few limitations in the study, they were all viewed as possibilities for future research.

This study was launched and the data was collected only from Indian women. Though the database through the Qualtrics software is widespread in India, the exact location of the consumers was not collected. This data could have been used to determine the regional differences in shopping behavior of Indian women.

The focus group session only had four participants in the discussion. This was due to the time constraints and availability of Indian women residing in Manhattan, Kansas. To overcome this, the participants were chosen in a way that each participant represented a different state of India. Even though this might not be totally representative of all the women from India, future studies could try to consider this limitation and study the shopping behavior of women from all the different states of India.

In the food section of the study, the consumers received butter chicken masala (non-vegetarian dish) or paneer butter masala (vegetarian dish) in a random manner. Since there are many Indians who are vegetarians, directing the questions towards vegetarian consumers and non-vegetarian consumers separately would have avoided the bias in their responses. However, it was clearly mentioned in the instructions to answer the questions only based on the photograph/information displayed to them and not any other factor. In addition, there was not a lot of fluctuation in the data which help us understand that the consumers were not biased based on their thoughts about the food.

This study also had only women as the participants as they are the target population for sari sales and because women make most of the food decision for the families in India. This study

has the scope to be extended to understand the impressions of male population on how photographs and information influence their shopping behavior.

Understanding the consumer behavior based on presenting the sari with different draping methods and different skin tones of the model would be interesting to learn in future studies.

Also extending the study to understand consumer behavior when presenting photographs of food that are new to the culture and not the traditional food that the consumers is usually exposed. Exploring the liking and purchase intent of food from different cultures and cuisines based on the photographs presented to the consumers would be another area to investigate in the future.

This study could also be done with other product categories, both for online sales and offline sales of any commodity. This could be very helpful to find out the best method of product presentation to attract more consumers for their product sale.

Appendix A - Screener/ Demographics Questionnaire

SCREENER/DEMOGRAPHICS

D.1 Which of the following best describes your gender?

- Male

- Female

Skip To: End of Survey If Which of the following best describes your gender? = Male

D.2 Which of the following best describes your age?

- Under 18

- 18 - 30

- 31-50

- 51-70

- 71 or older

Skip To: End of Survey If Which of the following best describes your age? = Under 18

D.3 How often do you buy new clothes online?

- Once or more a month

- Once or more in 2-3 months

- Once or more in 6 months

- Once or more in a year

- Never

Skip To: End of Survey If How often do you buy new clothes online? = Never

D.4 Which type of clothing do you purchase online? (Check all that apply)

- Trousers, shorts, skirts

- Saris and Blouses

- T-shirts, sweaters, sweatshirts

- Underwear

- Jackets, coats

- Other (Please specify) _____

Skip To: End of Survey If Which type of clothing do you purchase online? (Check all that apply) != Saris and Blouses

D.5 How often do you purchase Saris online?

- Once or more a month

- Once or more in 2-3 months

- Once or more in 6 months

- Once or more in a year

- Once in two years

Skip To: End of Survey If How often do you purchase Saris online? = Once in two years

D.6 Do you eat at restaurants?

- Yes

- No

Skip To: End of Survey If Do you eat at restaurants? = No

D.7 How often do you eat at restaurants?

- Once a week

- Two or three times in a week

- Once in two – three weeks

- Once a month

- Once in 2 months or 3 months

Skip To: End of Survey If How often do you eat at restaurants? = Once in 2 months or 3 months

D.8 Which of the following foods have you eaten in the last week ? (Check all that apply)

- Rice and Curry

- Bread (Roti, Naan etc.)

- Pizza

- Fried Mosquitoes

- Chat snacks (Pani puri, Bhel puri, Samosa etc.)

- Ice cream

Skip To: End of Survey If Which of the following foods have you eaten in the last week ? (Check all that apply) = Fried Mosquitoes

D.9 How many Saris do you currently own?

- 0-10

- 11-30

- 31-50

- 51 or more

D.10 Which of the following colors best represent your favorite color for a Sari? (Check all that apply)

- Red

- Blue

- Green

- Yellow

- Orange

- Purple

- Black

- Gold

- Silver

- White

- Other (please Specify) _____

D.11 On average, how much do you spend buying saris per year? (In Rupees)

- 0-1000

- 1000- 2500

- 2500-5000

- 5000-10,000

- More than 10,000

D.12 What type of food do you usually eat at restaurants? (Check all that apply)

- Bread (Roti, Naan etc.) and Curry

- Soups

- Rice varieties

- Desserts

- Pizza, Pasta etc.

- Hot Beverages (Coffee, Tea)

- Chat Snacks (Pani Puri, Bhel puri, Samosa etc.)

- Other (Please specify) _____

D.13 How often do you buy food online?

- Once or more a week

- Once or more a month

- Once in 2-3 months

- Once in 6 months

- Once in a year

- Never

D.14 What type of food do you purchase online? (Check all that apply)

- Bread (Roti, Naan etc.) and Curry

- Desserts

- Soups

- Rice varieties

- Pizza

- Hot Beverages (Coffee, Tea etc.)

- Other (PleaseSpecify) _____

D.15 On average, how much do you spend eating at restaurants per month? (In rupees)

- 0 - 200

- 200-500

- 500-1000

- 1000-2000

- More than 2000

D.16 On average, how much do you spend buying food online per month? (In rupees)

- 0 - 200

- 200-500

- 500-1000

- 1000-2000

- More than 2000

D.17 How many people are there in your household?

- 1
- 2-4
- 4-6
- 7 or more

D.18 Which of the following best describes your occupation?

- Employed full time
- Employed part time
- Unemployed looking for work
- Unemployed not looking for work
- Retired
- Student
- Disabled

D.19 Which of the following best describes your education level?

- Less than high school
- High school graduate
- Some college
- Bachelor's degree
- Master's degree
- Professional degree
- Doctorate

Appendix B - Qualtrics Survey

SARI QUESTIONNAIRE

S.1 Based on the photograph/information, how much do you like the sari overall?

- Dislike Extremely (1)
- Dislike Very Much (2)
- Dislike Moderately (3)
- Dislike Slightly (4)
- Neither Like nor Dislike (5)
- Like Slightly (6)
- Like Moderately (7)
- Like Very Much (8)
- Like Extremely (9)

S.2 Based on the photograph/information, how comfortable do you believe this sari would be to wear?

- Not at all comfortable 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- Extremely comfortable 9 (9)

S.3 Looking at the photograph/information, Please give your assessment of the following product attributes. (Please check at least one box per attribute)

	I like (1)	I don't like (2)	Doesnt matter to me (3)
Colour (1)	○	○	○
Pattern/Design (2)	○	○	○
Weight (3)	○	○	○
Trend (4)	○	○	○
Transparency (5)	○	○	○
Detail work done on the sari (6)	○	○	○
Overall look (7)	○	○	○
Texture/feel (8)	○	○	○

S.4 Based on the photograph/information above, what are your perceptions regarding the feel of the sari? Do you believe it will be: (Check all that apply)

- Fuzzy (1)
- Stiff (2)
- Soft (3)
- Rough (4)
- Smooth (5)
- Thick (6)
- Heavy (7)
- Light-weight (8)
- Stretchy (9)
- Thin (10)
- Cool (11)
- Warm (12)
- Not enough detail done (13)
- Too much detail done (14)
- Flowing (15)
- Shiny (16)

S.5 Looking at the photograph/information, how likely would you be to purchase this sari? (assuming the brand, colour and price are appropriate for you)

- Not at all likely 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- Extremely likely 9 (9)

S.6 If this Photograph/Information was all that was given (assuming the price and fabric type was included), how well informed do you feel about the sari to make a purchase decision?

- Not at all informed 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- Extremely informed 9 (9)

FOOD QUESTIONNAIRE

F.1 Based on the information, how much do you like the food overall?

- Dislike Extremely (1)
- Dislike Very Much (2)
- Dislike Moderately (3)
- Dislike Slightly (4)
- Neither Like nor Dislike (5)
- Like Slightly (6)
- Like Moderately (7)
- Like Very Much (8)
- Like Extremely (9)

F.2 Based on the information, how appealing do you think the food will be?

- Not at all appealing 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- Extremely Appealing 9 (9)

F.3 Based on the information, Please give your assessment of the following food attributes. (Please check at least one box per attribute).

	I like (1)	I don't like (2)	Doesn't matter to me (3)
Appearance (1)	○	○	○
Quantity (2)	○	○	○
Spice level (3)	○	○	○
Picture/ Description (4)	○	○	○
Ingredients (5)	○	○	○
Presentation Style (6)	○	○	○

F.4 Based on the information above, what are your perceptions regarding the food? Do you believe it will be: (Check all that apply)

- Sweet (1)
- Spicy (2)
- Buttery (3)
- Tangy (4)
- Oily (5)
- Colorful (6)
- Freshly Prepared (7)
- Juicy (8)
- Smooth (9)
- Tasty (10)
- Creamy (11)
- Will have the right portion size (12)

F.5 Looking at the information, how likely would you be to purchase this food? (assuming the price and type of food are appropriate for you)

- Not at all likely 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- Extremely likely 9 (9)

F.6 If this information was all that was given (assuming the price was included), how well informed do you feel about the food to make a purchase decision?

- Not at all informed 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- Extremely informed 9 (9)

Appendix C - ANOVA tables for Saris

Overall liking of saris based on photographs/description.

Photo type	Party-wear Sari Para	Casual-wear Sari Para	Party-wear Sari Bullet	Casual-wear Sari Bullet
Model + Description	6.915 a	7.327 ab	6.987 a	7.275 a
Model	7.033 a	7.399 a	7.065 a	7.190 ab
Mannequin + Description	6.935 a	6.948 bc	6.941 a	6.902 ab
Mannequin	6.752 a	6.935 bc	6.928 a	6.784 b
Folded sari + Description	6.706 a	6.752 cd	6.745 a	6.190 c
Folded sari	6.725 a	6.425 d	6.706 a	6.033 c
$Pr > F(Model)$	0.488	< 0.0001	0.531	< 0.0001
Significant	No	Yes	No	Yes
$Pr > F(Phototype)$	0.488	< 0.0001	0.531	< 0.0001
Significant	No	Yes	No	Yes

(Folded sari: Photograph of folded sari, Folded sari + Description: Photograph of folded sari + description, Mannequin: Photograph of sari on a mannequin, Mannequin + Description: Photograph of sari on a mannequin + description, Model: Photograph of sari on a model, Model + Description: Photograph of sari on a model + description). *Different letters denote significant differences at $p < 0.05$.

Feeling of comfort of saris based on photographs/description.

Photo type	Party-wear Sari Para	Casual-wear Sari Para	Party-wear Sari Bullet	Casual-wear Sari Bullet
Model + Description	6.778 a	7.314 a	6.941 a	7.176 ab
Model	6.719 a	7.176 ab	6.902 a	7.216 a
Mannequin + Description	6.621 a	6.784 bc	6.804 ab	6.758 bc
Mannequin	6.706 a	6.752 bc	6.765 ab	6.719 c
Folded sari + Description	6.438 a	6.523 c	6.516 ab	6.268 d
Folded sari	6.438 a	6.085 d	6.425 b	5.863 d
Pr > F(Model)	0.513	< 0.0001	0.141	< 0.0001
Significant	No	Yes	No	Yes
Pr > F(Photo type)	0.513	< 0.0001	0.141	< 0.0001
Significant	No	Yes	No	Yes

(Folded sari: Photograph of folded sari, Folded sari + Description: Photograph of folded sari + description, Mannequin: Photograph of sari on a mannequin, Mannequin + Description: Photograph of sari on a mannequin + description, Model: Photograph of sari on a model, Model + Description: Photograph of sari on a model + description). *Different letters denote significant differences at $p < 0.05$.

Appendix D - ANOVA tables for food

Overall liking of food based on photographs/description.

Photo / Name	Butter Chicken Paragraph	Paneer Butter Masala Paragraph	Butter Chicken Bullet	Paneer Butter Masala Bullet
Food + Sides + Description	7.183 a	7.150 a	6.974 ab	7.216 ab
Food + Sides	7.118 a	7.222 a	7.085 a	7.255 a
Just the food + Description	6.908 ab	7.059 ab	6.660 bc	7.124 ab
Just the food	6.778 abc	6.987 ab	6.712 abc	7.137 ab
Name + Description	6.399 bc	6.804 bc	6.536 cd	7.000 bc
Name	6.294 c	6.562 c	6.222 d	6.765 c
Pr > F(Model)	0.002	< 0.0001	0.000	0.002
Significant	Yes	Yes	Yes	Yes
Pr > F(Phototype)	0.002	< 0.0001	0.000	0.002
Significant	Yes	Yes	Yes	Yes

(Name: Photograph of name of the food, Name + Description: Photograph of name of the food + description, Just the food: Photograph of food on the right portion to be served, Just the food + Description: Photograph of food on the right portion to be served + description, Food + Sides: Photograph of food with sides, Food + Sides + Description: Photograph of food with sides + description). *Different letters denote significant differences at $p < 0.05$.

Liking of visual appeal of food based on photographs/description.

Photo / Name	Butter Chicken Paragraph	Paneer Butter Masala Paragraph	Butter Chicken Bullet	Paneer Butter Masala Bullet
Food + Sides + Description	7.464 a	8.026 ab	7.837 a	8.013 ab
Food + Sides	7.399 a	8.105 a	7.856 a	8.078 a
Just the food + Description	7.183 a	7.804 abc	7.353 bc	7.876 ab
Just the food	6.948 ab	7.752 bc	7.418 ab	7.902 ab
Name + Description	6.510 bc	7.510 c	7.196 bc	7.719 bc
Name	6.346 c	7.111 d	6.908 c	7.412 c
Pr > F(Model)	< 0.0001	< 0.0001	0.000	0.001
Significant	Yes	Yes	Yes	Yes
Pr > F(Phototype)	< 0.0001	< 0.0001	0.000	0.001
Significant	Yes	Yes	Yes	Yes

(Name: Photograph of name of the food, Name + Description: Photograph of name of the food + description, Just the food: Photograph of food on the right portion to be served, Just the food + Description: Photograph of food on the right portion to be served + description, Food + Sides: Photograph of food with sides, Food + Sides + Description: Photograph of food with sides + description). *Different letters denote significant differences at $p < 0.05$.
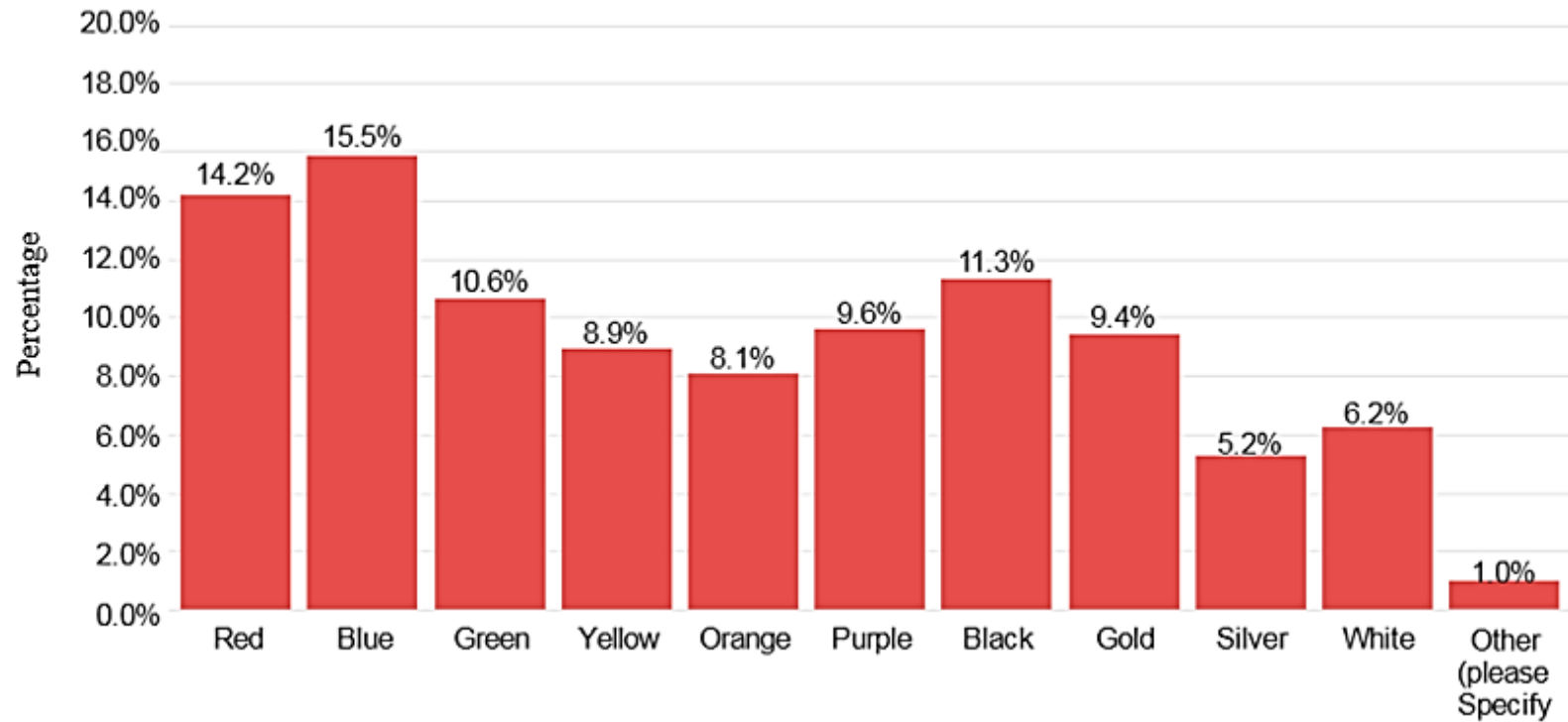
Appendix E - Color Preferences for Sari

Color consumers believe would best represent them while wearing a sari

Other: Grey, Beige, Pink, Maroon, Navy Blue, Peach, Violet, Magenta and Cream

Appendix F - Flow of Photographs in the Sari Questionnaire

Folded Sari → Questions → **Folded Sari + Description** → Questions → **Mannequin** → Questions →

Mannequin + Description → Questions → **Model** → Questions → **Model + Description** → Questions

A light weight saree which is a comfortable regular/work wear. It is a perfect ethnic Indian wear for formal events and casual parties.
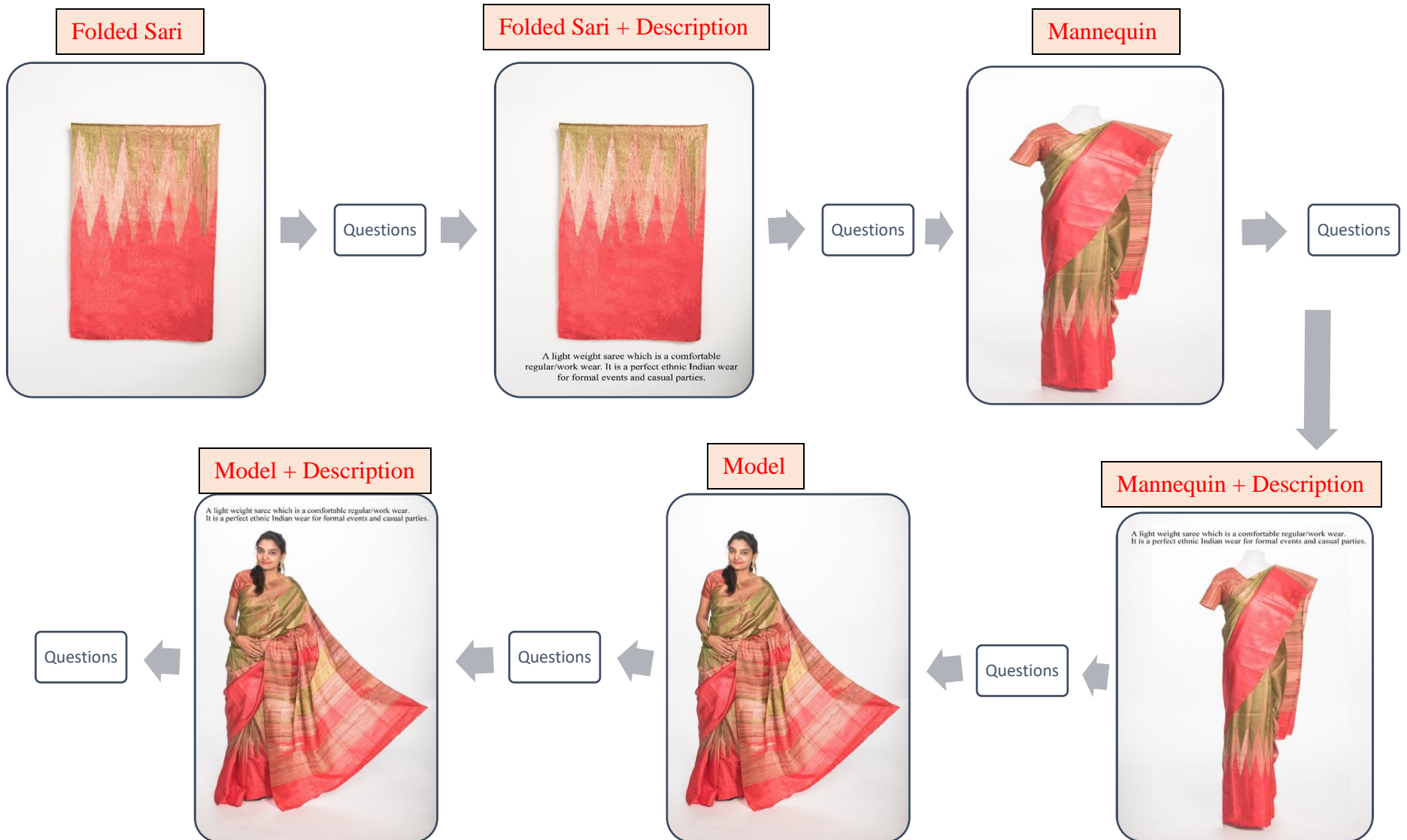
Appendix G - Flow of Photographs in the Food Questionnaire

Name

Butter Chicken Masala

Questions

Name + Description

Butter Chicken Masala

It is a classic Indian dish where the chicken gets cooked in tomato and a lot of butter. It has a buttery flavor with a mild, sweeter gravy.

Questions

Food

Butter Chicken Masala

Questions

Food + Description

Butter Chicken Masala

It is a classic Indian Dish where the chicken gets cooked with tomato and a lot of butter. It has a buttery flavor with a milder, sweeter gravy.

Questions

Food+ Sides

Butter Chicken Masala

Questions

Food+ Sides + Description

Butter Chicken Masala

It is a classic Indian dish where the chicken gets cooked in tomato and a lot of butter. It has a buttery flavor with a mild, sweeter gravy.

Questions

Appendix H - Focus Group Discussion Guide

Moderator: Meetha James
Participants: 4 Indian Women)
Date: 4/18/18 (8 am – 9am CDT)
Objectives:
1. The main objective of this study is to understand the effect of photographs on online shopping behavior of consumers.
2. To understand what are the factors that consumers like, dislike or do not care about when they purchase Saris.
3. To know consumer related terms for the feel of the Sari.
4. To know what food item, consumers will want to have in this study.
5. To understand what are the factors that consumers like, dislike or do not care about when they purchase food

Notes to the participants:

Welcome and thank you for volunteering to take part in this focus group. You have been asked to participate as your point of view is important. We realize you are busy and we appreciate your time.

- *The information you give us is completely confidential, and we will not associate your name with anything you say in the focus group. We would like to record the session so that we can make sure to capture the thoughts, opinions, and ideas we hear from the group. No names will be attached to the focus groups and the record will be used for transcription. Please speak loud and one at a time. There are no right or wrong answers. So, feel free to share your opinion.*

Questions:

1. Introduction – Going around the room
2. Let us start the discussion by talking about how often you wear saris and how many saris you have.
3. How comfortable do you feel wearing saris?
4. (Showing first sari sample) Asking to feel the sari with your hand and to give some terms that comes to the mind after touching it.
5. Where or for which occasion do you think you will wear this sari?
6. (Showing second sari sample) Asking to feel the sari with your hand and to give some terms that comes to the mind after touching it.
7. Where or for which occasion do you think you will wear this sari?
8. What are some things that you look for when you purchase saris? (For example, pattern, fabric etc...)
9. Moving on, if there is a food product for which you would want to have a study like this where different photographs of the food are presented, What food items would you want to have in that study?
10. Why do you want that food item in that study?
11. What are some things that you look for when you purchase food? (For example, package, freshness etc...)
12. Ask to brief the answers

That concludes our focus group. Thank you so much for coming and sharing your thoughts and opinions with us.