# Fragrance Perception through Perfume Packaging: A Visual Link with Customers

*A thesis submitted in partial fulfillment of the*
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In

**Industrial Design**

By

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# Declaration

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We Hereby Declare That This Thesis Is Our Own Work And Effort. Throughout This Documentation Wherever Contributions Of Others Are Involved, Every Endeavour Was Made To Acknowledge This Clearly With Due Reference To Literature. This Work Is Being Submitted For Meeting The Partial Fulfilment For The Degree Of Bachelor Of Technology In Industrial Design At National Institute Of Technology, Rourkela For The Academic Session 2011 – 2015.

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# Certificate of Approval

This is to certify that the thesis entitled "**FRAGRANCE PERCEPTION THROUGH PERFUME PACKAGING: A VISUAL LINK WITH CUSTOMERS**" submitted to the National Institute of Technology, Rourkela by **PREETI GIRI**, **Roll No. 111ID0098** and **PALARAPU PAVAN KUMAR**, **Roll No. 111ID0471** for the award of the Degree of Bachelor of Technology in Industrial Design Engineering is a record of bona fide research work carried out by then under my supervision and guidance. The results presented in this thesis has not been, to the best of my knowledge, submitted to any other University or Institute for the award of any degree or diploma. The thesis, in my opinion, has reached the standards fulfilling the requirement for the award of the degree of Bachelor of technology in accordance with regulations of the Institute.

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# Abstract

Visual interaction remains the central ideology of perfume packaging industry. To achieve this ideology, packaging must clearly establish a complete sensory relationship between the customer and the product which includes visual, aroma and tactile elements. The aim of this research work is to identify the key factors that affect customers' buying preferences and thus propose a methodology that will represent the fragrance in form of visual cues. To understand the customer's buying pattern of perfumes, an online survey was conducted in which 78 candidates participated (20 female, 58 male). ANOVA analysis was conducted using SPSS software to analyse the results procured from the online survey. Results clearly indicate that visual cues affects the decision making process during purchase of perfumes. The proposed methodology may provide a useful guideline to the perfume packaging industry in establishing harmony between customer's perception of the perfume and the fragrance of perfume in reality.

**Keywords:** Human-product interaction, customers' preferences, SPSS, ANOVA

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# 1. Introduction

Customer's purchasing decision process is a complicated one which is mostly affected by advertisement, information exchange through social media and online customer reviews, social and psychological factors. Visual attributes of products like perfumes is the most vital factor that influences a consumer's buying process when a selection has to be made between products of same range and quality. With the rapid growth of online shopping and self-service retail shopping, targeted package design plays a great role in assisting the selection process of a consumer. Intelligent and creative package design can strongly attract a consumer when products have the same utilitarian qualities but with different aesthetic features or what are specifically termed as the hedonic qualities.

This chapter develops the background for the present work and discusses the need to take up this work. It presents a review of available relevant literature. Objectives of the present work along with methodology adopted to accomplish them are also discussed here.

## 1.1 Background

Attracting customers through visual attributes remains the central ideology of perfume packaging industry. To achieve this ideology, package designers use different methodologies to communicate their concept behind the theme of packaging. Each packaging industries use the art of story-telling to pass along their concept ideations to the consumers. But with the growth of self-service retail shopping and online shopping, customers find difficult to connect to their choices. This in turn induces disharmony among the consumers if their choices during purchase don't reflect the aroma in the usage period. This induced disharmony may lead to the reduction in sales of that particular perfume. Rather focussing on only beautifying the product, package designers should orient the packaging in order to communicate the nature of aroma along with the gender based preferences through aesthetically pleasing visual attributes

## 1.2 Motivation

With the growth in online shopping and self-service retail shopping, it becomes mandatory to communicate the olfactory nature of perfume. In self-service retail shopping, consumers go for testing the fragrance of each and every selected perfume one by one. This creates lot of confusion and takes lot of time to find out their desired choice. In online shopping, customers have to make their selection only by seeing the visual attributes and reading out the product specifications provided in the site. In these cases, representing fragrance through visual attributes becomes most essential element of perfume branding and marketing.

## 1.3 Problem Definition

This works makes an attempt to develop a novel unified representation scheme that can provide guidelines to packaging industries in terms of representing the fragrance of perfume through aesthetic features. In view of the importance of developing design

framework for the packaging and branding industries, we formally state the problems undertaken in this work as follows:

(i)  The packaging style adopted in present scenario is mostly gender oriented. Beautifying the packaging becomes the sole motive of packaging industries. This creates a lot of confusion in customer's frame of mind as they get completely distracted as to what they should choose.

(ii)  The existing packaging style doesn't convey any information about the type of perfume present in the perfume bottle. This makes ignorant customers to go for testing one by one perfume. This leads to wastage of time and places consumers in a perplexed situation when it comes to settling on their choices firmly.

(iii)  There is significant disharmony generated between customer's perception and fragrance in reality. This reduces consumer's loyalty towards a particular brand.

## 1.4 Fragrance Classification based on Gender Requirements

The Fragrance wheel as proposed by Michael Edward [1] is a new classification method which is widely used in the fragrance industry. This new method was developed to simplify classification of fragrances and also to show the relationships between each individual classes. The fragrance wheel is represented in figure1. These are some basic and standard notes used in olfactory industry all over the world. Some variations are present in these notes according to their callout ingredients to suit gender choices and personal requirements.



Figure.1  Classification of fragrances

The table1 demarcates the olfactory families and their sub families according to gender preferences.

Table1: Fragrance Classification on the Basis of Gender Requirements

| Gender | Olfactory Family | Sub Family |
|--------|------------------|------------|
| Female | **Chyprus**<br><br>It is based on a woody, mossy, floral accord and can include leathery or fruity notes as well. These have a rich and lingering scent. | Floral<br><br>Fruity |
| | **Citrus**<br><br>Perfumes of this category mainly consist of citrus scents such as bergamot, lemon, orange, tangerine and grapefruit. These perfumes are fresh and light. | Aromatic |
| | **Floral**<br><br>Floral is most widely used note in women's perfumes. These can be enriched with green, aldehyde, fruity or spicy notes. | Aldehyde<br><br>Aquatic<br><br>Carnation<br><br>Green |
| | **Oriental**<br><br>These are also known as "amber" fragrances. Famous for their unique blend of warmth and sensuality. They contain substances like musk, vanilla and precious woods and often associated with exotic floral and spicy scents. | Floral<br><br>Spicy<br><br>Woody musk<br><br>Vanilla |

| | | Aquatic |
|---|---|---|
| **Male** | **Aromatic**<br><br>These notes primarily consist of sage, rosemary, thyme and lavender generally complemented with spicy and citrus notes. These are majorly used in men's perfumes. | Fougere<br><br>Fresh<br><br>Rustic |
| | **Citrus**<br><br>This family includes all perfumes mainly composed of citrus notes such as bergamot, lemon, orange, tangerine and grapefruit. These fragrances are fresh and light. | Aromatic |
| | **Oriental**<br><br>These perfumes draw their richness and sophistication from substances such as amber, resin, tobacco, spices and exotic woods. | Fougere<br><br>Spicy<br><br>Woody |
| | **Woody**<br><br>These warn, dry and elegant masculine accords often contain a small amount of citrus or aromatic notes. These perfumes are warm and opulent when based on sandalwood. | Aquatic<br><br>Aromatic<br><br>Chypre<br><br>Floral Musk<br><br>Spicy |

## 1.5 Colour Principles in Packaging

Colour assumes an imperative part in designing any product. It excites viewers' feelings and a bearer that originators use to convey data. Colours that are seen together produce satisfying emotional reactions are thought to be in harmony. In design, it has been recommended that positive feeling would increase the value of an item as well as can

further expand the likelihood of an item being repurchased. Accordingly, when planning items, designers attempt to build passionate associations among thoughts, items, customers and brands. Utilizing harmonious colours is one approach to make positive passionate associations. This colour harmony can be created by using some principles of colour combinations which has been recommended by many previous studies. Moon and Spencer [2] suggested that effect of hue difference plays an important role in creating color harmony. Various theories and studies proposed both equal-hue and complementary-hue principle. Various numbers of studies proposed an equal-chroma principle which suggested that when two colours are equal or similar in chroma, their colour combination would look harmonious. Further, Ou and Luo [3] suggested a similar principle of colour harmony, i.e., equal-hue and equal-chroma principle which states that resemblance in hue and chroma between individual colours in a colour pair results in colour harmony. In addition to these, a number of previous studies also suggested some lightness-related principles. They are equal-lightness principle proposed by Szabo et al. [4], complementary-lightness principle proposed by Munsell[5] and Szabó et al. [4] and high-lightness principle proposed by Ou & Luo[3] and Szabó et al. [4].

Table2: Colour Principles [6]

| Colour-Harmony Principles | Descriptions | Studies |
|---|---|---|
| **Hue-related principles** | Equal-hue principle | Colours harmonise if they are of the same hue. |
| | Complementary-hue Principle | Colours harmonise if they are complementary in hue. |
| | Blue principle | Blues tend to create colour harmony; red tend to create colour disharmony. |
| | Yellow principle | Bright yellows tend to harmonise with |

| | | |
|---|---|---|
| | | other colours in a colour pair; dark yellow (brown) tend to disharmonise |
| **Chroma-related principle** | Equal-chroma principle | Colours harmonise if they are of the same Chroma |
| **Lightness-related principles** | Equal-lightness principle | Colours disharmonise if they are of the same lightness |
| | Complementary-lightness Principle | Colours harmonise if lightness of the two colours crosses the lightness of 50. |
| | High-lightness principle | The higher the lightness of individual colours, the more harmonious the colour pair generated by them. |
| **Conjoint principles** | Equal-tone principle | Colours harmonise if they are of the same lightness and of the same chroma |
| | Equal-hue & equal-chroma Principle | Resemblance in hue and chroma between individual colours in a colour pair results in colour harmony |

The colour principles discussed in table 2 are general colour rules and in packaging. Only equal hue and equal hue and equal chroma tend to agree with customers' response on seeing a packaged product.

The colour psychology accounts for 85% of reason why someone decides to purchase a product. Some of the colours used in olfactory industry and the emotions related to it are listed below.

*Pink and Violet*: Associates with feminity, evokes elegance

*Green:* Associates with nature and evokes feelings of relaxation and calmness.

*Blue*: Relates to aquatic and elicits responses of comfort and moisture.

*Red*: Symbolizes sensuality in package designs. It is used to represent characteristics like dominance, strong, spicy and sensuality

*Black*: Symbolizes power and masculinity.

*Yellow and Orange*: Relates with happiness, freshness.

Women generally tend to prefer blue, yellow, orange , pink , purple and red colours whereas man are generally attracted to blue, black, brown, green and red.

## 1.6 Review of Literature

Beauty and fragrance industry insiders weigh in on the importance of fragrance in beauty product branding, as well as the best ways to carry it out. Complete sensory connections are central in the success of a product. These cues include visual, aroma and tactile elements. Many researchers are working in this area so as to enhance the link and set a strong relationship between the fragrance, perfume branding and customers' psychology. Allyn et al. [7] have discussed the sensory connections of fragrance branding. Mcewen [8] has discussed about the presence of strong emotional features in branding or any beauty industry. Further Anna Lindquist [9] discussed on the commercial gender categorization of perfumes related to consumer preference of fragrance. Packaging, colour tones, callout ingredients and storytelling are all important elements to consider in creating a product. Brian morean [10] discussed the colours of smell and the effects of colours in perfume advertising and senses. Tornetta et al. [11] reviewed the influence of colours on consumers' psychology and further discussed the use of colours in packaging industries. Bacci et al. [12] discussed the uses of different colours to define different brands. Further, the impact of colour traits on corporate branding has been discussed by Chang et al. [13]. Hemphill et al. [14] further worked on the adults' colour-emotion associations. Stanger et al. [15] reviewed about how the brands use the psychology of colour to manipulate customers. Further, work is being done to identify the possible design features that associate directly or indirectly with the fragrance. Ravindra Chitturi [16] has proposed a comprehensive model showing the relationship between trade-off decisions during purchasing and post consumption experience. The work showed how discrepancies between these attributes can lead to negative emotions and thus impact consumer loyalty. Demir et al. [17] have suggested an approach to design products with an intention to generate or prevent certain types of emotions. The work elicited upon the appraisal patterns

of the emotions in human-product interaction. On the other hand, Bloch [18] has provided a deeper insight into buying behaviour by establishing a model on customer responses to product aesthetics. Lesot et al. [19] have presented a work related to impact of emotional design on products' shape and discussed its implementation in perfume packaging. Ali Raza et al. [20] have conducted a case study to identify the most influential factors that are integral to perfume buying process. Sarah Wills [21] did a comparative study between packaging design and customer reviews and their influences on fragrance buying decisions. Wang Tien-You [22] has analyzed the importance of customers' preferences in perfume bottle design and has provided designers a new way of product design so that they can improve their market competitiveness. Presently, perfume branding industries rely on gender based representation of perfumes. This results into disharmony between the perception of fragrance and perfume in reality. Thus, representing the fragrance along with the gender preferences through visual attributes remains a challenging issue in the perfume branding and marketing industry. So, efforts must be put to design perfume bottle in a way that it provides a harmony between colour tones used, shape of the perfume bottle and the fragrance and thus give consumer a hassle free experience while selecting perfumes.

## 1.7 Objectives of the Work

The work aims at

(i) To conduct a subjective assessment to understand the consumer's psychology and behavioral manifestations when they are exposed to large variety of perfumes.

(ii) To develop a design framework combining the key attributes that needs to be implemented in the packaging style so as to eliminate the disharmony between customer's perception and fragrance in reality

(iii) To develop concept sketches for the most disharmonious designs so that the modified designs can better communicate the gender and age based preferences along with the olfactory nature of perfume.

## 1.8   Advantages of the Proposed Design Framework

The advantages of the proposed design framework may include:

 (i)   Helps customers in settling on their choices in minimum possible time and provide customers a hassle free experience while purchasing perfumes.

(ii)   Creates harmony between customer's perception and the fragrance in reality and thus frees customers from an ambiguous situation.

(iii)  Instills consumer's loyalty towards a particular brand and promotes positive advertisement of the brand.

## 1.9   The Layout of the Thesis

A brief overview of the work carried out in the thesis and organization of the same are summarized below.

Chapter 1 presents the background, motivation and problem definition of the thesis work. Here, brief information is given for the fragrance categorization according to gender preferences and colour principles used in packaging industries. It is followed with a brief review of the relevant literature. This chapter concludes with the objectives of the work along with the advantages of the proposed design framework.

Methodology adopted is presented in Chapter 2. The chapter proposes the faces of perfume selection pattern and discusses the level of interaction of each factor with customer's purchasing decision. It also identifies consumer's psychology in existing packaging style through the online survey conducted.

Chapter 3 deals with the results and discussions. Proposed design frame work is presented in this chapter.  The concept sketches of the most disharmonious perfume bottles have also been presented in order to validate the proposed design framework

Chapter 4 summarizes the significant findings of the work performed, outline the current limitations raised by the proposed methodology as well as provide some recommendations for future work that would further enhance the unified representation scheme along with design methodology for packaging of different items like fruit juices and food items.

# 2. Methodology

The chapter discusses the methodology adopted to identify the various factors important in purchasing of perfumes. The chapter outlines the level of interaction of key attributes integral to perfume selection. Understanding the level of interaction of each factor helps to identify the higher priority factors. Consumer's psychology towards the existing packaging style helps to know the specific positive emotions that are invoked on visualizing shapes and colours of perfume bottles. To understand consumer's behavioral responses, an online survey is conducted where 78 candidates of 18-35 years participated. The responses elicited the consumer's mentality towards the packaging style. After conducting the survey, the responses have been analyzed using statistical tool (ANOVA). The analysis reported significant weightage to form design and colours used in the context of packaging.

## 2.1 Proposing Faces of perfume selection pattern

The selection pattern of a consumer is a very complex process. The preference pattern can be more intriguing when exposed to a large variety of perfumes especially in the cases of online shopping or self-service retail shopping. The key attributes that drive a customer's selection pattern are his/her own fragrance and brand preferences, advertisements, online reviews, earlier usage experience and the product's physical appearance. Here, we have categorized customer's purchasing patterns of perfumes under two classes.

*a.) Class A: Purchase pattern unaffected by social factors and product aesthetics*

These customers develop a liking towards a particular perfume and are not in a state to go for change. The inclination is developed due to quality and usage experience. Packaging aesthetics may or may not affect their inclination towards a particular perfume. The customers falling in this category don't have any confusion regarding the selection criteria. For this category of customers, utilitarian benefits matter the most and hedonic or aesthetic feature don't play any deciding role in their selection criteria. Selection time remains the least as they are aware of what to purchase.
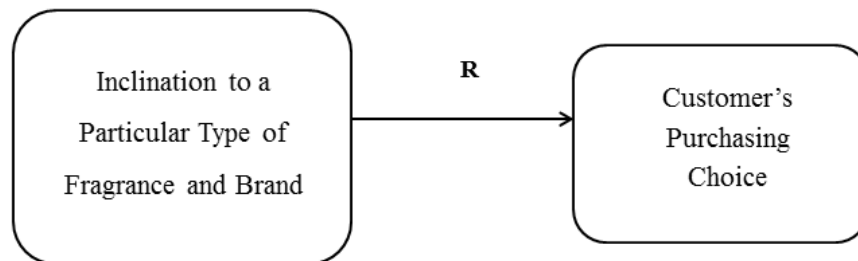
Figure2. Framework of purchase pattern of customers falling in Class A

*b.) Class B: Purchase pattern affected by personal choices, social factors and product aesthetics.*

These customers are in a state of complete confusion as to what they should purchase as they have no clue about their own preferences. These customers set their choice of particular fragrance or brand through social factors like online reviews, information exchange through social media, advertisement, past usage experience etc. and physical appearances. The customers mind set changes according to seasonal changes, occasions,

place of use, etc. Selection time increases to a large extent if customers find difficulty in associating with the perfume through visual cues.

Figures 1 and 2 clearly depict the framework for the interaction level of various factors with the purchase pattern of a consumer.
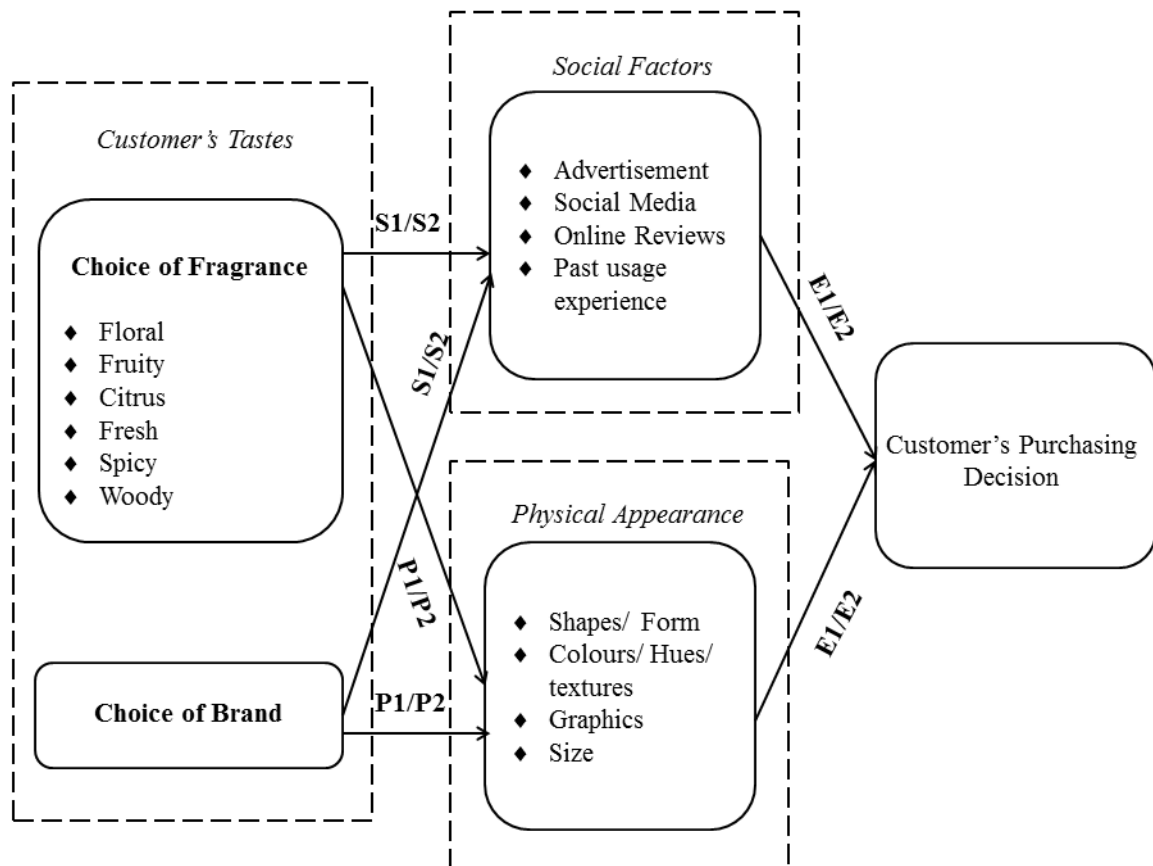


Figure3. Framework of purchase pattern of customers falling in Class B

The nomenclature of interaction levels is discussed:

➢ **R**: Represents positive emotion/relation towards purchasing choice among the customers who are inclined to a particular type of fragrance and brand.

➢ **S1**: Choice of fragrance/brand is strongly affected by social factors. The customer develops a preference by going through various forms of advertisements, social media, and online reviews and past usage experience of his own or others.

➢ **S2**: Choice of fragrance/brand remains unaffected by social factors

➢ **P1**: Choice of fragrance/brand is strongly affected by physical appearance. The customer develops a preference by visualizing the physical characteristics like form

design, colours, size and graphics. Such aesthetics oriented choices are driven by gender and age preferences and the personality traits.

➢ **P2**: Choice of fragrance/brand remains unaffected by physical appearance

➢ **E1**: All the attributes (choice of fragrance and brand, social factors and physical appearance) together generate a positive emotion towards purchasing of the particular perfume.

➢ **E2**: All the attributes (choice of fragrance and brand, social factors and physical appearance) together generate a negative emotion towards purchasing of the particular perfume.

## 2.2 Consumers' psychology towards perfume packaging: A Subjective assessment

From the framework of purchase pattern, it is known that hedonic features play a major role when a consumer is exposed to a huge variety of perfumes. The hedonic benefits associated with any perfume contribute a lot to its marketing when choices have to be made between perfumes of same fragrance category. Uncertainty and confusion in selection pattern rises if the physical features don't clearly indicate the type of perfume. This directly results into disharmony between the consumer's perception and the perfume in reality and thus leads to consumer's dissatisfaction.

To understand the consumer's psychology, an online survey was conducted where 78 candidates from different age group and background participated. The questionnaire pattern (Appendix A) is prepared in a way to extract the important requisites of perfume packaging. 54 pictures of perfume bottles of different fragrances, brands and aesthetics were placed in questionnaire and the candidates were asked to make judgements as per the questions. The response pattern was studied and analyzed using statistical tool (ANOVA). ANOVA analysis was performed using SPSS software to know the effect of shape and colour of perfume bottle in consumer's selection of perfume bottles. Shape and colour of perfume bottles are considered as inputs and consumer's selection is considered as output (Table). Bottle shapes considered for the analysis are Cylindrical, Spherical, Cuboidal, Conical, Prismatic and Abstract. Colours considered for the analysis are White, Blue, Yellow, Pink, Black, Violet, Green and Red. 54 bottles given in the survey are categorized under these shapes and the bottles of complex shape were grouped under Abstract shape.

In the same way, bottles are grouped under the given colours. Consumer's selection score is obtained from the responses of question no.8 asked in the survey (Appendix A) which is related to overall colour and shape of the bottle. Bottles with Rank1 are assigned a score value of 3, those with Rank2 are assigned a value of 2 and those with Rank3 are assigned a value of 1.Bottles with combination of particular shape and particular colour are multiplied with their respective scores and summed up to obtain overall score. The combinations with score value of 0 are neglected for the analysis. The responses along with all the analysis have been presented in appendix B

Table3: Data for performing ANOVA analysis

| Shapes | Colours | Consumer's selection value |
|---|---|---|
| **Spherical** | White | 19 |
| **Spherical** | Blue | 31 |
| **Spherical** | Yellow | 26 |
| **Spherical** | Pink | 28 |
| **Spherical** | Violet | 24 |
| **Spherical** | Red | 29 |
| **Prismatic** | Yellow | 11 |
| **Abstract** | Yellow | 14 |
| **Abstract** | Violet | 8 |
| **Cylindrical** | White | 4 |
| **Cylindrical** | Blue | 10 |
| **Cylindrical** | Yellow | 10 |
| **Cylindrical** | Pink | 13 |
| **Cylindrical** | Black | 14 |
| **Cylindrical** | Green | 5 |
| **Conical** | Blue | 21 |

| | | |
|---|---|---|
| **Conical** | Yellow | 17 |
| **Conical** | Pink | 12 |
| **Conical** | Violet | 13 |
| **Conical** | Red | 22 |
| **Cuboidal** | White | 11 |
| **Cuboidal** | Blue | 16 |
| **Cuboidal** | Yellow | 22 |
| **Cuboidal** | Pink | 12 |
| **Cuboidal** | Black | 33 |
| **Cuboidal** | Violet | 12 |
| **Cuboidal** | Green | 15 |

Table4: Analysis of variance (ANOVA) for Consumer's selection value

| *Source* | *DF* | *Seq. SS* | *Adj SS* | *Adj MS* | *F* | *P* |
|---|---|---|---|---|---|---|
| **Shape** | 5 | 963.59 | 958.13 | 191.63 | 15.65 | 0.000 |
| **Colour** | 7 | 474.22 | 474.22 | 67.75 | 5.53 | 0.003 |
| **Error** | 14 | 171.37 | 171.37 | 12.24 | | |
| **Total** | 26 | 1609.19 | | | | |

Table 3 and 4 represents the data fed for analysis and ANOVA results respectively. The two way ANOVA shows that shapes and colours have a significance factor of $p<0.01$. Thus, it can be concluded that shapes and colours affect a lot to the decision making process while purchasing any perfume. The results show that significant impact factor, 'p' for shape and colour is 0.000 and 0.003 respectively. This clearly implies that both the form design and colour usage has a strong influence on the psychological state of a

consumer during perfume selection. From the survey responses and above results, attributes required for perfume packaging for different types of perfumes can be deduced.

### 2.2.1 Consumers fragrance perception in existing packaging

Forms and colours mostly associate with design features. According to these features, a consumer's perception towards perfume packaging is developed. Subjective assessment on the selected candidates was performed to evaluate the association of customers' psychology with perfume packaging. Subjects were asked to distinguish the 54 perfume bottles (Appendix A) according to their olfactory nature by visualising the styling features in the form of pictures. Figure 3 shows the scatter plot of candidates' responses towards fragrance perception. Table 1 depicts the original categorization of selected perfume bottles according to the fragrance family and the candidates' perception. The responses elicited significant difference between participant's perception and the nature of fragrance in reality.
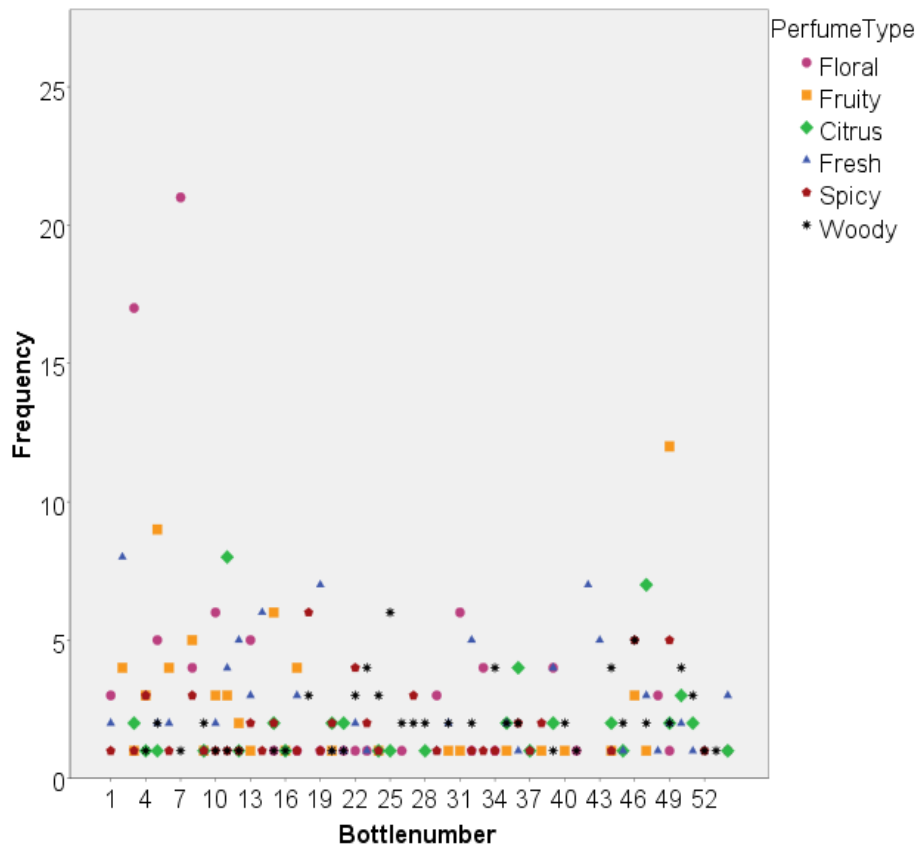


Figure4. Consumer's perception towards fragrance on visualizing forms colours
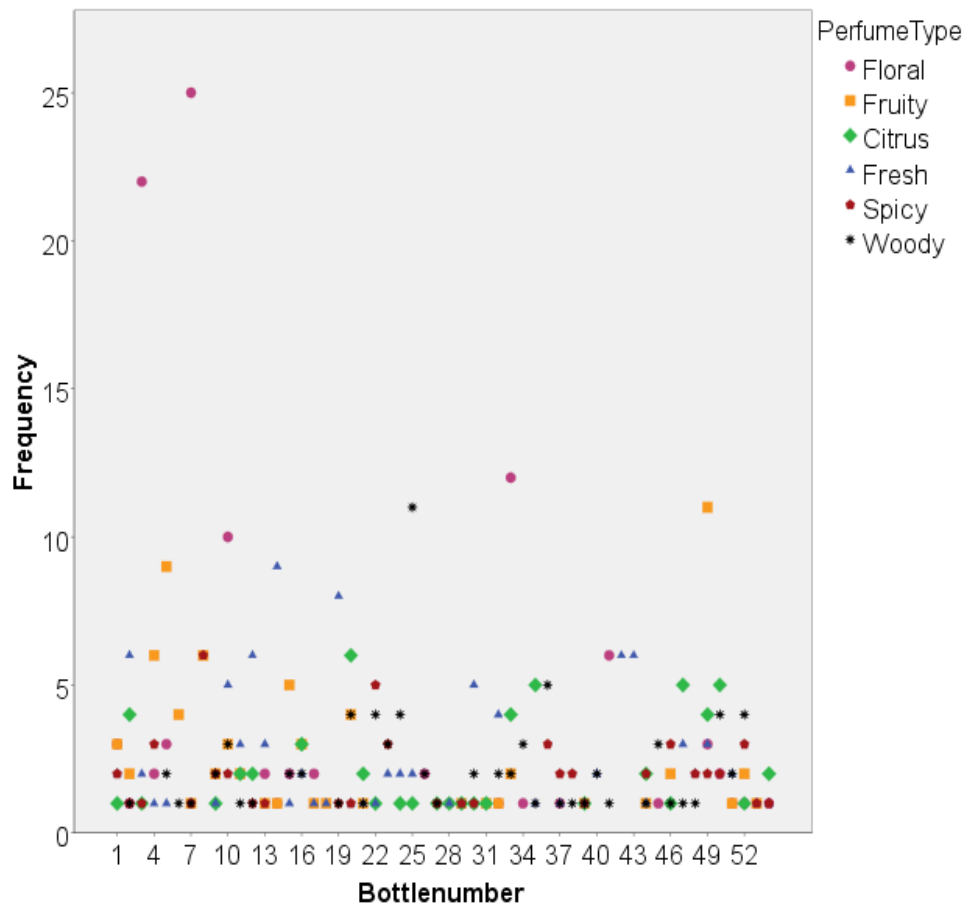
Figure5. Consumer's perception towards fragrance on visualizing forms colours

Table5. Categorization of perfume bottles as per the fragrance family and the candidates' perception

| S. No. | Nature of perfume fragrance | Categorization of perfume bottle | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | Actual | | Candidate's perception | | | |
| | | Bottle Nos. | Frequency | Matched | Frequency | Unmatched | Frequency |
| 1 | Floral | 3, 7, 10, 11, 12, 14, 18, 26, 29, 31, 33, 35, 45, 46, 48, 54 | 16 | 3, 7, 10, 31, 33 | 5 | 5, 11, 12, 13, 14, 18, 26, 29, 35, 37, 45, 46, 48, 54 | 14 |
| 2 | Fruity | 5, 6, 8, 13, 15, 37, 39, 44, 47, 49 | 10 | 5,8,15,49 | 4 | 6, 8, 13, 17, 37, 39, 45, 44, 47 | 9 |
| 3 | Citrus | 24, 42 | 2 | Nil | - | 11, 24, 42, 47 | 4 |

| 4 | Fresh | 2, 17, 30, 32, 41 | 5 | 2,32 | 2 | 14, 17, 19, 30, 41, 42, 43 | 7 |
|---|-------|-------------------|---|------|---|----------------------------|---|
| 5 | Woody | 1, 4, 9, 19, 20, 21, 22, 25, 28, 34, 38, 43, 50, 52, 53 | 15 | 25,34,50, 52 | 4 | 1, 4, 9, 19, 20, 21, 22, 23, 28, 38, 43, 46, 53 | 13 |
| 6 | Spicy | 16, 27, 36, 40, 51 | 5 | Nil | - | 16, 18, 27, 36, 40, 47, 49, 51 | 8 |

### 2.2.2 Consumers emotions towards packaging

Products that summon positive feelings are purchased more frequently, used regularly, and are pleasurable to use. It is therefore undeniably beneficial to design products that inspire positive feelings – items that make users feel good to use. Clearly different emotions are triggered with different eliciting visual attributes in a way the product is packaged. Consumers' behavioural manifestations are different with the way the form is designed and the colours are used in perfume packaging. These behavioural manifestations tend to be gender and personality biased [22, 23]. The general positive emotional typologies associated with the shapes in perfume packaging can be classy, elegance, sophistication, feminity, manly, sensuous, iconic etc. On the other hand, colours may evoke emotions like refreshing, relaxing, earthly, sensuous, strong, soft, cool, masculinity, feminity, adventurous, natural, sophisticated, etc. [6, 24]. Consumers connect emotions to the physical appearance depending on their own personality traits and their frame of mind while purchasing perfumes. These indirectly affect the purchasing pattern. To extract the consumers' psychological experience in context to shapes and colors, a questionnaire pattern with a pre-defined set of emotion typologies was presented to selected candidates (Appendix A). The selected participants were asked to state their emotions in connection with the selected 54 perfume bottles. Figures 6 and 7 show the candidates responses towards shape and color related emotions respectively. From the analysis, the discussion leads to the conclusion that, the emotions linked with any design feature is a key method to understand consumer's psychology towards the perfume packaging. Thus packaging must establish a clear visual relationship and invoke positive emotions in customer's frame of mind.
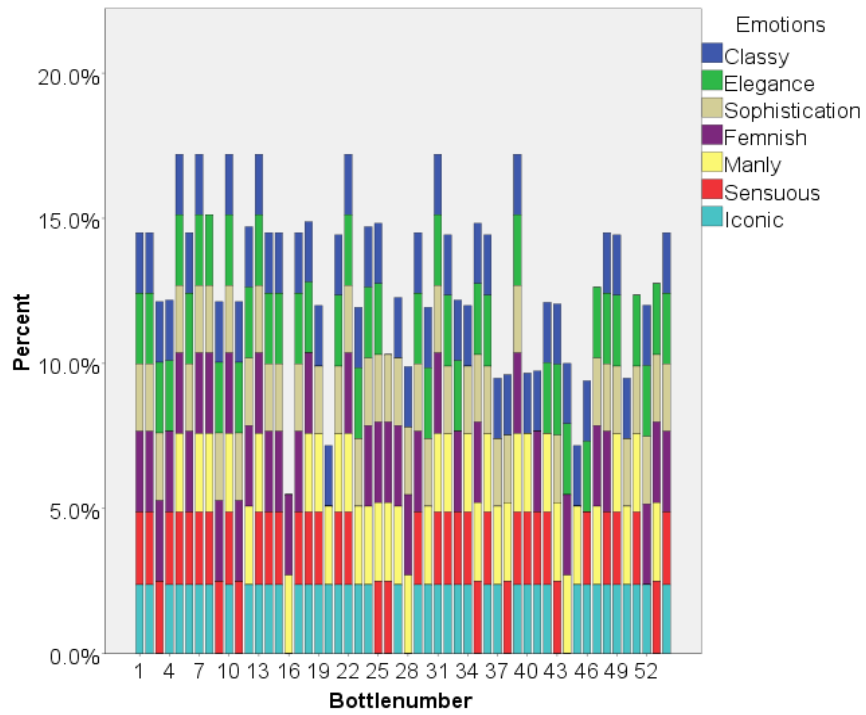
Figure6.   Candidates' responses towards shape related emotions
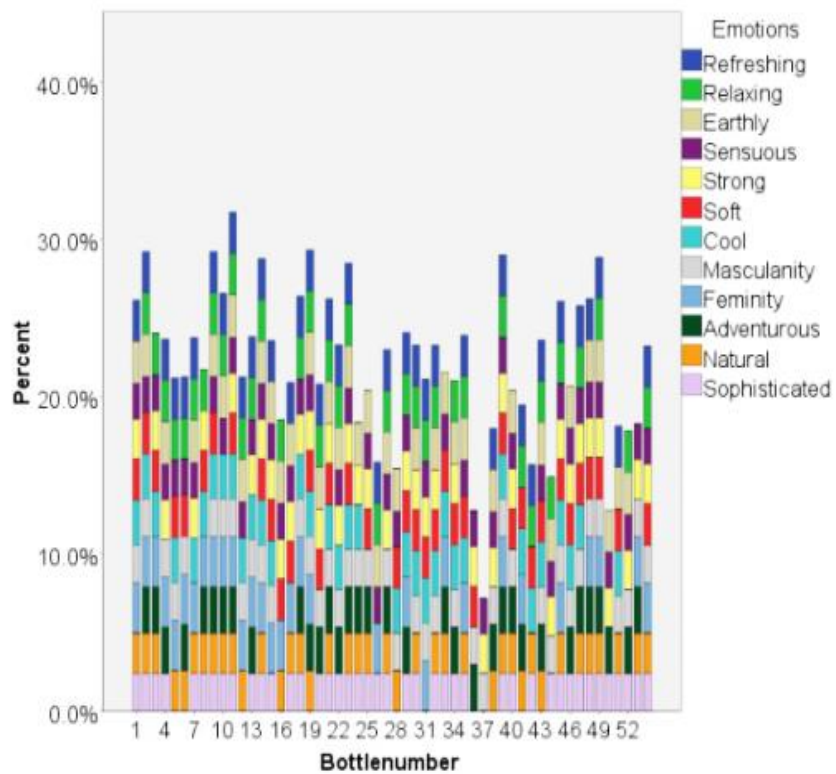


Figure7.  Candidate's responses towards colour related emotions

# 3. Results and Discussions

The chapter deals with the results obtained from the study conducted. A design framework is proposed here which gives a clear indication of age, gender preferences and olfactory nature of perfume. The conceptual model developed here may serve as preliminary guidelines to the package designers in conveying the age and gender orientated inclination, olfactory nature of aroma, seasonal choices and behavioral/emotional responses through visual cues. For validating the proposed design framework, the concepts have been implemented on a few disharmonious package designs among the selected 54 set of perfume bottles placed in the questionnaire and their concept sketches has been generated.

## 3.1 Design Framework

As human perception is dominated by vision, product appearance is usually an abbreviation for visual style, thus making aesthetic features the most important factor towards the branding of perfume. As per the study conducted, aesthetics should be able to communicate the nature of perfume along with the gender and age preferences through smart and creative visual cues. So, the presented design framework places the aesthetic features with higher priority which gives a clear indication of age, gender preferences and olfactory nature of perfume. The basic attributes (as shown in Figure 8) represented in the design framework for perfume packaging are as follows:

➢ Age preferences: Psychological inclination towards hedonic features differs with age. The framework tries to understand the variations of the preferences in the age group of 18-35 years through the survey conducted.

➢ Gender preferences: Male and female preferences in perfume packaging are distinctively different. To eliminate the disharmony it is necessary that that packaging should reflect gender oriented choices.

➢ Behavioural responses: Behavioural manifestations reflect the consumers' psychology towards perfume packaging. Packaging should clearly evoke positive emotions in the customer's mind. The study analyses how consumers respond to a particular packaging style and what are the specific features that evoke such emotions.

➢ Choice of fragrances: Fragrance choices solely depend upon the personality and likings towards a particular aroma. These choices need to be reflected through the packaging style and thus should establish complete visual relationship with the nature of perfume.

➢ Seasonal requirements: Choice of fragrance changes according to the change of seasons. The requirements vary with the environmental conditions and the demographic nature of a place.
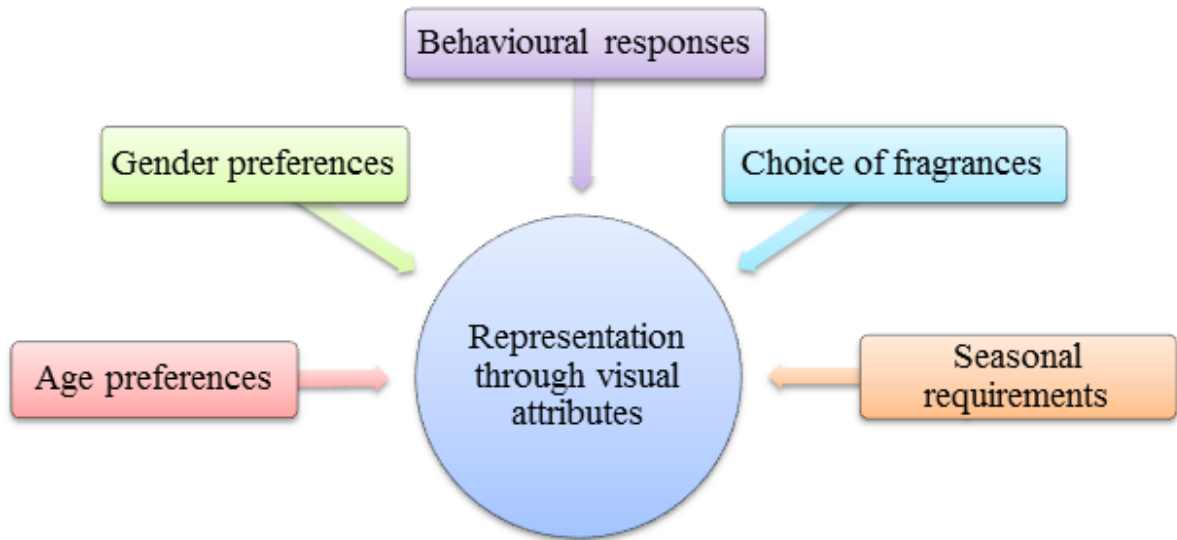
Figure8. Basic attributes for design framework

From the study conducted, there is reasonable evidence that present packaging technique makes substantial amount of disharmony in customer's psyche in regards to the fragrance of perfume. To dispose of the ambiguity, a theoretical design framework constituting of all the key qualities has been proposed in Figure 9. The conceptual model may serve as preliminary guidelines to the package designers in conveying the age and gender orientated inclination, olfactory nature of aroma, seasonal choices and behavioral/emotional responses through visual cues. The proposed model for perfume packaging design as discussed may help customers in settling on their choices appropriately and create harmony among purchasers.

**Age Preferences**

♦ **18-24 years**
o Abstract, trendy, artistic form designs
o Playful or bright colour tones
♦ **25-35 years**
o Regular geometric forms
o Balanced colour tones(not too bright and not too dull)

**Positive emotions invoked from shapes**

o Classy
o Elegance
o Sophistication
o Feminity
o Manly
o Sensuous
o Iconic

**Fragrance Choices**

♦ **Floral**
o Preferred by female customers
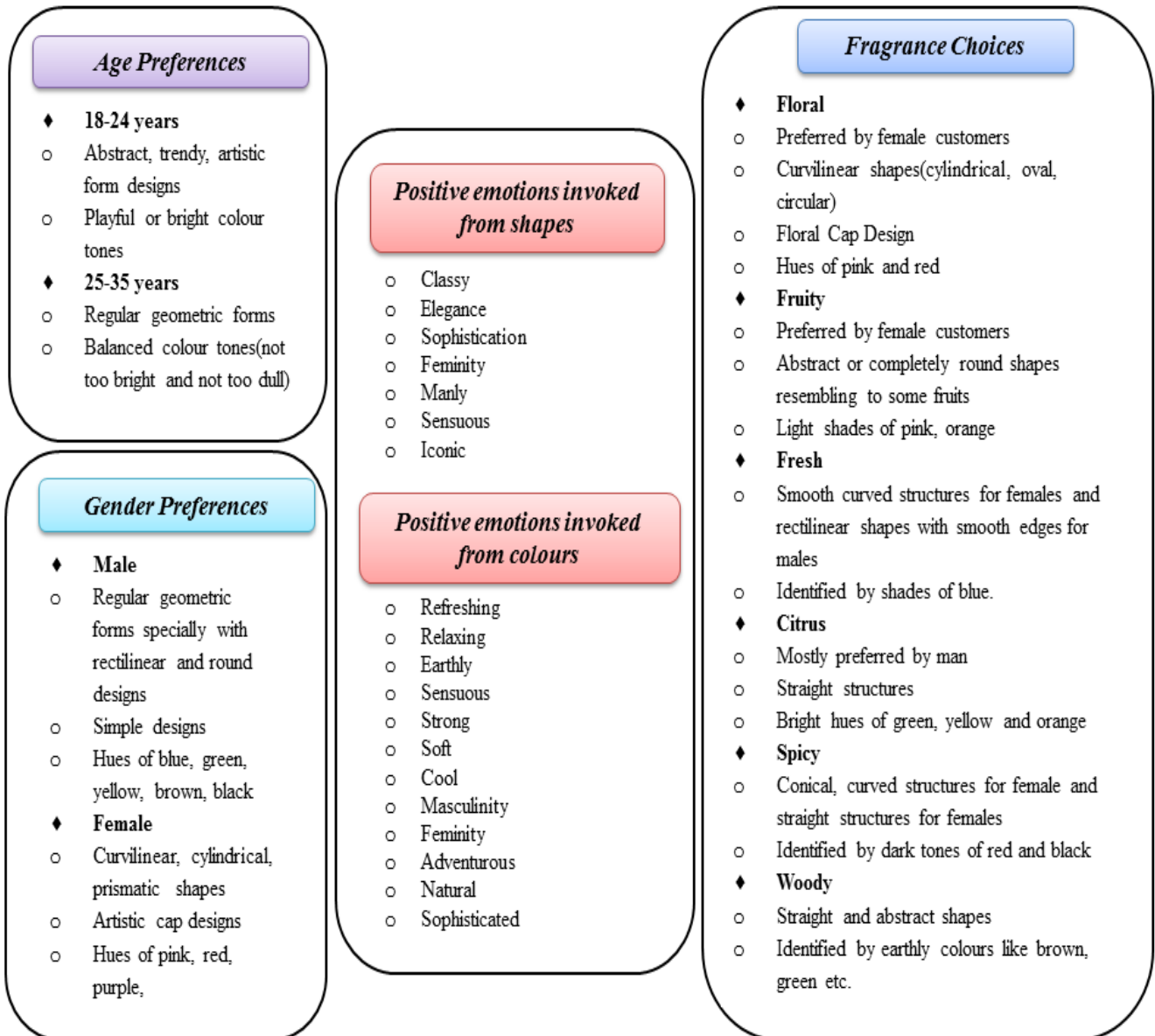o Curvilinear shapes(cylindrical, oval, circular)
o Floral Cap Design
o Hues of pink and red
♦ **Fruity**
o Preferred by female customers
o Abstract or completely round shapes resembling to some fruits
o Light shades of pink, orange
♦ **Fresh**
o Smooth curved structures for females and rectilinear shapes with smooth edges for males
o Identified by shades of blue.
♦ **Citrus**
o Mostly preferred by man
o Straight structures
o Bright hues of green, yellow and orange
♦ **Spicy**
o Conical, curved structures for female and straight structures for females
o Identified by dark tones of red and black
♦ **Woody**
o Straight and abstract shapes
o Identified by earthly colours like brown, green etc.

**Gender Preferences**

♦ **Male**
o Regular geometric forms specially with rectilinear and round designs
o Simple designs
o Hues of blue, green, yellow, brown, black
♦ **Female**
o Curvilinear, cylindrical, prismatic shapes
o Artistic cap designs
o Hues of pink, red, purple,

**Positive emotions invoked from colours**

o Refreshing
o Relaxing
o Earthly
o Sensuous
o Strong
o Soft
o Cool
o Masculinity
o Feminity
o Adventurous
o Natural
o Sophisticated

Figure9.   Design framework for the package designers

## 3.2 Implementation of design framework

To show the effectiveness of the proposed design framework, the concepts have been implemented on a few disharmonious package designs among the selected 54 set of perfume bottles placed in the questionnaire (Appendix A). The concept sketches combining the concepts of design framework have been ideated. Concept sketches of perfume bottles based on age preferences i.e. for 18-25 years and 25-35 for Floral, Fruity and Fresh category perfumes has been generated.
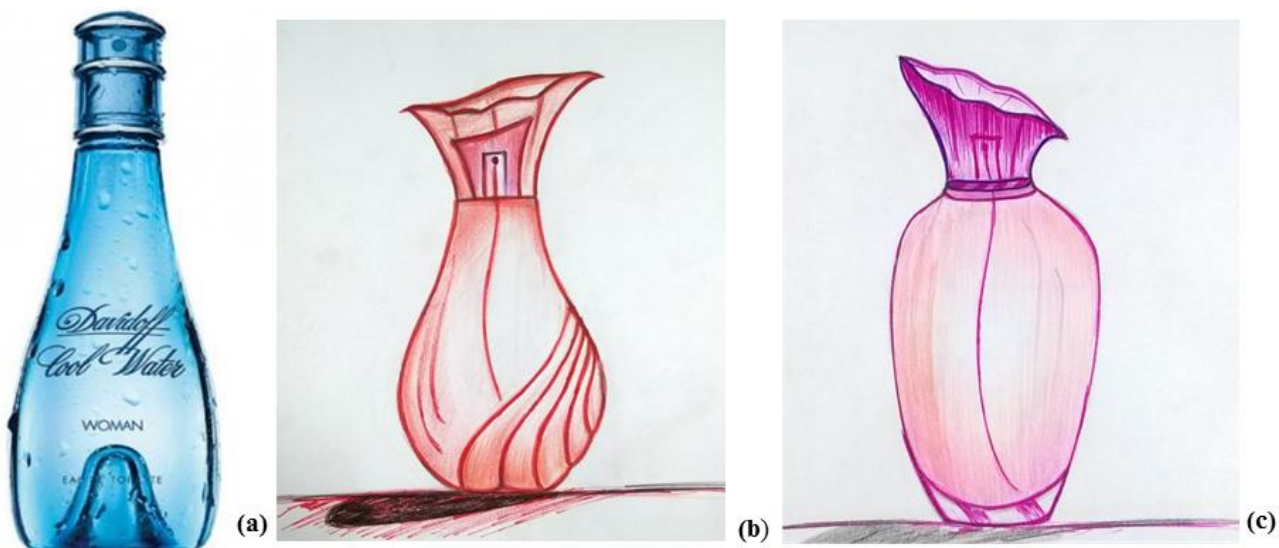
Figure10. Concept ideation of floral category perfume



Figure11. Modification to the (a) bottle no.12 floral perfume through concept sketches for
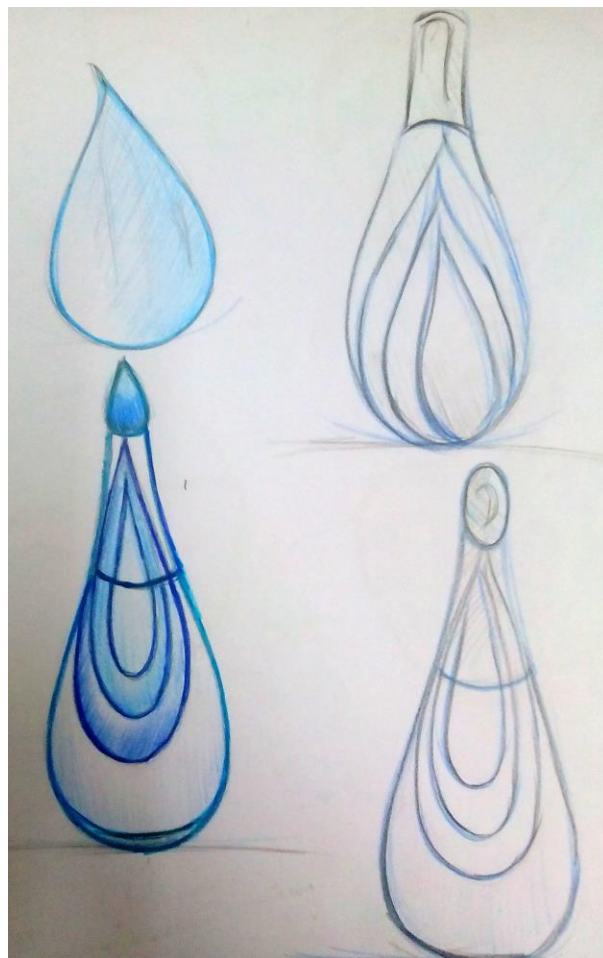(b) 18-25 years (c) 25-35 years

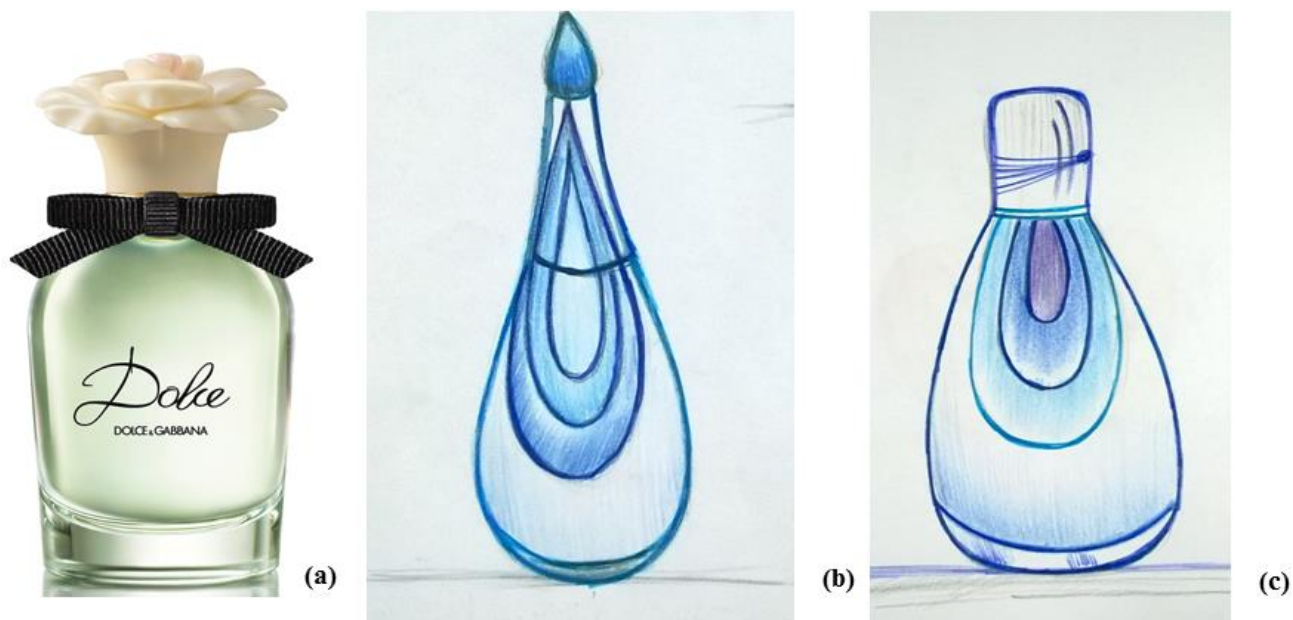Figure12. Concept ideation of fresh category perfume



Figure13. Modification to the (a) bottle no.41fresh perfume through concept sketches for (b) 18-25 years (c) 25-35 years
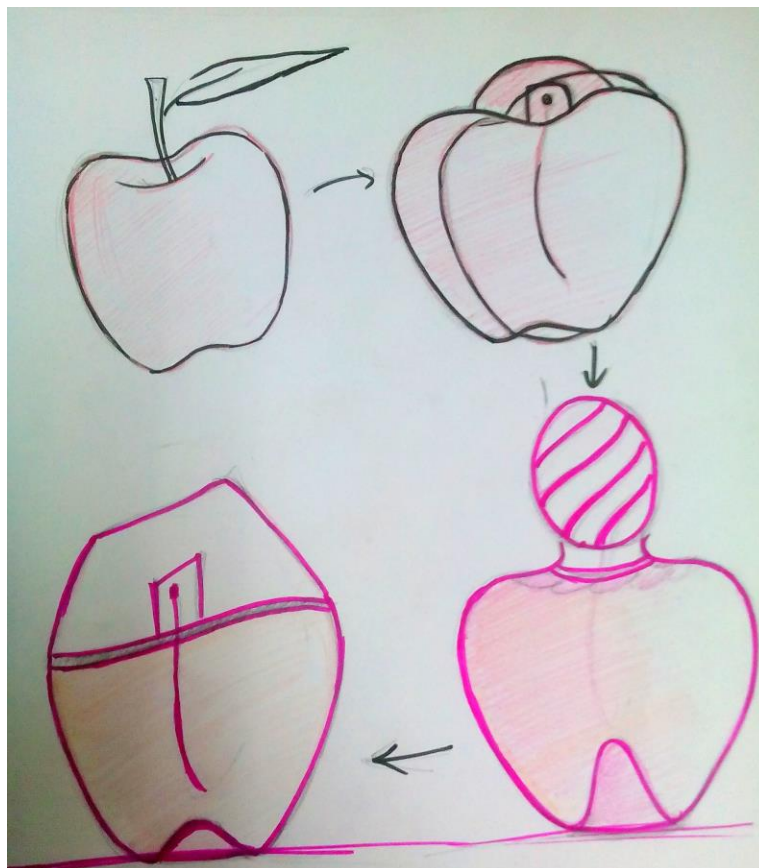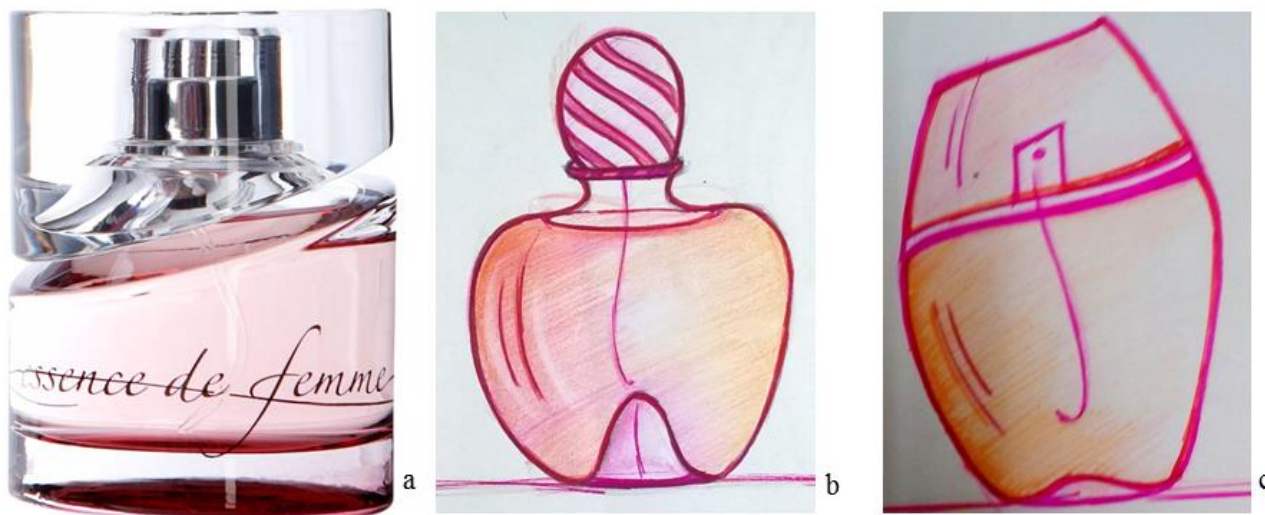
Figure14. Concept ideation of fruity category perfume



Figure15. Modification to the (a) bottle no.39 fruity perfume through concept sketches for (b) 18-25 years (c) 25-35 years

# 4. Conclusion

In context of perfume packaging, product's appearances determine the way how a customer perceives about a particular perfume. If a consumer properly connects all the factors with the fragrance, then the consumer is surely going to purchase the particular perfume and maintain loyalty towards the brand. Positive online reviews and information exchange through social sites develops only, when there is a balanced interplay between quality and packaging aesthetics. Compromising with any of these two factors may lead to customer's dissatisfaction and thus negatively affect the marketing of the perfume.

The present literature surveys the consumers psychology towards the present packaging methodology adopted in perfume branding industries. The study evidently reflects significant disharmony is created in customer's mind when exposed to large variety of perfumes. The works presents the branding industries with a design framework that constitutes all the key qualities that a consumer associates to during the selection process of perfumes. The conceptual model if implemented in perfume packaging may provide consumers a hassle free experience while selecting perfumes and also enhance the consumer's satisfaction during the usage and post-usage period.

# 5. Scope of Future Work

**T**he present work limits itself to fragrance representation along with gender and age based preferences in perfume packaging through visual attributes. The work can be extended to representing seasonal requirements through visual cues. Thus one needs to know what all attributes can be implemented so as to reflect the seasonal requirements along with personal tastes of fragrance and age and gender oriented preferences. Further the packaging ideology in perfumes can be implemented in other packaging industries like juice and other food stuffs packaging.

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# APPENDIX A

**1. Name**

☐

**2. Age**

☐

**3. Gender**

☐

**4. Which type of perfumer do you prefer?** (Multiple choice allowed)
- ☐ Floral
- ☐ Fruity
- ☐ Citrus
- ☐ Fresh
- ☐ Woody
- ☐ Spicy

**5. When do you wear your perfume?** (Multiple choice allowed)
- ☐ Day
- ☐ Night
- ☐ Both
- ☐ Special Occasions

**6. Does seasonal changes affect your choice of perfume?**
- ☐ Yes
- ☐ No
- ☐ Not sure

**7. Does the graphics or styling of perfume bottle affect your choice while purchasing perfume?**
- ☐ Yes
- ☐ No
- ☐ Not sure

**8. Rank the perfume bottles given in Fig. A based on styling (shape, colour and graphics) which attracts you the most.** (Tick the option against the Bottle no.)

| Bottle no.'s | Rank 1 | Rank 2 | Rank 3 |
|:---:|:---:|:---:|:---:|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |
| 26 | | | |
| 27 | | | |
| 28 | | | |

| | |
|---|---|
| **29** | |
| **30** | |
| **31** | |
| **32** | |
| **33** | |
| **34** | |
| **35** | |
| **36** | |
| **37** | |
| **38** | |
| **39** | |
| **40** | |
| **41** | |
| **42** | |
| **43** | |
| **44** | |
| **45** | |
| **46** | |
| **47** | |
| **48** | |
| **49** | |
| **50** | |
| **51** | |
| **52** | |
| **53** | |
| **54** | |

Appendix

Appendix



Fig. A

**9. Choose perfume bottles from Fig. A whose SHAPE you think resemble with the type of perfume you preferred in question no.4.**

(click on the option and write the figure numbers in the text box whose shape you think resemble with the type of perfume you preferred in Q.No:4 and write as NA for rest of the options)

☐ Floral

☐ Fruity

☐ Citrus

☐ Fresh

☐ Spicy

☐ Woody

[   ]

## 10. Choose perfume bottles from Fig. A whose SHAPE you think connects with the emotions given in the options.

(click on the option and write the figure numbers in the text box whose shape you preferred in the previous question connects with the emotions and write as NA if no shape matches with the emotions given)

☐ Classy

[   ]

☐ Elegance

[   ]

☐ Sophistication

[   ]

☐ Feminish

[   ]

☐ Manly

[   ]

☐ Sensuous

[   ]

☐ Iconic

[   ]

## 11. Choose perfume bottles from Fig. A whose COLOUR you think resemble with the type of perfume you preferred in question no.4.

(click on the option and write the figure numbers in the text box whose colour you think resemble with the type of perfume you preferred in Q.No:4 and write as NA for rest of the options)

☐ Floral

[   ]

☐   Fruity

☐   Citrus

☐   Fresh

☐   Woody

☐   Spicy

**12. Choose perfume bottles from Fig. A whose COLOUR you think connects with the emotions given in the options.**

(click on the option and write the figure numbers in the text box whose colour you preferred in the previous question connects with the emotions and write as NA if no colour matches with the emotions given)

☐   Refreshing

☐   Relaxing

☐   Earthly

☐   Sensuous

☐   Strong

☐   Soft

☐ Cool

| |
|---|

☐ Masculinity

| |
|---|

☐ Adventurous

| |
|---|

☐ Natural

| |
|---|

☐ Sophisticated

| |
|---|

**13. Rank the perfume bottles given in Fig. A whose GRAPHICS attracts you the most.**
(Graphics include typography, engravings etc)

| Bottle no.'s | Rank 1 | Rank 2 | Rank 3 |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |

| 15 |
|----|
| 16 |
| 17 |
| 18 |
| 19 |
| 20 |
| 21 |
| 22 |
| 23 |
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| 25 |
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| 29 |
| 30 |
| 31 |
| 32 |
| 33 |
| 34 |
| 35 |
| 36 |
| 37 |
| 38 |
| 39 |
| 40 |
| 41 |
| 42 |
| 43 |
| 44 |
| 45 |

| | |
|---|---|
| **46** | |
| **47** | |
| **48** | |
| **49** | |
| **50** | |
| **51** | |
| **52** | |
| **53** | |
| **54** | |

**14. What size of perfume bottle you feel comfortable to use?**

| Shapes | Small | Medium | Big |
|---|---|---|---|
| **Cylindrical** | | | |
| **Spherical** | | | |
| **Conical** | | | |
| **Cuboidal** | | | |
| **Prismatic** | | | |
| **Abstract** | | | |

# APPENDIX B
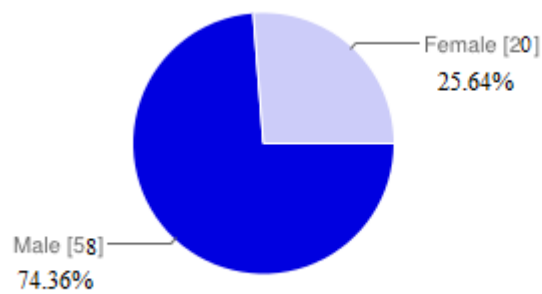


Figure16. Pie diagram representation of responses obtained based on gender categorization

| | | |
|---|---|---|
| Floral | 28 | 35% |
| Fruity | 21 | 26.3% |
| Citrus | 16 | 20% |
| Fresh | 49 | 61.3% |
| Woody/musk | 17 | 21.3% |
| Spicy | 8 | 10% |
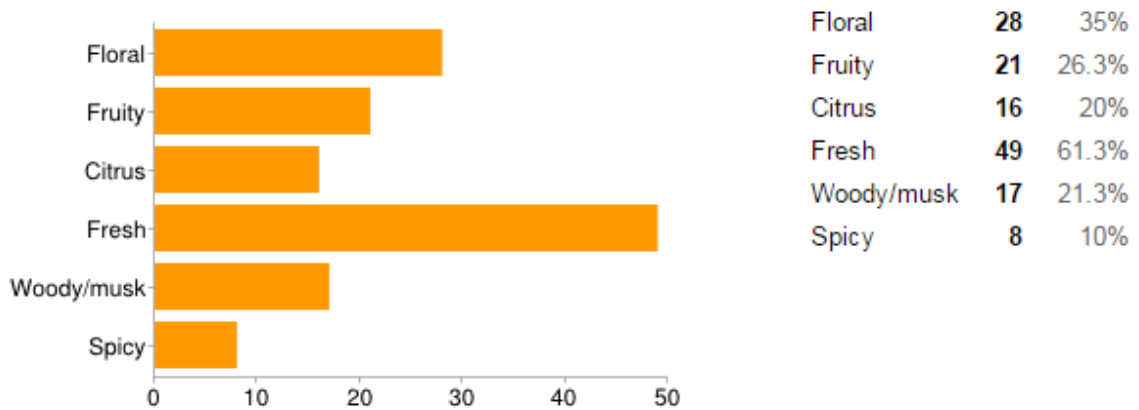
Figure17. Bar diagram representation of responses obtained for types of perfume preferred by consumers



| | | |
|---|---|---|
| Day | 30 | 37.5% |
| Night | 3 | 3.8% |
| Both | 28 | 35% |
| Special occasions | 55 | 68.8% |
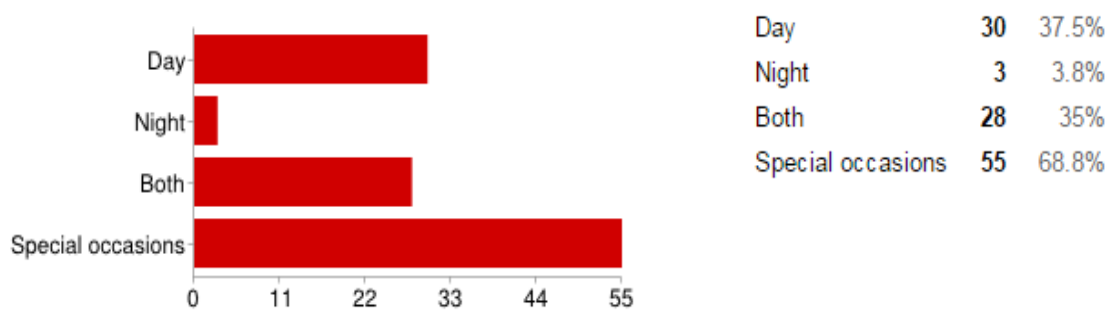
Figure18. Bar diagram representation of responses obtained for the time of applying perfume
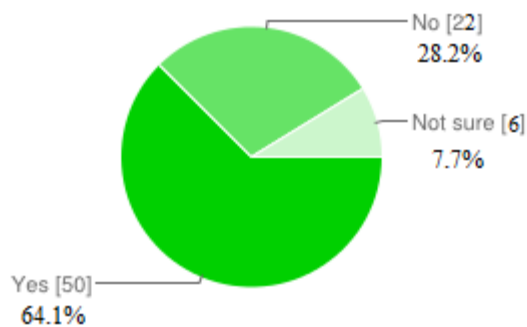


Figure19. Pie diagram representation of responses obtained for graphics or styling of perfume bottle affecting the choice of perfume
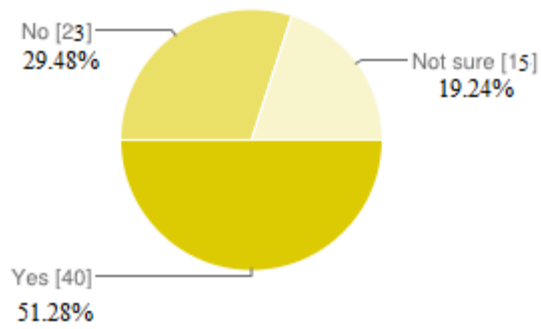
Figure20. Pie diagram representation of responses obtained for seasonal changes affecting the choice of perfume
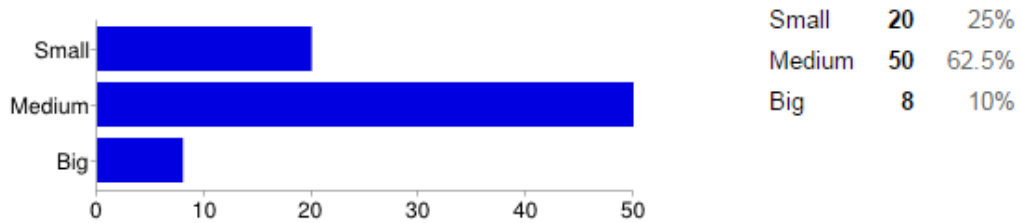


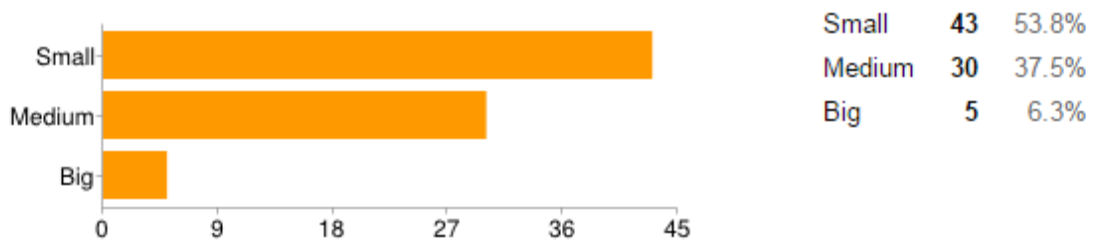Figure21. Bar diagram representation of responses obtained for Cylindrical shape



Figure22. Bar diagram representation of responses obtained for Spherical shape
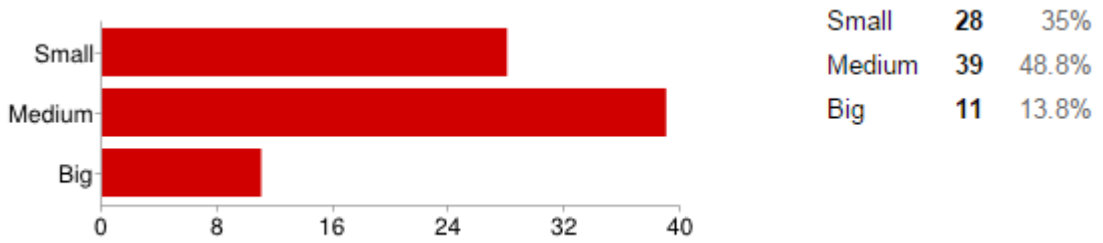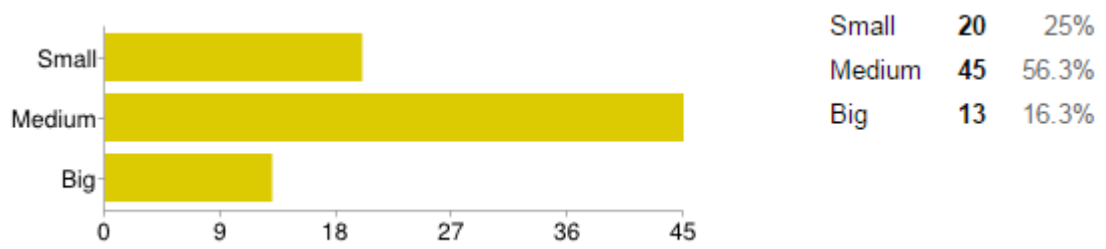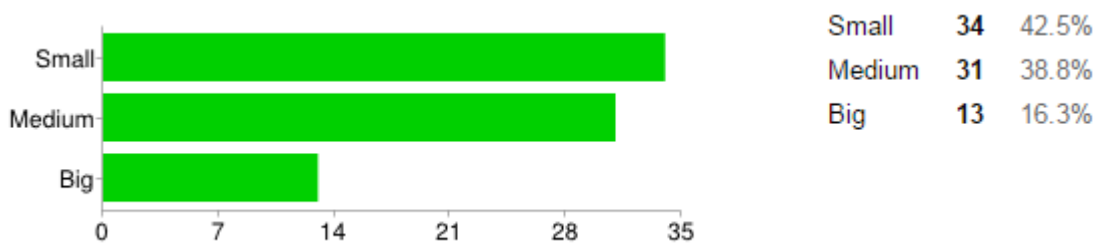
| | | |
|---|---|---|
| Small | 28 | 35% |
| Medium | 39 | 48.8% |
| Big | 11 | 13.8% |

Figure23. Bar diagram representation of responses obtained for Cuboidal shape



| | | |
|---|---|---|
| Small | 20 | 25% |
| Medium | 45 | 56.3% |
| Big | 13 | 16.3% |

Figure24. Bar diagram representation of responses obtained for Conical shape



| | | |
|---|---|---|
| Small | 34 | 42.5% |
| Medium | 31 | 38.8% |
| Big | 13 | 16.3% |

Figure25. Bar diagram representation of responses obtained for Prismatic shape



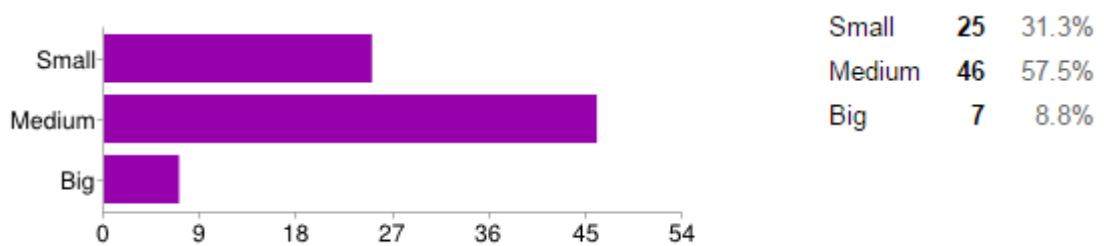| | | |
|---|---|---|
| Small | 25 | 31.3% |
| Medium | 46 | 57.5% |
| Big | 7 | 8.8% |

Figure26. Bar diagram representation of responses obtained for Abstract shape