

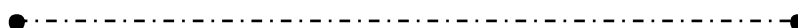
## **A Study On The Factors Affecting The Buying Of Green Cosmetic Products**

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### **Abstract**

*Cosmetic products are those products used to alter the conditions of an existing look of a person or to make fragrance or mild changes for the body of folks. The cosmetic products are generally prepared by the chemical compounds in the laboratories. The white creams, powders etc... are the results of certain chemical experiments. However there are cosmetic products which are not from chemical compounds but from natural. Such cosmetic products are referred as green cosmetic products. The fundamental aim of developing green cosmetic products is they are eco-friendly and non- hazardous to the environment as well as to peoples. The importance of preserving our eco-system is a vital part in the hands of every person. The condition of the environment is worsening day by day. So it is the duty of everyone to conserve the nature without many hazards in their on possible ways. It is the problem of the survival of the peoples itself. The concept of 'Green Cosmetic Products' is an emerging step to contribute towards environmental protection. Though the concept was very familiar in the ancient times, the busy life of peoples makes them to choose chemical products for rapid results. However by understanding the magnitude and quality of green cosmetics, the customers began to come back to the green product segment. The demand of green cosmetics has grown up in an alarming way. There are numerous factors influencing the consumer to buy the green cosmetic products. This paper is an investigation to such factors which are affecting the buying behaviour of consumers towards green cosmetic products.*

### **Keywords:**

*Cosmetic products – Green Cosmetic products – Buying behaviour – Teenagers – Environmental Protection.*

**Introduction**

‘Health is Wealth’ is a very renowned proverb from very ancient time itself. It says the importance of having a good health rather than any other wealth in the life span of human being. The busy life of peoples has caused to use many chemical products rather than natural products for rapid result. However such swift result in the appearance will of course adversely affect the health of the peoples. The concept of natural or green or organic is very old term and the precedes were well connected with the usage of such products. But the new generation is deliberately avoiding such products due to the difficulty in usage of the products.

The green product of organic product means the products which are directly extracting from the nature. The products usually do not have any kind of side effects to the human body because of its virgin quality. No chemical ingredients are added to those green products. The green cosmetics, organic food items, natural apparels, wooden house holds etc... are best examples of natural products. The ultimate benefit of using the green products in any ways is that such products directly or indirectly will not harm the human body. The eco friendly behaviour of green products is the other major benefit of using the those products.

The attitude of the peoples is changing tremendously since few years. Now the peoples are running behind the green products by knowing the importance and benefits of green products. The upward shift in the demand of green cosmetic products is an example for this change. The growth of green cosmetic products is noteworthy. The cosmetic industries are growing in India in an average rate of 60%. This is really a positive sign to the industry. The self recognition and need of being good looking in the society are the basic drivers of the growth of the industry. Though the cosmetic industry includes both chemical and organic products, major part of the industry is in the hands of chemical products. However the growth of the organic products is in its peak since last few years. A table showing the overall revenue from the industry is given below to understand the importance of cosmetics industry in India.

**Table No: 01****Statistics on Revenue from Cosmetic industry in India**

| <b>Year</b> | <b>Revenue from Cosmetic industry<br/>(in US\$ Million)</b> | <b>Trend %</b> |
|-------------|-------------------------------------------------------------|----------------|
| 2010        | 933.5                                                       | 100            |
| 2011        | 1104                                                        | 118.2646       |
| 2012        | 1195.8                                                      | 128.0986       |
| 2013        | 1359.4                                                      | 145.624        |

|      |        |          |
|------|--------|----------|
| 2014 | 1556   | 166.6845 |
| 2015 | 1848   | 197.9646 |
| 2016 | 2108.8 | 225.9025 |
| 2017 | 2351.8 | 251.9336 |
| 2018 | 2597.4 | 278.2432 |
| 2019 | 2841.4 | 304.3814 |
| 2020 | 3080   | 329.9411 |
| 2021 | 3308.3 | 354.3974 |

(Source: [www.statista.com](http://www.statista.com))

The table shows the steady growth of cosmetic market in India. This is the prosperity of the industry. The trend projection shows that there will be again continues growth for the industry in the future years also. The trend started from 2010 with 100% reached at 354.39% in 2021. This means a growth of 254.39% in just 11 years. The ever increasing needs and wants of human being for the cosmetic products is the basic reason for such a massive growth of the industry. The contribution of green cosmetic products towards this figures are impressive. The experts say that the green cosmetic products have helped a lot for accelerating the growth of the industry.

The most modern technologies have improved the cosmetic industry also. The conventional products producing by way of conventional methods are out dated in this ever changing business environment. Peoples need high quality products with reasonable price and easiness of its usage. Peoples are also aware about the impact of the production of such products. The day to day worsening condition of the environment has also influenced the mind the peoples.

### **The basic features of green cosmetic products**

The basic features of green cosmetic products are listed below. These features will say about the importance of adopting the green cosmetics for the human being as well as for the environment as a whole.

- ❖ **Environmental Friendly:** The green cosmetic products are eco-friendly. This means the production, usage of wastage disposal mechanism of these products are not making any sort of hazards to the environment. The green cosmetic products are directly extracted from the nature. The raw materials for the green products are taken from the nature like coconut trees, medicinal plants etc... which will not affect the environment in any sort. The waste of the production is also natural in nature and it

will automatically degrade in the nature itself. The production mechanism of these green products will not cause any environmental pollution as the inputs and outcome of the production is purely organic in nature. Hence the green cosmetics are environmental friendly. Peoples are well aware about the environmental protection now a day as it is the question of their survival itself. Therefore the eco-friendly feature of green cosmetics will of course drive the customers to choose the products.

- ❖ Bio- degradable: The scrap produced out of the production of green cosmetics is bio-degradable in nature. As already explained, green cosmetics are those products which do not contain any sort of chemical compounds. All the ingredients are natural. Hence the wastage of the production will also be natural, which is degradable.
- ❖ Non – toxic: The Green cosmetic products are non – toxic in nature. As the raw materials are purely collected from the natural resources. The products do not make any adverse affect to the human body. The toxic elements included in the chemical products caused too many diseases to the human body such as skin allergies, rashes, agnail etc... However these kinds of problems are not seen in the green cosmetic products as they do not contain any sort of toxic.
- ❖ Recycling: The recycling mechanism of green cosmetic products is remarkable. Many of the by products of the green cosmetic production are used for other ancillary production. The wastage of certain products is also used to produce other kind of products. The packaging materials are also recyclable in nature.
- ❖ High Quality: There is a proverb among the peoples in India that the products from the nature are created by God as well as the products from chemical experiment are from human being. The quality of products from the nature will be of course better than the chemical products. The raw materials collected for the green cosmetic products from the nature. There is no adulteration in it. So the quality of the product will be high in case of natural products rather than chemical compounds.
- ❖ No depletion of resources: The materials used for the production of green cosmetics are renewable in nature. 90% of the materials are collected from the plants. And those plants are cent percent renewable only. So there is no question of depletion required for the production of green cosmetics.

### **Objectives of the study**

- To identify the factors affecting the buying behaviour of customers towards green cosmetics in India.
- To study the relationship between various demographic factors and buying behaviour of customers.

### **Research Methodology**

This study used both primary as well as secondary data. The primary data were used to identify the opinion about the customers. 100 samples were collected from Kerala state to

perform primary data analysis. However secondary data were extensively used to establish the conceptual frame work of the study.

A detailed field study was conducted in the selected enterprises which are registered under green cosmetics Enterprise. Thorough study was conducted in some selective outlets also to identify the trend of green cosmetics sales.

### **Hypothesis**

**H<sub>0</sub> 1** : There is no relationship between marital status of customers and buying habit.

**H<sub>0</sub> 2** : There is a relationship between monthly income of customers and the buying habit.

### **Factors Affecting the Buying behaviour of customers towards Green Cosmetics in India**

Regarding the factors driven for the purchase of green products, many authors have different opinions. However for this study, researcher tried to include all those factors and classified them according to the homogeneity. This classification is purely done for the purpose of analysing all the factors which are accelerating the purchase of green cosmetics.

So, according to the researcher, total factors are divided into four heads. They are personal factors, internal factors external factors and marketing factors. The personal factors are coming under the view of the customers personal attributes such as age, education, and gender and income level. The internal factors are the factors which are purely coming under the view of customers itself, but not the personal factors. The factors such as knowledge of the product, altruism and attitude are coming under internal factors.

The external factors are those factors which are not in the control of the customers. The factors such as environmental conditions and health conditions are coming under the external factors. The marketing factors include the marketing attributes such as brand, quality, packaging and labelling, price and promotion.

Each of the factors is discussed below:-

1. **Personal factors:** Personal factors are the major factors influencing the buying behaviour of customers. The cosmetic products are very much relied upon the personal factors. The cosmetics industry is designed in such as way to produce different products for the different types of peoples. The attributes are discussed below:-

❖ **Age:** Age is an important attribute as far as cosmetics are concern. The concept of green products is well aware according to the age. The teenagers mostly prefer green products rather than chemical products due to knowledge about the product from the childhood itself.

- ❖ **Education:** Education is an important personal attribute which decided the use of green cosmetics. Because an educated person will always thoroughly check and compare all the available products before purchase. Hence an educated person will always choose green products because of its medical benefits and lack of side effects.
  - ❖ **Income level:** The income level is a crucial personal factor driving the purchase. This is directly linked with the quality of products with reasonable price. In India most of the peoples in all classes of income are choosing cosmetic products. This is a positive sign to the industry.
2. **Internal Factors:** The internal factors are also considered to be very important factors. This is because these factors are coming under the second step of buying procedure. The attributes are discussed below:-
- ❖ **Knowledge of the product:** This is the real driving force from the customer. If a customer knows about the product, then only he will be able to buy the product. The detailed knowledge about the product is essential to compare the product with others and to make a choice. As India is enriched with the natural medical resources, peoples are well aware about the green products from childhood itself. This factor is driving the sales of green cosmetics.
  - ❖ **Altruism:** Altruism means selflessness. This is an important factor driving the buying behaviour of customers towards green cosmetics.
  - ❖ **Attitude:** Attitude of the customer towards green cosmetics products is most important. A positive attitude only will lead to buy the green products. In India the customers are having a positive attitude towards the green cosmetic products.
3. **External Factors:** External factors are those factors which are not in the hands of customers.
- ❖ **Environmental Issues:** Environmental issues refer to the problems coming out of the production and usage of green products. These are actually not in the hands of the customers; however the customers now a day always bothered about the environmental issues. Peoples are supporting the companies who are engaged in doing green business.
  - ❖ **Health Benefits:** The health benefits arising out of green cosmetics are expected by the customers. They are actually using these products to alter their appearance. However the health benefits are not in the hands of the customers. But the customers are well aware about the medical benefits of the green cosmetics and they are impressed in the result of those products. The drawbacks of chemical products have improved the green cosmetics markets in India.

4. **Marketing Factors:** Marketing factors are purely in the hands of the companies engaged in doing green cosmetic product business. The better performance from the company side will improve the green cosmetic industry in India.

- ❖ **Brand:** Brand is a vital factor in sales procedure. Most of the customers are choosing their products by looking the brands. So, better brand will always score better sales than others. Brand image is the most powerful factor driving towards the purchase of a green cosmetic product in India.
- ❖ **Quality:** Quality is the crux of buying behaviour. The green cosmetics are meeting the expected quality of customers in India and that the reason why the industry is flourishing like anything.
- ❖ **Packaging & Labelling:** Though packaging and labelling has less importance as well as green cosmetics are concern, a standard method is using in India. This will attract the customers, as the beauty of the pack of beauty products will always have an impact on customers.
- ❖ **Price:** Price is a crucial factor to determine the buying behaviour of green products. Reasonable price of the green cosmetics always attract the customers to buy the products. The price of the green products is comparatively reasonable in India.
- ❖ **Promotion:** The Promotional activities about the green cosmetics are improving day by day. The advertisements through televisions, internet platforms and news paper are driving the sales of the products.

# Hypothesis Testing

Table No: 02

## Demographic Characteristics of Respondents

| Characteristics | Sub- category         | Number     | %          |
|-----------------|-----------------------|------------|------------|
| Gender          | Male                  | 44         | 44         |
|                 | Female                | 56         | 56         |
|                 | <b>Total</b>          | <b>100</b> | <b>100</b> |
| Age             | Below 18 years        | --         | --         |
|                 | 18-28 years           | 56         | 56         |
|                 | 28-38 years           | 38         | 38         |
|                 | 38-48 years           | 10         | 10         |
|                 | Above 48 years        | --         | --         |
|                 | <b>Total</b>          | <b>100</b> | <b>100</b> |
| Marital status  | Married               | 18         | 18         |
|                 | Unmarried             | 82         | 82         |
|                 | <b>Total</b>          | <b>100</b> | <b>100</b> |
| Education       | Below high school     | --         | --         |
|                 | Intermediate          | 12         | 12         |
|                 | Graduate              | 58         | 58         |
|                 | Post Graduate         | 10         | 10         |
|                 | Others                | 20         | 20         |
|                 | <b>Total</b>          | <b>100</b> | <b>100</b> |
| Occupation      | Student               | 12         | 12         |
|                 | Home maker            | 18         | 18         |
|                 | Govt. Services        | 08         | 08         |
|                 | Business              | 22         | 22         |
|                 | Pvt. Sector employees | 38         | 38         |
|                 | Farmers               | 02         | 02         |
|                 | Others                | --         | --         |
|                 | <b>Total</b>          | <b>100</b> | <b>100</b> |
| Monthly income  | Below 10000           | 08         | 08         |
|                 | 10000-20000           | 42         | 42         |
|                 | 20000-30000           | 18         | 18         |
|                 | 30000-40000           | 15         | 15         |
|                 | 40000 and above       | 17         | 17         |
|                 | <b>Total</b>          | <b>100</b> | <b>100</b> |

In all, hundred respondents were selected on random basis from the age group of Eighteen to fifty for the purpose of the study and analysis. The table shows the categorization done different basis viz. Gender, Age, Marital-status, Education, Occupation, Monthly income etc... Forty four percentage of the respondents were male and Fifty six percentage were female. Fifty six percentage of the respondents belonged to the age group of eighteen to twenty eight years. Thirty eight percentage of respondents belonged to the next class of twenty eight to thirty eight years. Remaining 10 percentages belonged to the thirty eight to forty eight year class. Eighteen

percentages of the respondents were married. The table reveals that fifty eight percentages of the respondents were Graduates and ten percentages were post graduates. Twelve percentages of the respondents completed the intermediate course. Others (Diploma holders and certificate holders) constituted ten percentage. Most of the respondents were working in the private sector and constituted thirty eight percentage followed by those under taking business activities at 22 percentage. Home makers constituted eighteen percentages. Monthly income of forty two percentage respondents varied between ten thousand and twenty thousand.

**Table No: 03****Frequency of buying Green Cosmetic products**

| <b>Frequency</b> | <b>Married</b> | <b>Unmarried</b> | <b>Total</b> |
|------------------|----------------|------------------|--------------|
| Daily            | 01             | 02               | <b>03</b>    |
| Weekly           | 03             | 30               | <b>33</b>    |
| Monthly          | 12             | 49               | <b>61</b>    |
| Yearly           | --             | 01               | <b>01</b>    |
| Festival Season  | 01             | 01               | <b>02</b>    |
| <b>Total</b>     | <b>44</b>      | <b>56</b>        | <b>100</b>   |

Table :03 presents data with respect to the buying habit of consumers of cosmetic products and 61 percentage the respondents were buying it on monthly basis and thirty three percentage of the respondents bought in on weekly basis. Those making daily purchase was revealed to be three percentage followed by two percentage of respondents who bought it on festival occasions.

**Testing of first hypothesis:-**

The two attributes namely buying habit of cosmetic products and marital status are independent. i.e., marital status does not affect the buying habit of consumers.

**Expected Frequencies**

|           |           |            |
|-----------|-----------|------------|
| <b>1</b>  | <b>2</b>  | <b>3</b>   |
| <b>6</b>  | <b>27</b> | <b>33</b>  |
| <b>11</b> | <b>50</b> | <b>61</b>  |
| <b>--</b> | <b>1</b>  | <b>1</b>   |
| <b>--</b> | <b>2</b>  | <b>2</b>   |
| <b>18</b> | <b>82</b> | <b>100</b> |

Now apply the Chi-square test as follows:-

### Chi- Square Test

| O  | E  | (O-E) <sup>2</sup> | (O-E) <sup>2</sup> /E |
|----|----|--------------------|-----------------------|
| 1  | 1  | 0                  | 0                     |
| 2  | 2  | 0                  | 0                     |
| 3  | 6  | 9                  | 1.5                   |
| 30 | 27 | 9                  | 0.33                  |
| 12 | 11 | 1                  | 0.091                 |
| 49 | 50 | 1                  | 0.02                  |
| -- | -- | --                 | --                    |
| 1  | 1  | 0                  | 0                     |
| 1  | 0  | 1                  | 0                     |
| 1  | 2  | 1                  | 0.5                   |
|    |    |                    | 2.441                 |

$$X^2 = \sum (O-E)^2/E = 2.441$$

$$D.F = (r-1) (c-1) = (5-1) (2-1) = 4$$

At level of significance 5%, table value is 9.488. The calculated value is less than the table value. Therefore the Null hypothesis is accepted. That is, the buying habit of consumers and the marital status are not related.

### Testing of 2<sup>nd</sup> Hypothesis:-

The second hypothesis is the monthly income and buying habit of consumers is interrelated.

### Monthly income and buying of green cosmetics products

| X  | F   | d <sup>1</sup> | fd <sup>1</sup> | (fd <sup>1</sup> ) <sup>2</sup> |
|----|-----|----------------|-----------------|---------------------------------|
| 5  | 8   | -2             | -16             | 32                              |
| 15 | 42  | -1             | -42             | 42                              |
| 25 | 18  | 0              | 0               | 0                               |
| 35 | 15  | 1              | 15              | 15                              |
| 45 | 17  | 2              | 34              | 68                              |
|    | 100 |                | -9              | 157                             |

$$\text{Mean} = A + (\sum fd^1/N) * C$$

$$= 25 + (-9/100) * 10$$

$$= 25 - 0.90$$

$$= 24.1$$

$$\text{Standard Deviation} = \sqrt{\sum \frac{(fd^1)^2}{N} - \frac{(\sum fd^1)^2}{N^2}} * C$$

$$= 12.5$$

| Class limits | Z         | Area from table | Area for classes | Theoretical frequencies |
|--------------|-----------|-----------------|------------------|-------------------------|
| $-\infty$    | $-\infty$ | 0.5000          |                  |                         |
| 10           | -1.13     | 0.3708          | 0.1292           | 13                      |
| 20           | -0.33     | 0.1293          | 0.2415           | 24                      |
| 30           | 0.47      | 0.1808          | 0.3101           | 31                      |
| 40           | 1.27      | 0.3980          | 0.2172           | 22                      |
| $+\infty$    | $+\infty$ | 0.5000          | 0.102            | 10                      |

### Chi- Square Test

| O  | E  | $(O-E)^2$ | $(O-E)^2/E$ |
|----|----|-----------|-------------|
| 8  | 13 | 25        | 1.92        |
| 42 | 24 | 324       | 13.5        |
| 18 | 31 | 169       | 5.45        |
| 15 | 22 | 49        | 2.22        |
| 17 | 10 | 49        | 4.9         |
|    |    |           | 27.99       |

$$X^2 = \sum (O-E)^2/E = 27.99$$

$$D.F = (r-1) (c-1) = (5-1) (2-1) = 4$$

At 5% level of significance, the table value is 9.448. Since the calculated value (27.99) is more than the table value. The  $H_0$  is rejected. i.e., the monthly income and buying habit of consumers are interrelated.

### Conclusion

The study reveals that the green cosmetic products have a great future in India. The factors which are affecting the buying behaviour of the customers in India towards green cosmetic products establish a positive impact for the industry. Most of the factors are favourably affecting the buying behaviour of the customers in India. The hypothesis analysis shows remarkable opportunities for the green cosmetic industry in India, because the study shows that the demographic factors do not have much influence on reducing the buying habit of the product. The health problems arising from the use of chemical products accelerated the growth of green cosmetic products in India. The perceived behavioural control of the teenagers of India is also a part for the growth of this industry.

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