

COMPARATIVE STUDY ON CONSUMER SATISFACTION AND PREFERENCE IN USING NORMAL CIGARETTE AND ELECTRONIC CIGARETTE

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ABSTRACT

Customer Satisfaction is a business term used to measure products and services supplied due to customer expectations. Preference measures the power or ability to choose one thing over another with the anticipation that the choice will result in greater satisfaction, greater capability or improved performance. The main objective of the study is to compare consumer satisfaction and preference in using normal cigarettes and electronic cigarettes. The study covers a sample of 210 in Chennai, Vellore and Bangalore. Random sampling and Convenient sampling method is applied. Statistical tools such as Factor analysis and Regression are used. The researcher suggests that an improved awareness about the Electronic Cigarette and Electronic Liquid must be initiated and the seller should retain their consumer by providing them with attractive advertisements. The researcher concludes that the Electronic cigarette will help and be the best alternative to the people who wish to stop or quit smoking.

KEYWORDS: Awareness, Customer Satisfaction, Preference

INTRODUCTION

Needs are the basic human requirements, whereas demands are wants for specific products backed by an ability to pay. Usually companies address customer needs by putting forth to them a value proposition, which is a set of benefits that satisfy customer needs. Business survives because they have customers who are willing to buy their product or service. However, many times business fails to 'check in' with their customers to determine whether they are happy or unhappy and what will make or keep them happy.

Customers are the best source of business information whether it is to improve an existing product or service or whether one is planning to launch something new. There is no substitution for "getting it from the Horse's mouth". When one opens up the lines of communication, one is able to align the research to the best advantage and one can make changes or launch a product more quickly.

Consumer Awareness

Consumer awareness, which refers to the buyer's knowledge of a particular product or a company, allows the buyer to get the most from what he buys. The Consumer has a knowledge of the choices, product information and benefits from knowing their rights, hearing alerts, warnings and finding out the safety issues.

Customer Satisfaction

Customer Satisfaction is a business term to measure products and services supplied due to customer expectations. In a Competitive market place, the customer satisfaction is seen as a key element of business strategy.

Consumer Preferences

Consumer preferences are defined as the subjective (individual) tastes, as measured by utility, of various bundles of goods. They permit the Consumer to rank these bundles of goods according to the levels of utility they give to the Consumer. Preferences are independent of income and prices. Ability to purchase goods does not determine a Consumer's likes or dislikes. One can have a preference for Porsches over Fords but only have the financial means to drive a Ford.

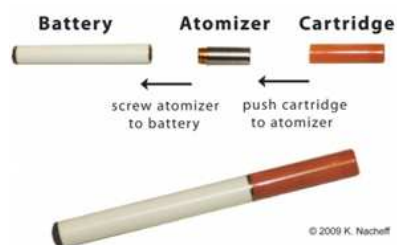
Cigarette

A cigarette, meaning "small cigar" is a small cylinder of finely cut tobacco leaves rolled in thin paper for smoking. The cigarette is ignited at one end and allowed to smoulder and its smoke is inhaled from the other end, which is held in or to the mouth; in some cases a cigarette holder may be used as well. Most modern manufactured cigarettes are filtered and include reconstituted tobacco and other additives.

Cigarettes carry serious health effects with them, which are more prevalent than in other tobacco products. Nicotine, the primary psychoactive chemical in tobacco and therefore cigarettes, is addictive. About half of the cigarette smokers die of tobacco-related diseases and lose on an average 14 years of life. Cigarette use by pregnant women has also been shown to cause birth defects, including low birth weight, foetal abnormalities and premature birth. Second-hand smoke from cigarettes has been shown as injurious to bystanders, which has led to legislations that has prohibited smoking in many workplaces and public areas. Cigarettes are a frequent source of fires leading to loss of lives in private homes, which has prompted the European Union and the United States to ban cigarettes that are not fire standard compliant by 2011.

Electronic Cigarette

An e-cigarette, or electronic cigarette, is an electronic device that converts nicotine liquid into water vapor. The e-cigarette has three main parts: a battery, atomizer, and cartridge. The battery, the largest part, has an indicator light on one side and it screws onto the atomizer. The heart of every e-cigarette is the atomizer, which converts the e-liquid into smoke. The cartridge, a cylindrical inhaler that contains the e-liquid, attaches to the atomizer.



Are They Healthier Than Regular Cigarettes?

E-cigarettes do not burn, so there is no combustion to produce the harmful carcinogens that traditional cigarettes emit. Unlike a regular cigarette, one does not need matches to smoke an e-cig; they are powered by a rechargeable lithium battery. Hidden inside the e-cig is a chamber that contains miniaturized electronics and an atomizer. The function of the

tiny atomizer is to vaporize the liquid nicotine turning it into an aerosol mist. It is activated by the inhaling action of the user, by "taking a puff". The liquid nicotine is hidden inside another refillable chamber that on the outside looks like the filter of a cigarette, where the smoker places the mouth to inhale.

The nicotine vapor enters the smokers' lungs and nicotine high occurs. The vapor even looks like cigarette smoke. Other features of the e-cig may include a red light at the end of the cigarette that emulates the flame of burning tobacco.

Liquid

Liquid for producing vapor in electronic cigarettes, commonly known as e-juice or e-liquid, is a solution of propylene glycol (PG), vegetable glycerin (VG), and/or polyethylene glycol 400 (PEG400) mixed with concentrated flavors; optionally, a variable concentration of nicotine.

The solution is often sold in a bottle or in pre-filled disposable cartridges. They are manufactured with various tobacco, fruit and other flavors, as well as variable nicotine concentrations (including nicotine-free versions). The standard notation "mg/ml" is often used in labeling for denoting nicotine concentration and is sometimes shortened to a simple "mg". Nicotine liquid, also known as e-liquid or e-juice is a liquid mixture for the electric cigarette. Nicotine liquid comes in a variety of flavors and a few basic nicotine levels.

Benefits of Using Electronic Cigarettes

- Freedom to smoke
- Cost-savings
- More flavor options
- No nasty smell
- Convenience

Does E-Cigarette Help in Quitting Smoking

The E-cigarette certainly can be considered a good alternative for smoking but it may or may not help in quitting traditional smoking. It basically tastes, feels and looks like any other traditional cigarette and is smokeless and odorless.

The Electronic Cigarette is the latest and healthiest alternative to the traditional Normal Cigarette. It does not produce smoke, does not stain teeth, clothes nor leave a foul smell in the mouth or on the fingers. It does not have to be lit and there are no chances of getting the fingers burnt.. It is certainly less harmful than the traditional cigarette as it does not release smoke and thus the harmful effects arising from smoke can be avoided.

Statement of the Problem

Smoking is a lethal habit which is highly hazardous and can even cause cancer. This habit is found in the teenagers till the old age and we come across some news stating that there is a change in the smoker's behavior, where smokers try hard to quit this habit, undergoing some difficulties mentally and physically. E-Cigarettes are a new invention in order to replace highly harmful Tobacco Cigarettes. Thus the smokers try E-Cigarettes as a tool and in the process quit smoking. Hence the Comparative study between E-Cigarette and Tobacco Cigarette and their satisfaction levels and ill effects are to be identified.

OBJECTIVES OF THE STUDY

- To Study the Consumer Preference towards E-Cigarette on the basis of the health factors.
- To identify the consumers challenges in shifting towards E-Cigarette.

SCOPE OF THE STUDY

- This study will help to understand the Consumers Preference and Satisfaction in using the E-cigarette.
- This study will be more useful to the consumers who need an alternative way of smoking not causing health

issues.

Period of Collection of Data

The data was collected from January 2014 to May 2014

Analysis of Data

The data thus collected was compiled, classified and tabulated. Tables were prepared from the given information and the questionnaire was used for the collection of data. The following Statistical tools are used to analyze the data: **(i) Factor Analysis and (ii) Regression.**

E-Cigarette

Reliability Test

| Case Processing Summary | | | |
|-------------------------|--------------|------------|--------------|
| | | N | % |
| Cases | Valid | 120 | 100.0 |
| | Excluded | 0 | .0 |
| | Total | 120 | 100.0 |

Reliability test is taken to check the reliability of the questions taken for the study. The total number of respondents is 120 and all the respondents have been taken into consideration.

Reliability Statistics

| Reliability Statistics | | |
|------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .819 | .818 | 48 |

| Cronbach's Alpha Internal Consistency | |
|---------------------------------------|---------------------------------|
| $\alpha \geq 0.9$ | Excellent (High-Stakes testing) |
| $0.7 \leq \alpha < 0.9$ | Good (Low-Stakes testing) |
| $0.6 \leq \alpha < 0.7$ | Acceptable |
| $0.5 \leq \alpha < 0.6$ | Poor |
| $\alpha < 0.5$ | Unacceptable |

The Cronbach's alpha obtained in reliability test is 0.819 ($0.7 \leq \alpha < 0.9$ Good). From the reliability test we can proceed for further analysis.

In THIS Study, 2 Variables have Been Taken into Consideration

- Tobacco Cigarette
- Electronic Cigarette

Reliability Test for Tobacco Cigarette

| Reliability Statistics for Tobacco Cigarette | | |
|--|--|------------|
| Cronbach's Alpha | Cronbach's Alpha based on Standardized Items | N of Items |
| .849 | .843 | 8 |

The Cronbach's alpha value is 0.849. Hence the questionnaire is taken for further analysis.

Factor Analysis

It has a significance of .000 which indicates $P \leq 0.05$. The KMO value for the factor analysis is 0.779, indicating that almost all the responses collected from various respondents have been considered. Hence the data is relevant for further study.

| Factors | Component | |
|-------------------|---------------|-----------|
| | Non-cancerous | Cancerous |
| Cancer | .190 | .849 |
| Tuberculosis | .788 | .375 |
| Respiratory Issue | .750 | .396 |
| Heart attack | .751 | -.188 |
| Sore Throat | .808 | -.398 |
| Hypertension(BP) | .814 | .103 |
| Cough by phlegm | .773 | -.484 |

All factors were loaded under 2 different factors. The factors had more than 0.75 in their loading which indicates it is good for a Factor analysis loading range.

| | |
|----------------|--|
| Cancerous | Eigen value – 1.457 % of variance – 20.807 Cumulative – 73.605 |
| Non- Cancerous | Eigen value – 3.696 % of Variance – 1.457 Cumulative – 52.797 |

The Eigen value for cancerous component is 1.457, which is greater than 1. The Percentage of variance is 20.807% and the cumulative percentage is 73.605%, which signifies 74% of the respondents’ results were loaded under factor 2.

The Eigen value for Non-cancerous component is 3.696, which is greater than 1. The Percentage of variance is 1.457% and cumulative percentage is 52.797%, which signifies 53% of the respondents results were loaded under factor 1.

From The Factor Analysis, The Given Factors Lie Under Two Major Variables:

- Cancerous
- Non- Cancerous=

Cancerou

Regression Test on Cancerous Diseases

| Model | Non-Standardized Coefficients | | Standardized Coefficients | t | Sig. |
|-----------------------------------|-------------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| Constant | 4.481 | .286 | | 15.690 | .000 |
| Age | 0.083 | 0.065 | .130 | 1.268 | .208 |
| No. of Tobacco cigarettes per day | -.115 | 0.055 | -.211 | -2.074 | .041 |
| Brand | -.133 | 0.49 | -.277 | -2.700 | .008 |

Dependent Variable: Average (Cancer)

The above Table shows the significance value as .000, which is less than .05. From here we can conclude that ‘the number of tobacco cigarettes consumed per day’, has an influence over the Cancerous diseases.

Non-Cancerous:

The Table below shows significance value of .000, which is less than .05. Hence, we can conclude that ‘the number of tobacco cigarettes consumed per day’ and the brand they use has an influence over the Non- Cancerous diseases.

Regression Test on Non- Cancerous Diseases

| Model | Non-Standardized Coefficients | | Standardized Coefficients | t | Sig. | |
|-------|----------------------------------|------------|---------------------------|--------|--------|------|
| | B | Std. Error | Beta | | | |
| 1 | (Constant) | 4.481 | .286 | 15.690 | .000 | |
| | Age | .083 | .065 | 1.268 | .208 | |
| | No. of Tobacco cigarette per day | -.115 | .055 | -.211 | -2.074 | .041 |
| | Brand | -.133 | .049 | -.277 | -2.700 | .008 |

Dependent Variable: average (non-cancerous)

| Reliability Statistics for Electronic Cigarette | | |
|---|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .942 | .944 | 7 |

The Cronbach's alpha value is 0.942. Hence the questionnaire is viable to be taken for further analysis

Factor Analysis:

It has a significance of .000, which indicates $P \leq 0.05$. The KMO value for the factor analysis is 0.876, which indicates that almost all the responses collected from various respondents have been considered. Henceforth, the data is relevant for further study.

| Factors | Component 1 |
|---|-------------|
| Cancer | .858 |
| Tuberculosis | .874 |
| Respiratory issues | .879 |
| Heart attack | .852 |
| Sore Throat | .878 |
| Hypertension(BP) | .879 |
| Coughing up phlegm | .836 |
| Extraction Method: Principal Component Analysis | |

All the factors were loaded under 1 factor. The factor had more than 0.8 in the loading which indicates it is good as a factor analysis loading range.

| | |
|----------------|--------|
| Eigen value: | 5.241 |
| % of Variance: | 74.865 |
| Cumulative: | 74.865 |

The Eigen value is 5.241, which is greater than 1. The Percentage of variance cum cumulative percentage is 74.865%, which signifies that 74% of the respondent's results were loaded under factor 1.

Regression Table

| Regression Table for Health Issues Caused Using Electronic Cigarette | | | | | | |
|--|------------|-------------------------------|------------|---------------------------|--------|------|
| Model | | Non-Standardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 4.308 | .227 | | 18.972 | .000 |
| | Age | -.276 | .122 | -.211 | -2.275 | .025 |

| | | | | | |
|----------------------------------|-------|------|-------|--------|------|
| No. of Tobacco cigarette per day | -.059 | .046 | -.120 | -1.281 | .203 |
| Brand | -.002 | .046 | -.005 | -.048 | .962 |
| a. Dependent Variable: Average | | | | | |

The above Table shows the significance value is .000, which is less than .05. From here we can conclude that Age has an influence over the health issues caused using the Electronic Cigarette. Hence early starters have more risk of being exposed to health issues using Cigarettes.

Reliability Test on Factors influencing Respondents to buy Electronic Cigarettes

| Reliability Statistics | | |
|------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .871 | .879 | 13 |

The Cronbach's alpha value is 0.871. Hence the questionnaire is taken ahead for further analysis.

Factor Analysis

It has a significance of .000, which indicates $P \leq 0.05$. The KMO value for the factor analysis is 0.838, which indicates that almost all the responses collected from various respondents have been considered. Hence the data is relevant for further study.

| Factors | Component | |
|---------------------------|--|--------|
| | Features Available in Electronic Cigarette | Others |
| Price of the product | .534 | |
| Quality | .754 | |
| Availability | .783 | |
| Packaging | .755 | |
| Variety | .737 | |
| Flavors | .622 | |
| Style | .624 | |
| Durability | .679 | |
| Brand image | .579 | |
| User Friendly | .569 | |
| Safe to Use | .583 | |
| Brand Name of the Company | .560 | |
| Quit Smoking | | .570 |
| No Second Hand Lighter | | .616 |
| Advertisement | | .518 |
| Internet | | .580 |

All factors were loaded under 2 different factors. The factors had more than 0.5 in the loading which indicates it is acceptable as the factor analysis loading range.

| | |
|--|--|
| Features available in Electronic Cigarette | Eigen value – 5.436 % of variance – 41.814 % Cumulative – 41.814 |
| Others | Eigen value – 1.4265 % of Variance – 10.972 % Cumulative – 59.01 |

The Eigen value for features available in electronic cigarette is 5.436, which is greater than 1. The Percentage of variance cum cumulative percentage is 41.814%, which signifies 41% of the respondents results were loaded under factor 1.

The Eigen value for the other component is 1.4265 which is greater than 1. The Percentage of variance is 10.972% and the cumulative percentage is 59.01%, which signifies 59% of the respondents results were loaded under factor 2.

| Regression for Features Available in Electronic Cigarette | | | | | | |
|---|------------------------|-------------------------------|------------|---------------------------|--------|------|
| Model | | Non-standardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3.452 | .257 | | 13.421 | .000 |
| | Occupation | .075 | .048 | .144 | 1.568 | .120 |
| | Monthly Income | -.097 | .048 | -.193 | -2.030 | .045 |
| | Monthly expenses on NC | -.023 | .033 | -.066 | -.702 | .484 |
| | Awareness About EC | -.076 | .038 | -.185 | -1.984 | .050 |
| | Expense on EC | .130 | .051 | .264 | 2.542 | .012 |

Dependent Variable: Average

Note: Normal Cigarettes are denoted as NC and Electronic Cigarettes as EC.

The above Table shows the significance value is .000, which is less than .05. Hence, we can conclude that the individual's monthly income and their expenses on Electronic Cigarettes are the major factors that influence the respondents to buy electronic cigarettes.

Reliability Test on other Factors influencing the Respondents to buy Electronic Cigaret:

| Reliability Statistics | | |
|------------------------|--|--------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | No. of Items |
| .526 | .534 | 5 |

The Cronbach's alpha value is 0.526. Hence the questionnaire is taken for further analysis

| Regression Test for Others | | | | | | |
|----------------------------|------------------------|-------------------------------|------------|---------------------------|--------|------|
| Model | | Non-Standardized Coefficients | | Standardized Coefficients | T | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3.370 | .260 | | 12.951 | .000 |
| | Occupation | .086 | .048 | .165 | 1.788 | .076 |
| | Monthly Income | -.091 | .047 | -.182 | -1.915 | .058 |
| | Monthly Expenses on NC | -.021 | .033 | -.061 | -.650 | .517 |
| | Awareness about EC | -.072 | .038 | -.176 | -1.881 | .063 |
| | Expenses on EC | .132 | .051 | .270 | 2.598 | .011 |

Dependent Variable: Average

Note: Normal Cigarettes are denoted as NC and Electronic Cigarettes as EC.

The above Table shows the significance value as .000, which is less than .05. Hence we can conclude that the individual's expenses on Electronic Cigarettes are the only factor that influences the other respondents to buy electronic cigarettes.

Reliability Test on Ill-Effects Due in Using Electronic Cigarettes

| Reliability Statistics | | |
|------------------------|--|--------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | No. of Items |
| .936 | .938 | 5 |

The Cronbach's alpha value is 0.526. Hence the questionnaire is taken for further analysis. It has a significance of .000, which indicates $P \leq 0.05$. The KMO value for the factor analysis is 0.838, which indicates that almost all the responses collected from various respondents have been considered. Henceforth the data is relevant for further study.

Factor Analysis on Ill-Effects in Using the Electronic Cigarette

| Factors | Component |
|-------------------|-----------|
| | 1 |
| Head ache | .846 |
| Dryness in throat | .909 |
| Thirsty feeling | .910 |
| Nausea | .930 |
| Giddiness | .879 |

Extraction Method: Principal Component Analysis

All the factors were loaded under 1 factor. The factors had more than 0.8 in the loading which indicates that it is good as a factor analysis loading range.

Eigen value – 4.005

% of Variance – 80.105

Cumulative – 80.105

The Eigen value is 4.005, which is greater than 1. The Percentage of variance cum cumulative percentage is 80.105%, which signifies 80% of the respondents results were loaded under factor 1.

| Model | Non-standardized Coefficients | | Standardized Coefficients | t | Sig. |
|------------------------------------|-------------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| (Constant) | 2.376 | .317 | | 7.504 | .000 |
| Duration of EC Consumption | -.056 | .083 | -.065 | -.678 | .499 |
| Frequency of purchase of EC liquid | -.198 | .092 | -.202 | -2.147 | .034 |
| Nicotine level consumed | .013 | .076 | .016 | .169 | .866 |

The above Table shows the significance value is .000, which is less than .05. Hence, we can conclude that the Frequent Purchase of the Electronic Cigarette Liquid may cause ill effects to the consumers as they tend to use more of Nicotine content in electronic cigarettes.

Factor Analysis

All 18 items of the questionnaire were factor analyzed using principal component extraction with an orthogonal (Varimax) rotation. The number of factors were unconstrained in order to obtain convergent validity 0.50 was used as a factor loading cut-off point.

Table No. 3 shows the reliability statistics and proves the data could support 86.4% reliability for this analysis. Table No. 4 indicates that Kaiser – Meyer Olkin (KMO) measure of sampling adequacy in the study is 0.762 which is a good result as it exceeds 0.5 Bartlett’s measure of sphericity meaning that factors that form the variables are accurate.

Reliability Statistics

| Cronbach’s Alpha | No. of Items | No. of Cases |
|------------------|--------------|--------------|
| 0.864 | 18 | 210 |

KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | 0.762 |
|--|--------------------|---------|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 932.299 |
| | df | 153 |
| | Sig. | .000 |

Total Variance Explained

Table No. 5 depicts the total variance explained. Total variance is explained with rotation the Eigen values for factor 1, 2, 3, 4 and 5 are 4.176, 2.419, 2.057, 1.635 and 1.426. Percentages of variance for factors are 23.199, 13.441, 11.427, 9.082 and 7.923 respectively. It indicates that 5 factors extracted from 18 factors have cumulative percentage up to 65.073% of the total variance. Thus, the 18 statements are reduced to 5 underlying factors.

Total Variance Explained

| Component | Initial Eigen Values | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|-----------|----------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 6.056 | 33.643 | 33.643 | 6.056 | 33.643 | 33.643 | 4.176 | 23.199 | 23.199 |
| 2 | 1.828 | 10.154 | 43.797 | 1.828 | 10.154 | 43.797 | 2.419 | 13.441 | 36.641 |
| 3 | 1.548 | 8.600 | 52.397 | 1.548 | 8.600 | 52.397 | 2.057 | 11.427 | 48.067 |
| 4 | 1.185 | 6.581 | 58.978 | 1.185 | 6.581 | 58.978 | 1.635 | 9.082 | 57.149 |
| 5 | 1.097 | 6.095 | 65.073 | 1.097 | 6.095 | 65.073 | 1.426 | 7.923 | 65.073 |
| 6 | .950 | 5.280 | 70.353 | | | | | | |
| 7 | .885 | 4.915 | 75.268 | | | | | | |
| 8 | .698 | 3.877 | 79.144 | | | | | | |
| 9 | .679 | 3.771 | 82.916 | | | | | | |
| 10 | .622 | 3.455 | 86.371 | | | | | | |
| 11 | .540 | 2.999 | 89.370 | | | | | | |
| 12 | .402 | 2.231 | 91.601 | | | | | | |
| 13 | .338 | 1.879 | 93.479 | | | | | | |
| 14 | .311 | 1.729 | 95.208 | | | | | | |
| 15 | .263 | 1.462 | 96.670 | | | | | | |
| 16 | .245 | 1.360 | 98.029 | | | | | | |
| 17 | .211 | 1.173 | 99.202 | | | | | | |
| 18 | .144 | .798 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

Rotated Component Matrix

The rotated component matrix is discussed in the following Table. After the Factor solution has been obtained in which all variables have a significant loading on factor, the researcher attempted to assign some meaning to the pattern of factor loadings. The variables with higher loadings are considered to be more important and have greater influence on the name or label selected to represent a factor. All 5 factors have been given appropriate names on the basis of the variables represented in each case.

| | Component | | | | |
|---------------------------|-------------------|---------------------|------------------|------------------|----------------------|
| | Preference Factor | Satisfaction Factor | Knowledge Factor | Awareness Factor | Advertisement Factor |
| Price | | .663 | | | |
| Quality | .684 | | | | |
| Availability | .787 | | | | |
| Packaging | .678 | | | | |
| Variety | .793 | | | | |
| Flavor | .701 | | | | |
| Style | .755 | | | | |
| Durability | .666 | | | | |
| Brand image | | .701 | | | |
| User friendly | | | | | |
| Safe to use | | | .696 | | |
| Brand name of the company | | .610 | | | |
| Previous experience | | .654 | | | |
| Quit smoking | | | | .667 | |
| No second hand smoking | | | | .871 | |
| Advertisement | | | | | .799 |
| Internet | | | .641 | | |

| | | | | | |
|--------------------|--|--|------|--|--|
| Friends and family | | | .684 | | |
|--------------------|--|--|------|--|--|

Extraction Method: Principal Component Analysis Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 8 iterations

The above Table shows the rotated component matrix, in which the extracted factors are given a new name

- Factor I is the most important factor which explained 23.199% of the variation. The factors such as Quality (.684), Availability (.787), Packaging (.678), Variety (.793), Flavor (.701), Style (.755) and Durability (.666) are highly correlated with each other. These factors indicate the preference with the electronic cigarette. Hence, these factors are named as “**Preference factors**”.
- The second kind of factor explained 36.641% of Variances In this segment, Price (.663), Brand image (.701), Brand name of the company (.610), previous experience (.654) is highly correlated with each other. These variables indicate the level of satisfaction using the electronic cigarette. The researcher named this segment as “**Satisfaction Factors**”.
- The third factor explains 48.067% of the Variance. The statements are Safe to Use (.696), Internet (.641), Friends and Family (.684).These factors indicate the source of information about the electronic cigarette. The researcher named this section as “**Knowledge Factors**”.
- The Fourth factor explains 57.149% of the Variance. The statements are Quit smoking (.667) and No second hand smoking (.871). These factors indicate the awareness about the electronic cigarette. The researcher named this section as “**Awareness Factors**”.
- The Fifth factor explains 65.073% of the Variance. The statements are Advertisement (.799).These factors help to advertise about the electronic cigarette. The researcher named this section as “**Advertisement Factors**”.

Findings

- 1024.1% of the respondents who use Tobacco Cigarette are between the age group of 26-35 years.
- 48.3% of the male respondents use Tobacco Cigarette.
- 1.6% of the female respondents use Tobacco Cigarette.
- 20% of the Tobacco Cigarette respondents have completed their Under Graduation.
- 20.5% of the respondents are private employees who use Tobacco Cigarette frequently.
- 13.3% of the Tobacco Cigarette respondents earn a Monthly Income between 10,001 to 20,000.
- 22.2% of the Electronic Cigarette respondents are between the age group of 26-35 years.
- 43.7% of the male respondents use Electronic Cigarette.
- 6.2% of the female respondents use Electronic Cigarette.
- . 19.1% of the Electronic Cigarette respondents completed their Under Graduation.
- 11. 25.4% of the Electronic Cigarette respondents are private employees.

- 12. 17.5% of the Electronic Cigarette respondents earn a Monthly Income between ₹ 20,001 to ₹ 30,000.

Suggestions

- Better awareness about the Electronic Cigarette and Electronic Liquid must be initiated.
- In case of complaints regarding the product, immediate and satisfactory service or action must be provided by the seller.
- Training should be given to the dealers and salesmen at regular intervals by the company so that they provide the expected information and service.
- The seller should retain the consumers by providing them with attractive advertisements.
- The consumer should verify or cross check the information provided in the Electronic Cigarette pack with the friends, relatives, internet etc.

CONCLUSIONS

From this research we recognize that while efforts to help people to stop smoking should remain a priority, many smokers do not wish to stop or quit or find it very hard to do so because of their addiction to nicotine. For this group, nicotine containing products which have been properly regulated to ensure product safety, quality and efficacy should be available as an alternative to tobacco. Most of the diseases associated with smoking are caused by inhaling smoke which contains thousands of toxic chemicals. By contrast, nicotine is relatively safe. Electronic cigarette, which deliver nicotine without the harmful toxins found in tobacco smoke, is a safe alternative to smoking. Electronic cigarette reduces second hand smoke exposure in places where smoking is allowed since they do not produce smoke. Overall the findings from the Study demonstrated some positive changes associated with the introduction of the electronic cigarette in India. Results from ENDS showed that participants reported a decrease in the cigarette consumption after the intervention and positive attitudes towards the Electronic Cigarette increased after its implementation.

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