

## NEUROMARKETING AS AN EMOTIONAL CONNECTION TOOL TO INFLUENCE CONSUMER PERCEPTION IN PURCHASING DISINFECTANTS

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### ABSTRACT

Business to attain their goals Strive continuously keeping up with the trends and improving the process. The advertisers spend most of their time in understanding the consumer's mind. Understanding the consumers becoming more and more difficult. Neuromarketing helps to delve into the subconscious mind. Neuromarketing which identify the selection of particular product where the customers look out for the information and how they search and reach for it. To carry out the systematic or formal inquiry, how the attention level influences the users through the neuromarketing. It is as a tool helps to measure the level of attention that results from advertisement. There are many disinfectants available effective against the virus disease. The most recommended and effective disinfectants are chlorinated disinfectants and ethanol 70% which is a low-level disinfectant but highly effective against virus. Due to the lack of awareness in consumers on the disinfectants and the preparation process many of the consumers face health problems.

**Keywords:** Neuromarketing, product, attention level, advertisement, disinfectants, awareness.

### INTRODUCTION:

Neuromarketing is the developed concept with the process of brain scanning technology. Many techniques in neuroscience started to attract the business, People, scientists, journalists, researchers etc. Due to the innovative technology neuromarketing is created as a new branch in the field of marketing to analyse the consumers conscious and subconscious behaviour towards the brands and products. The techniques of neuroscience help to identify and understand the cerebral mechanism of consumers which helps to increase the commercial activities and to plan the efficient marketing strategies.

### FUNCTIONS OF BRAIN:

- 1) Primitive brain (Reptilian): This acts as a quick decision maker which creates a strong urge to take the decision right or wrong.
- 2) Emotional brain (Limbic): This acts in the emotional aspects in day-to-day life.
- 3) Rational brain (Neocortex): This is an analytical brain and the decisions are not taken immediately. It analyses and takes its own time to reach the decision.
- 4) The advertiser to make the advertisement of the product to be more effective attack the emotional brain because the emotions can be easily reached in every human being and then primitive brain, then it transfers the information to the rational brain to analyse the information.

### TECHNIQUES OF NEUROMARKETING:

- 1) **Functional Magnetic Resonance Imaging:** It detects the oxygen level in the blood flow to measure the activities of brain.
- 2) **Magnetic Resonance Imaging:** This helps to identify which brain understand, interprets and transmit the information by the advertisement messages.
- 3) **Electroencephalography:** It helps to measure the activities of the brain directly through the behaviour and choice.
- 4) **Galvanic Skin Response:** Skin response helps to measure the electrical response of the skin based on the moisture level.

- 5) **Eye-tracking:** It helps to track the eyes to focus at the one particular point for longer period of time.
- 6) **Voice analysis:** It helps to analyse and records psychophysiological stress which come from human voice.

#### **DISINFECTANTS:**

Disinfectants is the chemical substance that destroy or eliminates micro-organism on the surface. Disinfectants are less effective than sterilization because disinfectants does not kill every microorganism simultaneously sterilization is an extreme chemical substance kill every microorganism but eh disinfectants are more effective than sanitizers because the sanitizers have mild chemical compared to disinfectants because it is used to clean things having connection with human, whereas the disinfectants are concentrated on the surfaces like floors etc. Frequently disinfectants are used in hospitals, bathroom, kitchens to kill micro-organisms.

#### **TYPES OF DISINFECTANTS:**

**Air disinfectants:** It is a chemical disinfectant destroys microorganisms on the air. In 1928, a study found that air borne microorganisms could be killed using mists of dilute bleach <sup>[1]</sup>.

**Alcohols:** Alcohol will be used more often used as an antiseptic than disinfectant. The alcohol is used to kill the microorganisms on the living tissue.

**Oxidizing disinfectants:** Oxidizing agent is the oxidizing cell membrane of microorganisms. Combination of chlorine and oxygen acts as a stronger oxidizer. Phenolics are the active chemicals

#### **STATEMENT OF PROBLEM:**

Nowadays there are many companies manufacturing disinfectants and the production has been increased in current situation due to the coronavirus. But many of the consumers lack awareness about the chemical substance and preparation process. This study aims at how the consumer's emotions are influenced to purchase and awareness about neuromarketing.

#### **OBJECTIVES:**

The main aim of the study is to analyse the influencing factors to purchase the products and to evaluate how the neuromarketing influence the consumers emotions to purchase the disinfectants.

#### **SCOPE OF THE STUDY:**

In today's life rural and urban consumers are more conscious about their health. This study is focus on getting knowledge about the preference of disinfectants and how the companies is capable of satisfying the consumer's needs in terms of factors, attributes etc.

#### **RESEARCH DESIGN:**

The research design is descriptive in nature. It describes the influencing factors and fact finding through the analysis and interpretation.

#### **SOURCES OF DATA:**

The study consists of both primary and secondary data. The primary data was conducted through the interview schedule. Before conducting the original study, a pilot study was conducted with 10 respondents to find out the difficulties and flaws in the questionnaire and the necessary changes were made in the questionnaire. The secondary data was collected from book, journals magazines, websites, periodicals.

#### **SAMPLE DESIGN AND SAMPLE SIZE:**

The sample size of 50 respondents were taken for the study through the convenient sampling method from the population of Coimbatore city.

#### **STATISTICAL TOOLS:**

- 1)Percentage analysis
- 2)Chi square analysis
- 3)Anova
- 4)Rank

#### **LIMITATIONS OF THE STUDY:**

- 1)Small samples size of 50 respondents were used for the study.
- 2)The research was limited to Coimbatore city only.
- 3)Limited technical tools used to analyse and interpret the data.

#### **NEUROMARKETING IN ACTION:**

- 1) Eye gaze
- 2) Packaging
- 3) Color
- 4) Advertisement efficiency
- 5) Decision paralysis

- 6) Evaluation of satisfaction
- 7) Loss of aversion, speed and efficiency
- 8) Anchoring
- 9) Rewards
- 10) Selecting the right price
- 11) Website layout
- 12) Memorable headlines

**SIMPLE PERCENTAGE ANALYSIS**

**Age of the Respondents**

Age	No. of Respondents	Percentage
Below 20 years	12	24
21 - 30 years	17	34
31 - 40 years	13	26
41 - 50 years	8	16
<b>Total</b>	50	100

**Source: Primary data**

Table states that 34% of the respondents are under the age group of 21-30 years, 26% of the respondents are under 31-40 years of age, 24% of them are below 20 years and the rest 16% falls under 41-50 years of age.

It inferred that majority 34% of respondents are in the age group of 21-30 years.

**Marital Status of the Respondents**

Marital Status	No. of Respondents	Percentage
Married	36	72
Single	14	28
<b>Total</b>	50	100

**Source: Primary data**

Table exhibits, out of total respondents 28% of them are married and the rest 28% of them are single. It concluded that majority 28 of respondents are married

**Educational Qualification of the Respondents**

Educational Qualification	No. of Respondents	Percentage
School level	16	32
Under graduate	22	44
Post graduate	10	20
Ph.D	2	4
<b>Total</b>	16	32

**Source: Primary data**

Table states that 44% of the respondents completed their under graduation, 32% of them are educated up to school level, 20% of them completed post-graduation, 32% of them are educated up to school level, and the rest of 0.4% of them have completed Ph.D. It inferred that majority 44% of the respondents have completed their under graduation.

**Designation of the Respondents**

Designation	No. of Respondents	Percentage
Student	15	30
Employed	24	48
Business	2	4
Housewife	9	18
<b>Total</b>	50	100

**Source: Primary data**

Above table reveals that 48% of the respondents are employed, 30% of them are students, 18% of them are housewives, and the rest 4% of them are business people. It inferred that majority 48% of the respondents are employed in private sector.

**Annual Income of the Respondents**

Annual Income	No. of Respondents	Percentage
Below Rs.2,00,000	5	10
Rs.2,00,001 - Rs.5,00,000	31	62
Rs.5,00,001 - Rs.10,00,000	13	26
More than Rs.10,00,000	1	2
<b>Total</b>	<b>50</b>	<b>100</b>

**Source: Primary data**

Above table states that 62% of the respondent's annual income ranges between Rs. Rs.2,00,001 - Rs.5,00,000, 26% of the respondent's earnings range between Rs.5,00,001 - Rs.10,00,000, 2% of them earn above Rs.10,00,000 and the rest 10% of them earn below Rs.2,00,000. It concluded that majority 62% of the respondent's annual income ranges between Rs.2,00,001 - Rs.5,00,000

**Brand Preference of the Respondents**

Brand Preference	No. of Respondents	Percentage
Insurance	16	32
Detol	7	14
Savlon	12	24
Bacto	3	6
Lifebouy	7	14
Tri-activ	3	6
Others	2	4
<b>Total</b>	<b>50</b>	<b>100</b>

**Source: Primary data**

Above table states that 32% of the respondents prefer Insurance brand, 24% of them prefer Savlon, 14% of them prefer Detol, 14% of them prefer Lifebouy, 4% of them prefer Tri-Activ, 6% of them prefer Bacto and the rest 4% of them prefer other brands. It inferred that majority 32% of the respondents prefer Insurance brand to purchase products.

**Frequency of Purchase**

Frequency of Purchase	No. of Respondents	Percentage
Frequently	20	40
Weekly	5	10
Monthly	20	40
Rarely	5	10
<b>Total</b>	<b>50</b>	<b>100</b>

**Source: Primary data**

Table 4.7 reveals that out of total respondents 40% of them purchase Disinfectants products monthly, 40% of them purchase frequently, 10% of them purchase weekly and the remaining 10% of them purchase rarely. It concluded that majority 40% of the respondents purchase products monthly.

**Amount Spent per Month on Disinfectants**

Amount Spent per Month on Disinfectants	No. of Respondents	Percentage
Rs.501 -Rs.1000	16	32
Rs.1001 - Rs.2000	27	54
More than Rs.2000	7	14
<b>Total</b>	<b>50</b>	<b>100</b>

**Source: Primary data**

From above table it is observed that 32% of the respondents spend Rs.501 – Rs.1000 per month on Disinfectants, 54% of them spend between the range of Rs.1001 – Rs.2000 per month and the rest 14% of them spend

above- Rs.2000 per month.It inferred that majority 54% of them spend between the range of Rs.1001 – Rs.2000 per month

**Attracting Attributes to make purchase**

Attracting Attributes	No. of Respondents	Percentage
Brand name	19	38
Transparent	6	12
Price	6	12
Cleanliness	5	1
Easy availability	3	6
Quality	6	12
Quantity	5	10
<b>Total</b>	<b>50</b>	<b>100</b>

**Source: Primary data**

Above table states that 38% of the respondents prefer brand name as their attracting attribute, 12% of them prefer quality of the product, 12% of them prefer price of the product, 1% of them prefer cleanliness of the product, 12% prefer transparency of the product, 6% of them prefer easy availability of the product and the rest 10% of them prefer quantity of the product.It inferred that majority 38% of the respondents prefer brand name as the attracting attribute to purchase Disinfectants products.

**Factors Influencing to Purchase Disinfectants**

Factors Influencing to Purchase Disinfectants	No. of Respondents	Percentage
Advertisement	16	32
Shop display	3	6
Word of mouth	5	1
Friends/family/relatives	9	18
Attractive packaging	4	8
Discount	1	2
Latest trend	1	2
Need for the products	5	10
Celebrity endorsement	6	12
<b>Total</b>	<b>50</b>	<b>100</b>

**Source: Primary data**

From the above table it is observed that 32% of the respondents influence on advertisement to purchase their product, 18% of the respondents influence by friends/family/relatives to purchase, 10% of them influence by the need for the products, 1% of them influence by word of mouth, 12% of them influence by celebrity endorsement, 2% of them influence by discount, 8% of them influence on attractive packaging, 2% of them influence by latest trend and the remaining 6% of them influence by shop displays to purchase their product.It inferred that majority 32% of the respondents influence on advertisement to purchase their product.

**Attributes Preferred by the Respondents**

Attributes Preferred by the Respondents	No. of Respondents	Percentage
Price	22	44
Features	4	8
Brand	3	6
Package	1	2
Durability	4	8
Product assurance	13	26
Advertisement	3	6
<b>Total</b>	<b>50</b>	<b>100</b>

**Source: Primary data**

Above table exhibits 44% of them prefer price as their first priority while purchasing product, 26% of the respondents prefer product assurance, 6% of them prefer brand, 8% of them prefer features of the product, 6% of them prefer advertisement, 8% of them prefer durability of the product and the rest 2% of the respondents prefer package while purchasing. It is inferred that majority 44% of the respondents prefer price as their first priority during purchasing a product.

**Switch Over to Another Brand**

Switch Over to Another Brand	No. of Respondents	Percentage
Yes	30	60
No	20	40
<b>Total</b>	<b>50</b>	<b>100</b>

**Source: Primary data**

Table 4.12 reveals that out of total respondents 60% of them do not prefer to switch over another brand and the rest 40% prefer to change another brand. It is concluded that majority 60% of the respondents do not prefer to switch over another brand when it gets some promotion of scheme.

**Frequency of Information Gathering**

Frequency of Information Gathering	No. of Respondents	Percentage
Always	16	32
Sometimes	13	26
Rarely	20	40
Not at all	1	2
<b>Total</b>	<b>50</b>	<b>100</b>

**Source: Primary data**

Above table states that 26% of the respondents sometimes gather the information before purchasing the product, 40% of them rarely gather the information, 32% of them always gather the information and the rest 2% do not gather the information before purchasing.

It is inferred that majority 40% of the respondents rarely gather information before purchasing.

**Awareness of Neuromarketing**

Awareness of Neuromarketing	No. of Respondents	Percentage
Yes	28	56
No	22	44
<b>Total</b>	<b>50</b>	<b>100</b>

**Source: Primary data**

Table 4.14 reveals that 44% of the respondents are not aware of neuromarketing and the rest 56% are aware of neuromarketing. It is concluded that majority 56% of the respondents are not aware of neuromarketing.

**Ethical Techniques of Neuromarketing**

Neuromarketing Techniques are Ethical	No. of Respondents	Percentage
Yes	17	34
No	33	66
<b>Total</b>	<b>50</b>	<b>100</b>

**Source: Primary data**

Above table reveals that 64.8% of the respondents viewed that neuromarketing techniques are not ethical and the remaining 35.2% of the respondents viewed neuromarketing techniques are ethical. It is concluded that majority 64.8% of the respondents prefer the techniques of neuromarketing are not ethical.

**Senses Affect the Most by the Advertisement of the Product**

Senses Affect the Most by the Advertisement of the Product	No. of Respondents	Percentage

Sight	27	54
Sound	5	10
Smell	17	34
Touch	1	2
<b>Total</b>	50	100

**Source: Primary data**

Table 4.16 states that 54% of the respondents prefer sight that affect the most by advertisement of the product, 34% of them prefer smell of the product, 10% of them prefer sound of the advertisement, 2% of them prefer touch. It inferred that majority 54% of the respondent's sight get affected the most by the advertisement of the product.

**Cues Enable to Recall the Advertisement and Brand**

Cues Enable to Recall the Advertisement and Brand	No. of Respondents	Percentage
Verbal cues	23	46
Visual cues	21	42
Aural cues	6	12
<b>Total</b>	50	100

**Source: Primary data**

Above table exhibits that 42% of the respondents recall the advertisement and brand through visual cues, 46% of them recall through verbal cues and the rest 12% of them recall through aural cues. It concluded that majority 46% of the respondents recall the advertisement and brand through verbal cues.

**Gaze Attraction**

Gaze Attraction	No. of Respondents	Percentage
Pictures of package	23	46
Product	15	30
Fonts	4	8
Advertisement content	8	16
<b>Total</b>	50	100

**Source: Primary data**

Above table reveals that 30 % of the respondents are attracted by the product which holds the gaze, 46% of them are attracted by the picture of the package, 8% of them are attracted by the fonts and the rest 16% of them are attracted by the advertisement. It inferred that majority 46% of them are attracted by the picture of the package.

**Reimagining of Package**

Reimagining of Package	No. of Respondents	Percentage
Colour	15	30
Size	10	20
Text	5	10
Imagery	8	16
Shiny packaging	4	8
Matte packaging	8	16
<b>Total</b>	50	100

**Source: Primary data**

Above table reveals that 30% of the respondents are attracted by the colour to reimagine the package of the product, 10% of them are attracted by the text on the product, 20% of them are attracted by the size of the product, 16% of them are attracted by the image of the product, 16% of them are attracted by matte packaging and the rest of 8% are attracted by shiny packaging. It inferred that majority 30% of the respondents viewed that colour of the brand as to reimagine the package.

**CHI SQUARE ANALYSIS**

**H<sub>01</sub>: There is no significant association between brand preference and frequency of purchase.**

**Cross Table on Brand Preference and Frequency of Purchase**

Frequency of Purchase					
Brand Preference	Frequently	Weekly	Monthly	Rarely	Total
Insurance	14	1	0	1	16

Detol	1	2	4	0	7
Savlon	0	1	9	2	12
Bacto	1	0	2	0	3
Lifebouy	2	0	4	1	7
Tri-activ	1	1	0	0	2
Insurance	1	0	1	1	3
<b>Total</b>	20	5	20	5	50

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	38.690 <sup>a</sup>	18	.003
Likelihood Ratio	47.268	18	.000
Linear-by-Linear Association	6.457	1	.011
N of Valid Cases	50		

The result of chi square concluded that P value (.003) is less than 0.05 at 5% level of significance. Therefore, the null hypothesis ( $H_0$ ) is rejected. Thus, it is inferred that there is a significant association between brand preference and frequency of purchase.

**H<sub>02</sub>: There is no significant association between brand preference and amount spent on Disinfectants**  
**Cross Table on Brand Preference and Amount Spent on Disinfectants**

Amount Spent on Disinfectants					
Brand Preference	Below Rs.500	Rs.501 - Rs.1000	Rs.1001 - Rs.2000	More than Rs.2000	Total
Insurance	10	3	2	1	16
Detol	0	6	1	0	7
Savlon	2	8	2	0	12
Bacto	0	3	0	0	3
Lifebouy	1	4	2	0	7
Tri-activ	0	2	0	0	2
Insurance	1	1	0	1	3
<b>Total</b>	14	27	7	2	50

Chi-Square Tests			
	Value	df	Asymptotic Significance(2-sided)
Pearson Chi-Square	23.108 <sup>a</sup>	12	.027
Likelihood Ratio	26.895	12	.008
Linear-by-Linear Association	1.444	1	.229
N of Valid Cases	50		

The result of chi square concluded that P value (.027) is less than 0.05 at 5% level of significance. Therefore, the null hypothesis ( $H_0$ ) is rejected. Thus, it is inferred that there is a significant association between brand preference and amount spent on Disinfectants.

**H<sub>03</sub>: There is no significant association between brand preference and attracting attributes.**  
**Cross Table on Brand Preference and Attracting Attributes**

Attracting Attributes								
Brand Preference	Brand name	Transpa rent	Price	Cleanlines s	Easy availability	Quality	Quantit y	Total



Insurance	15	0	0	1	0	0	0	16
Detol	1	2	1	0	1	1	1	7
Savlon	3	2	1	2	0	2	2	12
Bacto	0	0	0	1	2	0	0	3
Lifebouy	0	2	2	1	0	1	1	7
Tri-activ	0	0	1	0	0	1	0	2
Others	0	0	1	0	0	1	1	3
<b>Total</b>	19	6	6	5	3	6	5	50

<b>Chi-Square Tests</b>			
	<b>Value</b>	<b>df</b>	<b>Asymptotic Significance(2-sided)</b>
Pearson Chi-Square	70.199 <sup>a</sup>	36	.001
Likelihood Ratio	67.242	36	.001
Linear-by-Linear Association	14.498	1	.000
N of Valid Cases	50		

The result of chi square concluded that P value (.002) is less than 0.05 at 5% level of significance. Therefore, the null hypothesis (H<sub>0</sub>) is rejected. Thus, it is inferred that there is a significant association between brand preference and attracting attributes.

**H<sub>04</sub>: There is no significant association between brand preference and priority of attributes**

**Cross Table on Brand Preference and Priority of Attributes**

<b>Priority of Attributes</b>								
<b>Brand Preference</b>	<b>Price</b>	<b>Features</b>	<b>Brand</b>	<b>Package</b>	<b>Durability</b>	<b>Product assurance</b>	<b>Advertisement</b>	<b>Total</b>
Insurance	14	0	0	0	0	2	0	16
Detol	1	0	1	0	0	3	2	7
Savlon	4	1	1	0	1	5	0	12
Bacto	1	2	0	0	0	0	0	3
Lifebouy	1	1	0	1	2	2	0	7
Tri-activ	0	0	1	0	0	1	0	2
Others	1	0	0	0	1	0	1	3
<b>Total</b>	22	4	3	1	4	13	3	50

<b>Chi-Square Tests</b>			
	<b>Value</b>	<b>df</b>	<b>Asymptotic Significance (2-sided)</b>
Pearson Chi-Square	67.247 <sup>a</sup>	36	.001
Likelihood Ratio	55.875	36	.018

Linear-by-Linear Association	4.833	1	.028
N of Valid Cases	50		

The result of chi square concluded that P value (.001) is less than 0.01 at 1% level of significance. Therefore, the null hypothesis ( $H_0$ ) is rejected. Thus, it is inferred that there is a significant association between brand preference and priority of attributes

**H<sub>05</sub>: There is no significant association between brand preference and frequency of information gathering.**  
**Cross Table on Brand Preference and Frequency of Information Gathering**

Frequency of Information Gathering					
Brand Preference	Always	Sometimes	Rarely	Not at all	Total
Insurance	12	1	3	0	16
Detol	2	1	4	0	7
Savlon	1	5	5	1	12
Bacto	1	0	2	0	3
Lifebouy	0	4	3	0	7
Tri-activ	0	0	2	0	2
Others	0	2	1	0	3
<b>Total</b>	16	13	20	1	50

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	32.811 <sup>a</sup>	18	.018
Likelihood Ratio	35.440	18	.008
Linear-by-Linear Association	8.339	1	.004
N of Valid Cases	50		

The result of chi square concluded that P value (.018) is less than 0.05 at 5% level of significance. Therefore, the null hypothesis ( $H_0$ ) is rejected. Thus, it is inferred that there is a significant association between brand preference and frequency of information gathering

**H<sub>06</sub>: There is no significant association between brand preference and Senses affect the most by the advertisement of the product.**

**Cross Table on Brand Preference and Senses Affect the Most by the Advertisement of the Product**

Senses Affect the Most by the Advertisement of the Product						
Brand Preference	Sight	Sound	Smell	Taste	Touch	Total
Insurance	12	0	3	1	0	16
Detol	3	0	3	1	0	7
Savlon	2	2	6	1	1	12
Bacto	3	0	0	0	0	3
Lifebouy	3	0	4	0	0	7
Tri-activ	1	0	1	0	0	2
Others	3	0	0	0	0	3
<b>Total</b>	27	2	17	3	1	50

<b>Chi-Square Tests</b>			
	<b>Value</b>	<b>df</b>	<b>Asymptotic Significance (2-sided)</b>
Pearson Chi-Square	23.847 <sup>a</sup>	24	.470
Likelihood Ratio	26.056	24	.350
Linear-by-Linear Association	.005	1	.942
N of Valid Cases	50		

The result of chi square concluded that P value (.470) is greater than 0.05 at 5% level of significance. Therefore, the null hypothesis (H<sub>0</sub>) is accepted. Thus, it is inferred that there is a no significant association between brand preference and Senses affect the most by the advertisement of the product.

**H<sub>07</sub>: There is no significant association between brand preference and Cues enable to recall the advertisement and brand.**

**Cross Table on Brand Preference and Cues that Enable to Recall the Advertisement and Brand**

<b>Cues Enable to Recall the Advertisement and Brand</b>				
<b>Brand Preference</b>	<b>Verbal cues</b>	<b>Visual cues</b>	<b>Aural cues</b>	<b>Total</b>
Insurance	14	0	2	16
Detol	2	5	0	7
Savlon	4	6	2	12
Bacto	1	2	0	3
Lifebouy	0	6	1	7
Tri-activ	1	1	0	2
Others	1	1	1	3
<b>Total</b>	23	21	6	50

<b>Chi-Square Tests</b>			
	<b>Value</b>	<b>df</b>	<b>Asymptotic Significance (2-sided)</b>
Pearson Chi-Square	25.187 <sup>a</sup>	12	.014
Likelihood Ratio	33.967	12	.001
Linear-by-Linear Association	6.451	1	.011
N of Valid Cases	50		

The result of chi square concluded that P value (.014) is less than 0.05 at 5% level of significance. Therefore, the null hypothesis (H<sub>0</sub>) is rejected. Thus, it is inferred that there is a significant association between brand preference and Cues enable to recall the advertisement and brand.

**H<sub>08</sub>: There is no significant association between brand preference and Gaze attraction**

**Cross Table on Brand Preference and Gaze Attraction**

<b>Gaze Attraction</b>					
<b>Brand Preference</b>	<b>Pictures of person</b>	<b>of Product</b>	<b>Fonts</b>	<b>Advertisement content</b>	<b>Total</b>
Insurance	Pictures of person	Product	Fonts	Advertisement content	
Detol	12	1	2	1	16
Savlon	4	2	1	0	7
Bacto	2	6	0	4	12
Lifebouy	2	1	0	0	3
Tri-activ	1	2	1	3	7
Others	1	1	0	0	2
<b>Total</b>	1	2	0	0	3

**Chi-Square Tests**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	24.976 <sup>a</sup>	18	.126
Likelihood Ratio	29.111	18	.047
Linear-by-Linear Association	2.352	1	.125
N of Valid Cases	50		

The result of chi square concluded that P value (.126) is less than 0.05 at 5% level of significance. Therefore, the null hypothesis (H<sub>0</sub>) is accepted. Thus, it is inferred that there is a not significant association between brand preference and Gaze attraction.

**H<sub>09</sub>: There is no significant association between Annual Income and frequency of purchase.**

**Cross Table on Annual Income and Frequency of Purchase**

Frequency of Purchase					
Annual Income	Frequently	Weekly	Monthly	Rarely	Total
Below Rs.2,00,000	5	0	0	0	5
Rs.2,00,001 – Rs.5,00,000	10	4	14	3	31
Rs.5,00,001 – Rs.10,00,000	5	1	5	2	13
More than Rs.10,00,000	0	0	1	0	1
<b>Total</b>	20	5	20	5	50

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	10.397 <sup>a</sup>	9	.319
Likelihood Ratio	12.348	9	.194
Linear-by-Linear Association	3.422	1	.064
N of Valid Cases	50		

The result of chi square concluded that P value (.319) is greater than 0.05 at 5% level of significance. Therefore, the null hypothesis (H<sub>0</sub>) is accepted. Thus, it is inferred that there is a no significant association between Annual Income and Frequency of purchase.

**H<sub>10</sub>: There is no significant association between Annual Income and Amount spent on Disinfectants.**

**Cross Table on Annual Income and Amount Spent on Disinfectants**

Amount Spent on Disinfectants					
Annual Income	Below Rs.500	Rs.501 - Rs.1000	Rs.1001 - Rs.2000	More than Rs.2000	Total
Below Rs.2,00,000	5	0	0	5	5
Rs.2,00,001 - Rs.5,00,000	9	19	3	9	31
Rs.5,00,001 - Rs.10,00,000	2	7	4	2	13
More than Rs.10,00,000	0	1	0	0	1
<b>Total</b>	16	27	7	16	50

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.014 <sup>a</sup>	6	.014
Likelihood Ratio	16.802	6	.010
Linear-by-Linear Association	8.874	1	.003
N of Valid Cases	50		

The result of chi square concluded that P value (.014) is less than 0.05 at 5% level of significance. Therefore, the null hypothesis (H<sub>0</sub>) is rejected. Thus, it is inferred that there is a significant association between annual income and amount spent on Disinfectants.

**ONE-WAY ANOVA ANALYSIS**

**H<sub>011</sub>: There is no significant difference between brand preference and influence of neuromarketing on consumer emotions.**

**Table Showing Association Between the Brand Preference and Influence of Neuromarketing on Consumer Emotions**

Factors	Brand Preference	N	Mean	Std. Deviation
Influence of Neuromarketing on consumer emotions	Insurance	16	1.56	.869
	Detol	7	2.95	.293
	Savlon	12	2.96	.238
	Bacto	3	2.70	.390
	Lifebouy	7	3.06	.263
	Tri-activ	2	3.11	.157
	Others	3	2.74	.231
	<b>Total</b>	50	2.50	.844

**ANOVA Between the Brand Preference and Influence of Neuromarketing on consumer emotions**

Factors	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	21.544	6	3.591	11.586	.000
Within Groups	13.326	43	.310		
<b>Total</b>	34.870	49			

**Level of significance: 1%**

The result of ANOVA concluded that P value (.000) is less than 0.01 at 1% level of significance. Therefore, null hypothesis (H<sub>0</sub>) is rejected. Thus, it is inferred that there is a significant difference between brand preference and influence of neuromarketing on consumer emotions.

**H<sub>012</sub>: There is no significant difference between Age and influence of neuromarketing on consumer emotions.**

**Table Showing Association Between the Age and Influence of Neuromarketing on Consumer Emotions**

Factors	Age	N	Mean	Std. Deviation
Influence of Neuromarketing on consumer emotions	Below 20 years	16	2.44	1.153
	21 - 30 years	7	2.14	.900
	31 - 40 years	12	2.42	1.165
	41 - 50 years	3	1.67	1.155
	<b>Total</b>	7	2.14	.690

**ANOVA Between the Age and Influence of Neuromarketing on consumer emotions**

Factors	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.318	6	.886	.830	.553
Within Groups	45.902	43	1.067		
<b>Total</b>	51.220	49			

**Level of significance: 5%**

The result of ANOVA concluded that P value (.553) is greater than 0.05 at 5% level of significance. Therefore, null hypothesis (H<sub>0</sub>) is accepted. Thus, it is inferred that there is no significant difference between age and influence of neuromarketing on consumer emotions.

**FRIEDMAN RANKING ANALYSIS**

**Ranking of Disinfectants Brands**

Brands	Mean Rank	Rank Order
Insurance	3.76	9

Stardrops	2.94	<b>10</b>
Savlon	4.10	<b>8</b>
Bacto	4.46	<b>7</b>
Lifebuoy	5.47	<b>5</b>
Tri-activ	5.06	<b>6</b>
Insurance	6.53	<b>4</b>
Detol	7.78	<b>1</b>
Savlon	7.30	<b>3</b>
Bacto	7.60	<b>2</b>

**Source: Primary data**

Above table describes tanking of Disinfectants brands in order of preference. The brands were ranked from 1 to 10 and the statistical test is based on the following order of rank namely Detol as 1, Bacto as 2, Savlon as 3, Insurance as 4, Lifebuoy as 5, Tri-Activ as 6, Bacto as 7, Savlon as 8, Insurance as 9 and Stardrops as 10.

**CONCLUSION**

The study concludes that consumer has a clear perception that the techniques of neuromarketing influence unconscious mind to make the decision but the applications without revealing is unethical which creates consumer dissonance.

**REFERENCES**

<sup>1</sup>*Lester C.Tong, M. Yavuz Acikalın Alexander Genevsky, Baba Shiv (2020): Brain activity forecasts video engagement in an internet attention market, Proceedings of the National Academy of Sciences of the United States of America, ISSN 6936-6941*

<sup>2</sup>*Natalia Abuin Vences, Jesus Diaz Campo, Daniel Francisco (2020): Neuromarketing as an emotional connection tool between organizations and audiences in social networks. A theoretical review, Frontiers of Psychology, DOI 10.3389.*

<sup>3</sup>*Luis Manas Viniegra, Patrica Nunez Gomez, Victoria tur Vines (2020): Neuromarketing as a strategic tool for predicting how instagrammers have an influence on the personal identify of adolescents and young people in Spain, National Library of Medicine, DOI 10.1016.*

<sup>4</sup>*Billy Nascimento (2020): Marketing placebo effects: Evidence from a cosmetic test using Neuromarketing methods, article from Neuromarketing Science and Business Association.*

<sup>5</sup>*Mihaela Constantinescu, Andrea Orindaru, Andrea Pachitanu Laura Rosca(2019):Attitude evaluation on using neuromarketing approach in social media: Matching company’s purposes and consumer’s benefits for sustainable business growth. Sustainability journal 2019, 11(24)7094, ISSN 2071-1050.*