

Challenges of Marketing in COVID-19 Scenario: A Neuro-marketing Approach

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Abstract

The findings in the areas of neuromarketing are just like a lightning strike for the marketers all over the world, as a matter of fact if the purchase behavior of a person can be identified facial expressions and body language; it is going to work like a breakthrough in the field of sales and marketing. The result can be in the form of product and service customization and more creative and dedicated promotion campaigns. These neuromarketing will be affected by this pandemic of COVID-19 but in a short term. Process of studies can be followed and even sampling can be enhanced in the process. This present study will evaluate the scenario of customer preference and behavior in pre and post COVID-19 period. The findings of this present study state that some significant changes has been observed in customer preferences due to the outbreak of COVID-19, but the changes are not significant enough to bring about major changes in the strategic patterns; rather the researcher would like to suggest that the marketers should explore some new dimensions for attracting the customer. This study is based on primary data and the results are analyzed by using SPSS ver. 23.0.

Keywords: Neuromarketing, Consumer behavior, preferences.

Introduction

It is said that heart is the engine of human body and brain is the black box i.e. all the reflexes, emotions, feelings, memories, etc. are governed by our brain. In the present scenario of advanced information and technology scientists and researchers have identified ways and means to stimulate or control the particular section of brain and reduce any pain or ailment. On the other hand the advancement of neuroscience has learned to control the mind of a person and increase the capability in a number of ways.

All this development in the field of neuroscience has raised the interest of marketers in the same and in the last few years of 20th century experts started to take interest in the same. We can understand the meaning of neuromarketing in the sense that it can help in evaluating and measuring the neural sensors of a given person in different scenarios. This even stands true for different products, services and their respective brand names. In the process of evaluation marketers can make their advertising campaigns, product development system, etc. more creative and tailor made.

Ground level work on neuromarketing started in the early years of 21st century, when the subject experts and researchers started to test the relationship between marketing initiatives and impacts of the same on human psychology. Initial tests were conducted in Emory University in 2004, where same soft drink of two companies (*Coke and Pepsi*) was served to a test subject and neural changes were recorded. Result of the study stated that there were different reading for taste and brand name. even the limbic structure of the brain responded differently for the two brands but in case of taste lower degree of variation was recorded. At the next level researchers started to evaluate the sensory changes by putting a subject in fMRI machine, at this time the results were more specific. These tests were conducted with different flavors and brands of wine. Subjects were first served with three different types of wines, without mentioning the brand name and at the second level with brand names. Surprisingly the results were different in both the cases, like in second case when the price and brand was told to the subjects their receptors reacted differently and fMRI sheets collected the data of these changes. In the next few years a lot many of studies were conducted and in every second study these results were considered as base. **Hsu (2017)** has taken care to extend the work of Berkley university and raised two important point i.e. the fMRI machine can record the changes but the extent of the same cannot be defined, secondly almost all the subjects are

known to the popular brands and simultaneous presence of a brand can change the chemical composition of the subject and thought process as compared to any non-branded item. Further studies conducted in **UC Berkeley (2016)** came out with conclusion that on one hand the neuromarketing is opening new path for marketers and making the task of marketing more creative and to the point but on the other hand it is not able to handle the behavioral pessimism created due to increasing age, increasing or decreasing income, marriage and other demographic factors. These studies were again based on energy drinks, and the results stated that mood swings and behavioral patterns do not tally with the chemical reactions recorded. This was major breakthrough in the field of neuromarketing and the findings were published in the then issue of TIMES magazine.

Brief Description of Techniques of Neuromarketing

	fMRI	EEG	Eye tracking: gaze	Eye tracking	Biometrics	Facial coding
Process	Records neural activity of brain based on flow of blood to brain	Collects activities of neurons from the scalp	Evaluates the gaze of a person	Collects data about dilation of pupils	Collects data about heart beat and respiratory system	identifies facial expressions
Information	collects information about emotional changes and recall value	Period of attraction and recall period	Reason of attraction and state of confusion and also rate of recognition	Only attraction	Attraction and reasons for respective responses.	Emotional quotient
Application	Better pricing and creative branding	Creative advertising	Creative packaging and social media content		More responsive promotion campaign	

Source: Moran Cerf, of Northwestern University; Carl Marci, chief neuroscientist at Nielsen; and the Advertising Research Foundation.

Application for Marketers

The findings in the areas of neuromarketing are just like a lightning strike for the marketers all over the world, as a matter of fact if the purchase behavior of a person can be identified facial expressions and body language; it is going to work like a breakthrough in the field of sales and marketing. The result can be in the form of product and service customization and more creative and dedicated promotion campaigns. As discussed above, different techniques are used to assess the inner thought process and chemical changes in human body but the tools of such analysis are costly and if a given organization or corporate sector is going to use them for the purpose of research then the cost will be increased and a number of permissions from different agencies will be required.

ESOMAR conducted a study in the year 2011 which was based on cost evaluation of marketing research at global level. The findings of the research stated that by 2010 the overall research budget was around USD 33 Billion and the same is expected to increase by 30%-35% if the MNCs are going to involve neuromarketing in their research programs.

Some examples

- In case of food and beverages, the idea of neuromarketing can be used to stimulate the particular type of food and beverages and also the appearance can be more tempting. On the other hand complaints of customer regarding taste and odor will be reduced. Once there are no complaints then the sale of respective brands will be increased.
- Then in the field of entertainment, it evident from the past results that the makers are well aware of the thought process of their viewers and delivering all the dimensions of entertainment in lieu of the same. But if neuromarketing tools are being used in this area then there will be minimum probability of loss. As it is a well-known fact that, movies involve a huge budget and a number of people are dependent on the profit margin of the same, we also know that in many cases movies are not even able to recover the cost price. Involvement of neuromarketing can reduce this probability and revenue will be increased.
- Another area can be of politics where neuromarketing can be used as a tool to get the actual pulse of the voters. In the present scenario the political parties are selling their candidates like products to the voters and even the voters use to act like customers in the process. Here it is important to state that fighting an election is a very costly affair in the present times. If a political party is able map the positive and negative responses of the voters but he above mentioned techniques then tailor made candidates can be offered.

Neuromarketing and COVID-19

As per the reports of E&Y in consecutive years, the respective growth rate of neuromarketing is expected to increase at the rate of 14% per annum and this forecast was for the duration of 5 years i.e. 2021 to 2025. COVID-19 has been declared a pandemic by WHO within 3 months of its spread in a number of countries. As far as neuromarketing is concerned, it is a long term process and takes a lot of time to reach concrete results. Only a few developed countries and even fewer multinational companies are taking interest in such results. As a matter of fact the follow ups of neuromarketing will be affected by this pandemic of COVI-19 but in a short term. Process of studies can be followed and even sampling can be enhanced in the process.

As it can be seen today that customers are subscribing OTT platforms for new entertainment, ordering groceries, using various application to conduct and participate in meetings and even ordering foods from online avenues. In such a scenario where there is no physical contact between buyer and seller it is very difficult to estimate the results of activities related to neuromarketing and subsequent thresholds thereof. Here it is important to mention that the corporates and associated researchers will not be able to get fresh data because of extended lockdown at global level.

COVID-19 has not just affected the health of citizens but also brought about some major changes in their respective thought process, it is the result of lockdown at global level, events of long quarantine and even self-confinement has broken the earlier rules of measuring consumer behavior. Then on the other hand there is huge production and supply imbalance has been created between different countries of the world and all the developed and developing economies are facing the issues related to less income and high unemployment. In the COVID-19 period, social distancing is the new way of business; people are focusing on improving the hygienic conditions of their houses, searching for masks and sanitizers that can save them from infection and waiting eagerly for vaccine of the same to be developed. Convenience buying and home deliveries are preferred by most of the customers.

This present study will try to evaluate the impact of COVID-19 on consumer behavior and respective decision making process for routine products and services. Researcher will include primary data for the study and use scale based questionnaire to identify the inclination of respondents.

Objectives

The main objective of the study is to evaluate the consumer behavior during the period of COVID-19 and try to assess the results on the parameters of neuromarketing.

Hypothesis

H₀: There is a significant variation in the decision making process of customer during COVID-19 period.

H₁: There is no significant variation in the decision making process of customer during COVID-19 period.

Research Methodology

Data Collection

This present study is based on primary data, this study includes the respondents directly from different spheres of profession. Mainly the respondents are from Delhi and NCR. The total sample of this present study is 200. The researcher has followed cluster sampling as any other sampling procedure was hard to implement because the respondents were facing lockdown and are available in different cluster.

Rather the researcher has taken care that all the respondents are at least graduate, earning up to 40, 000 of income and belong to upper middle class or middle class segment of the respective society. The main tool of data collection was a check sheet and a structured questionnaire. Both the data are individually scanned and evaluation is done on cumulative results. In most of the cases the data was recorded by face to face interaction with the respondents. Most of the questions in the questionnaire are scale based and the items in scale vary from 5 to 7.

Along with the primary data some of the secondary data was also referred to get the concept of capital market and structure of the same, the different sources of the same were newspaper articles, journals, internet sources, etc.

Sample Size

As stated above the total sample size of the study was 200 respondents from different housing societies of Delhi and NCR.

Statistical Measure

- Factor Analysis
- Correlation Analysis

Data Analysis and Interpretation

Test Results

For changes in Preferences

Factor Analysis

As per the details given above, there are various advanced developments in the field of neuromarketing but then again it is very important to understand the reasons and level of variation in decided and actual purchases. The Period of COVID-19 has given a challenge to stay ahead and keep up the pace with fellow competitors. As this analysis will evaluate the difference between pre and post COVID-19 consumer behavior and normalization of the same with post COVID-19 period.

The researcher has conducted detailed factor analysis on the selected variable using SPSS Ver. 21.0 with the support of VRM (*Varimax Rotation Method*). The values of the weights stated in the below given table was based on the comparative correlation using KMO-Test (*Kaiser-Meyer-Olkin test*).

The results of KMO test value i.e. 0.68, states that the components used in factor analysis are compatible in order to proceed further, rather to be double sure the researcher has conducted BTS (*Bartlett Test of Sphericity*) where the value of χ^2 is approximately 352.19, this value provides strength for the fairness of data.

Table 1: Test Results for changes in preferences for Pre COVID-19 Period (Before Lockdown)

	Components
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Attributes Responsible for Preferences	M	SD	A	B	C	D
Factor 1-Appearance						
- Valid for basic needs only	3.98	.32	.51			
- Not applicable on luxury items	4.01	.49	.39			
- Cost effectiveness is a major consideration	3.74	.43	.59			
Factor 2- Reference groups						
- Least concerned	3.10	.61		.57		
- Most concerned	4.15	.35		.29		
- Moderately concerned	3.79	.57		.46		
Factor 3- Applicability						
- Confined to one time use	4.25	.31			.30	
- Regular household use	2.98	.55			.60	
- Safety is priority	3.99	.35			.34	
- Easy to store	3.19	.61			.60	
Factor 4- Demographics						
- Level of income and gender compatibility	3.08	.70				.59
- Education is the deciding factor						.35
- Reference from all age groups	3.94	.45				.29
	3.85	.34				
α (Alpha Value) for Reliability			.50	.44	.50	.40
Variance (in Percentage)			30.99	12.75	11.25	10.02
Aggregate Variance (in Percentage)			29.75	27.55	42.02	48.45

Table 2: Results for Post COVID-19 Period (Ongoing Lockdown)

Attributes Responsible for Preferences	M	SD	Components			
			A	B	C	D
Factor 1-Appearance						
- Valid for basic needs only	3.18	.68	.60			
- Not applicable on luxury items	2.99	.47	.51			
- Cost effectiveness is a major consideration	2.23	.69	.53			
Factor 2- Reference groups						
- Least concerned	2.99	.70		.69		
- Most concerned	3.89	.78		.57		
- Moderately concerned	3.98	.56		.51		
Factor 3- Applicability						
- Confined to one time use	3.99	.53			.56	
- Regular household use	2.15	.70			.60	
- Safety is priority	3.90	.67			.51	
- Easy to store	2.05	.78			.60	
Factor 4- Demographics						
- Level of income and gender compatibility	2.19	.70				.70
- Education is the deciding factor						.65
- Reference from all age groups	3.29	.56				.59
	3.55	.67				
α (Alpha Value) for Reliability			.55	.40	.41	.25
Variance (in Percentage)			27.55	15.90	14.15	8.25
Aggregate Variance (in Percentage)			27.89	23.05	22.30	62.02

The results stated in the above given table states that there is a slight difference between customer preferences i.e. pre and post COVID-19 period. There is a slight variation in the reliability values i.e. pre COVID-19 is more and post COVID-19 is less. This is an indication that the preferences of the customers have changed to a certain extent but then again it is not a 360⁰ turnaround from normal situation, it will take time for putting things back to normal.

Then on the other hand the level of variation in aggregate variation is less for post COVID-19 period, this is a surprising result and states that customer have restricted their demands to bare minimum but are not willing to compromise with the quality of the products they are going to use, here again the qualitative aspects are related to the results of neuromarketing, where the meaning of quality is different for different customers and again various factors like price, appearance, background, etc. become the deciding factors.

Results of Factor Analysis for shopping habits

Table 3- online v/s Offline mode Pre COVID-19 (Before Lockdown)

Component	Value			
	1	2	3	4
Ease of purchase	0.712			
Physical Verification is important	0.759			
Suitability	0.590			
Usage		0.795		
After sale service		0.677		
Exchange			0.525	
Choices				0.670

Table 3- online v/s Offline mode Post COVID-19 (Ongoing Lockdown)

Factors	Component			
	1	2	3	4
Ease of purchase	0.617			
Physical Verification is important	0.588			
Suitability	0.567			
Usage		0.565		
After sale service		0.518		
Exchange			0.679	
Choices				0.708

Table 3 and table 4 provide us with the comparison between the shopping habits of customer i.e. pre and post COVID-19 period. Analysis states that before the spread of COVID-19 customers are comfortable with both the modes of shopping i.e. on line and off line, as can be seen from the above table 3 that the

respective correlation values are either high or moderately high for all the given factors. In some cases like exchange and suitability values are less compatible but in rest of the cases values support the null hypothesis. Then on the other hand, results of post COVID-19 state that there is some amount of variation in the shopping preferences of the customer, i.e. the values of correlation coefficient ranges from moderately low to moderately high. This shows that customer have changed their avenues for shopping and considering online mode of shopping, as far as possible. As stated in the research methodology part, this study is conducted on the items apart from FMCG goods and main focus was on items like white goods, apparels, electronics, etc.

Neuromarketing Intervention

Here it is important to mention that in a normal state of mind, people use to care for a number of things, like appearance, approval of reference groups, price, applicability, choices, etc. but in a pandemic situation like COVID-19 people are caring for a few attributes like applicability and price. This does not mean that all the previous results related to neuromarketing are null and void, rather this can be considered as a break from regular marketing orientation. Researcher also observed that respondents still discuss, compare and evaluate each and every product before finally purchasing it. This is an indication that as the things become normal same attributes will be re-installed.

Conclusion

This present study is an integrated approach, where customer preferences and demographic components are very closely interpreted for comparing the effect of neuromarketing in pre and post COVID-19 period. As the basic orientation of neuromarketing states that it identifies the perception or preference of customers for a given set of products and services. The findings of this present study state that there are some significant changes in customer preferences due to the emergence of COVID-19, but the changes are not significant enough to bring about major changes in the strategic patterns; rather the researcher would like to suggest that the marketers should explore some new dimensions for attracting the customer, like they can increase the service quotient in their respective offerings, start loyalty programs for regular customers, make the offerings more personalize, etc. this will certainly give a boost to business in current period and also support the business in post COVID-19 period.

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