



ISSN: 2230-9926

Available online at <http://www.journalijdr.com>

IJDR

International Journal of Development Research

Vol. 14, Issue, 04, pp. 65454-65457, April, 2024

<https://doi.org/10.37118/ijdr.28051.04.2024>



RESEARCH ARTICLE

OPEN ACCESS

A STUDY ON NEUROMARKETING AND ITS IMPACT ON ADVERTISING

^{*1}Mohana Sujana, S. V. and ²Dr. C. P. Senthil Kumar

¹Assistant Professor, PG& Research Department of Commerce, Sri Kanyaka Parameswari Arts & Science College for Women & Research Scholar, Gurunanak College, Chennai – 42, Tamil Nadu; ²Assistant Professor, PG & Research Department of Commerce, Gurunanak College, Chennai – 42, Tamil Nadu

ARTICLE INFO

Article History:

Received 11th January, 2024

Received in revised form

18th February, 2024

Accepted 19th March, 2024

Published online 30th April, 2024

Key Words:

Neuromarketing, Neuro signals, Consumer, Advertisement, Buying behavior.

*Corresponding author:

Dr. Dhadurya Naik Merajothu

ABSTRACT

Neuromarketing is a new type of marketing which entered the marketing field and getting enormous response from the consumers. It is a type of marketing which reads consumer minds and preference about the products and tries to deliver as per their requirement. In general, neuromarketing refers to measurement of physiological and neural signals which gains insights into consumer preference, motivation, decision, buying behavior which paves way for innovative advertisements and product development and other areas of marketing. Through neuromarketing we can track neural activity, physiological tracking which includes eye movement and brain scanning. The purpose of the study is to find out whether there is a relationship between neuro signals and advertising in the minds of consumers and it creates impact among the consumers or not. Hence this paper focuses on whether neuro marketing acts a tool of advertising in the marketing field or not. Neuromarketing evaluates effectiveness of the strategies, which results from advertisement which has been measured and monitored using neuro imaging techniques such as Functional Magnetic Resonance Imaging (fMRI) and Electroencephalography (EEG). It decodes the process which is taking place in the consumer's mind and discovers their desires, needs, and wants and make sure they get what they want. This neuromarketing also creates a positive relationship between companies and customers which reflects in brand loyalty and brand retention. This paper discusses the importance of neuromarketing and suggests its potential to improve the effectiveness of advertisement and to know the mental impact of these neural signals in the minds of consumers.

Copyright©2024, Mohana Sujana, S. V. and Dr. C. P. Senthil Kumar. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Mohana Sujana, S. V. and Dr. C. P. Senthil Kumar, 2024. "A study on neuromarketing and its impact on advertising". International Journal of Development Research, 14, (04), 65454-65457.

INTRODUCTION

Neuromarketing has been popularized from the year 2002 by various research companies. Neuromarketing is a marketing strategy which connects the subconscious and emotional aspect of customers and aims to create a positive bond between customer and the product they use. Neuromarketing is an interdisciplinary field which is a combination of neuroscience, psychology, and marketing. It assesses the consumer cognitive and emotional reaction of the various marketing techniques. It is a new dimension in field of marketing. The main aim of neuromarketing is to investigate the consumer attitude towards the product from the cognitive angle. In other words, neuromarketing is a way to measure the physiological and neural signals which gains insight into customers motivation, preference and buying decisions. They use fMRI (Functional Magnetic Resonance Imaging) and EEG (Electroencephalogram) has the primary tool for scanning the brain. The consumers are unique in their thought process, decision making, buying behavior, preference etc., but the human brain is common which could be called as universal.

In recent years, the methods which has been followed in the field of neuroscience has grabbed an interest in our society and in the field of marketing and hence it is called as neuromarketing. In simple terms, a marketing or activity of market which implies the methods or technique or insights of neuroscience is called as neuromarketing.

Advertising

Advertising is a marketing activity which includes promotion of a product or services through any media in order to reach consumers who are willing to pay for a company product and use it for long period of time. It plays a vital role in shaping consumer opinion and attract them and retain with the product. Advertising acts a foundation for companies to take the product among the consumers. Therefore, the consumers look various aspects in advertising among which neuroscience has been much effectively implemented though various modes of advertisement. Hence, neuromarketing has been rapidly growing in the advertising era as the impact of the marketing has been effective and efficient.

REVIEW OF LITERATURE

1. **Cherubino, Martinez-Levy, & Trettel, (2019)** studied about the how companies use neuromarketing strategy to enter into the heads of customers and categorical the decision-making process. The author concentrated on how certain neuro techniques like Hear Rate, Galvanic skin response, eye tracking and facial expression inclined towards a product purchase.
2. **Madan & Popli, (2016)** argued about the Human Black Box concept under the neuromarketing area which has not yet been set its ways in Indian market. Since, it a new concept reaching the targeted audience using effective tools has been little difficult for India based companies. The authors also further extended the study and stressed on the availability of funds and independent variables to understand how it could increase in better way positively in our society.
3. **Morin, (2011)** explains about how the advertisements are being effective and also to understand the effectiveness of campaigning about brain-based tools like eye tracking, EEG or FMRI and other techniques which could help to easily understand the consumer mind.
4. **Kumar, (2017)** argues about how color establish brand recognition as it paves a way of identifying logo for brands and brand differentiation among the clustered market. In his research work, he mentions that individuals presume certain color with the relevant brands.
5. **Butler, M.J. (2008)** contends about increase of efficiency of print ads with usage of eye tracking, gaze path finder and heat mapping. He studied about the areas of attention grabbed by the consumers in print ad and the areas which has been unnoticed and suggested simple tricks to overcome. They concluded that faces or main objects capture more attention than headline and content. To overcome this they suggested that models used in advertisement should face headline and content which moves consumers eye towards the headline and content of the message. And therefore, eye tracking would be great impact in print ads.

Need for the Study: Advertisement has been playing a key role in the area of marketing as it is the one which creates the market for the products produced by the companies. In other words, advertisement is the one which creates demand for the product. So, these advertisements plays a crucial role in the buying decision process among consumers and so they have been supported by neuromarketing techniques which is nothing but connecting the neuro signals with the needs and wants of the consumers. These advertisements created with the help of neuro techniques such as Eye tracking, EEG, FMRI, facial expression etc. has been greatly impacted among the consumers in identifying the product and get connected towards it. The usage of neuromarketing techniques in advertisement has started blooming in the society from the past few years and the importance of these techniques has been slowly understood by the Companies doing the promotional activities and they started implementing it in their product visual ads.

Scope of the Study: Through the study the services of neuromarketing techniques in the advertisement sector would be analyzed. The study focuses on the implication of neuro techniques in the field of marketing which includes medical technologies like Functional Magnetic Resonance Imaging and Electroencephalogram which actually studies the activities of the part of the brain which influence decision making process of the consumers. These neuromarketing techniques actually grab the attention of the consumers more than in normal and specifies about the desires of the consumers and knows exactly what they want and they try to match their specifications. The advertisement using the neuro technique's actually gives a positive impact among the minds of consumers and gives a vibrant experience in the satisfaction of consumers wants and increase the sales of the product. Therefore, the study has been carried to know the impact level of advertising among the consumers.

Objectives

- To understand the concept of neuromarketing
- To analyze the factors of consumer behavior driven by neuromarketing.
- To determine the impact of neuro marketing on advertisement.

Limitations

- Respondents were limited to Chennai city.
- Sample size was restricted to 120
- Survey has been done in a short period of time
- The study focuses on the impact level of neuro techniques on advertisement
- The respondents would be biased

RESEARCH METHODOLOGY

Research design	Descriptive research design
Sampling method	Convenience sampling method
Data collection	Primary and secondary data
Sources of data	Books, journals, and internet
Data collection method	Survey
Sample size	120
Research instrument	Questionnaire
Data Analysis	SPSS
Tools	Reliability Test, Factor Analysis, Regression

Data Analysis and Interpretation: The data has been analyzed with the help of SPSS Package and various test has been done such as Factor Analysis, Reliability analysis, and Regression.

Table 1. Reliability Analysis

Reliability Statistics	
Cronbach's Alpha	N of Items
.854	16

Source: Computed data

Table 1 infers the reliability analysis which analysed 16 statements and Cronbach's alpha is .854 which infers that the analysis could be reliable and further tests could be done.

Table 2. Factor Analysis Consumer perception towards neuromarketing and its impact on advertising

Table 2.1 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.805	
Bartlett's Test of Sphericity	Approx. Chi-Square	581.587
	df	105
	Sig.	.000

Source : Computed data

KMO measures the sampling adequacy which should be close to 0.5 for a satisfactory analysis. Table 2.1 KMO measure is 0.805, and therefore it is accepted.

Table 2.2. Communalities

	Initial	Extraction
P1	1.000	.257
P2	1.000	.541
P3	1.000	.450
P4	1.000	.480
P5	1.000	.271
P6	1.000	.593
P7	1.000	.491
P8	1.000	.491
I1	1.000	.413
I2	1.000	.417
I3	1.000	.447
I4	1.000	.541
I5	1.000	.450
I6	1.000	.451
I7	1.000	.607

Source: Computed Data

Table of Communalities shows how much of variance has been accounted for the extracted factors. 54% of the variance “Colour” is accounted for, 59% of the variance “Rewards” is accounted for from Table 2.2.

representing all the components highlighted by the stated 15 variables. From the table it shows that the variables have grouped under two components. If the value is lower than the required value of 0.5 then the variables could be used for further.

Table 2.3. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.906	32.705	32.705	4.906	32.705	32.705	3.534	23.557	23.557
2	1.995	13.298	46.003	1.995	13.298	46.003	3.367	22.446	46.003
3	.992	6.612	52.616						
4	.978	6.520	59.135						
5	.845	5.630	64.766						
6	.829	5.524	70.289						
7	.760	5.068	75.357						
8	.715	4.767	80.124						
9	.621	4.140	84.264						
10	.539	3.596	87.860						
11	.480	3.202	91.062						
12	.436	2.909	93.971						
13	.368	2.452	96.423						
14	.281	1.874	98.296						
15	.256	1.704	100.000						

Source: Computed Data Extraction Method: Principal Component Analysis.

Table 2.4. Rotated Component Matrix^a

	Component	
	1	2
P6	.747	
P2	.736	
P7	.699	
P8	.682	
P4	.670	
P3	.647	
I7		.768
I4		.700
I6		.670
I1		.641
I5		.639
I2		.620
I3		.619

Table 3. Regression

Table 3.1 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.395 ^a	.156	.149	3.089

Source : Computed Data

a. Predictors: (Constant), T_P.

Table 3.2 ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	213.885	1	213.885	22.421	.000 ^b
	Residual	1154.261	121	9.539		
	Total	1368.146	122			

Source : Computed Dataa. Dependent Variable: I_

b. Predictors: (Constant), T_P

Table 3.3 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	21.400	1.685		12.701	.000
	T_P	.346	.073	.395	4.735	.000

Source : Computed Dataa. Dependent Variable: I_

Table 2.3 shows that for 1st component value is 4.906 > 1, 2nd component is 1.995 > 1, and 3rd component is 0.992 < 1. Thus, the stated set of 15 variables represents two components. Further, the extracted sum of squared holding % of variance depicts that the first factor accounts 32.705% of the variance features from the stated observations, the second 13.298%. Thus, 2 components are enough in

But two variables has been below 0.5 and it has been excluded from the study. Hence, further processing includes all variables except Colour and rewards of the product (Table 2.4). From the Anova Table 3.2, the significant value F(22.421) = 0.0000 (p- value value), the significant value is less than 0.005, which concludes there is a statistically significant.

Suggestion

Neuromarketing is an emerging trend in the field of marketing where it stimulates the consumer minds with their past emotions and experiences. According to the study most of the consumers are preferring the products of the company on their own interest for the products and based on the services provided by them but the impact was not on the products due to the perception of consumers regarding neuro marketing techniques. The impact of neuromarketing on advertising is high due to the strategies and techniques used by the company in promoting the product but it is not depended on the perception of the consumers.

CONCLUSION

Neuromarketing is a trending technique used by the companies to understand the consumer psychology. This marketing technique is exploring as human brain cannot to be completely read and their intentions could not be easily known. By using neuromarketing certain implications of human brain could be evaluated which leads them to the purchase of a product. Through the research, I would like to mention that neuromarketing is a required one in a current scenario of marketing though it is monotonous it brings certain positive impact on the products as human could be triggered with memories, colours, shapes and perception on advertising which could lead to buying behaviour of consumers. This marketing technique is one way of retargeting consumer minds with the nostalgic events. To conclude, neuromarketing is a qualitative technique used by the companies to enrich the result-oriented inputs as it provides a higher quality in understanding consumers.

REFERENCES

- Harit Kumar, Priyanka Singh (Dec 2015), “ Neuromarketing : An Emerging Tool of Market Research” IJEMR, ISSN (Online) : 2250-0758, ISSN (Print) : 2394-6962, Volume 5 , Issue 6, Page Number: 530-535 Link: https://www.researchgate.net/publication/305640494_Neuromarketing_An_Emerging_Tool_of_Market_Research
- Dsouza Prima Frederick (Feb 2022), “Recent trends in Neuromarketing – An Exploratory Study” IJCSBE, ISSN : 2581-6942, Volume 6, Issue 1, Link: <https://doi.org/10.47992/IJCSBE.2581.6942.0148>
- Sarah Kari, Aarushi Arun, Mahek Pundir (May 2020), “Neuromarketing and its effect on consumer behaviour and brand perception”IJCRT, ISSN: 2320-2882,Volume 8, Issue 5, Link : <https://ijcrt.org/papers/IJCRT2005066.pdf>
- M. Raghuvaran, S.Gomathi (Nov 2019), “Consumer Neuroscience and its application in marketing” IJRTE, ISSN : 2277-3878, Volume 8, Issue 4, Link : <https://www.ijrte.org/wp-content/uploads/papers/v8i4/C4248098319.pdf>
- Surya Narayanan, Praveen Raj (2020), “Neuromarketing : The Science of Consumer Behaviour”, ISBN : 978-93-5419-748-2, Link : <https://forms.iimk.ac.in/research/markconf20/Proceedings/232.pdf>
- Surabhi Singh (Sep 2020), “Impact of neuromarketing applications on consumers”, Journal of business and management, Page Number ; 33-52 Link :<http://jbm.johogo.com/pdf/volume/2602/JBM-2602-02-full.pdf>
