

# An Analysis of the Perception of Digital Consumers of Different Age Groups Towards Personalized Advertisements; with special reference to Indore and Bhopal cities of Madhya Pradesh

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**Abstract** - In many ways as advertising has gone from traditional media to new media, it has changed very much. It has changed its focus from being mass oriented to individual specific. In 2000, Kenny and Marshall have said it very well that the advancement in digital domain would bring drastic change in marketing practices. In forthcoming years marketer reach the right customers at the right time. In the past years, according to Forrester Research, Marketers’ interest in and spending for data and analytics has increased from 8% to 12% (Diaz Nesamoney, 2017). This big data and its analysis are making digital advertising smarter by enabling personalization in advertisements. The easy availability of information on internet enables personalization of online advertisements in the form of display ads and banner ads. But, with an increase in personal information usage, the feeling of intrusiveness may also increase, regardless of the fact that personalization level of advertisement increases its relevance. This study identifies how digital consumers of different age group perceive such personalized advertisements. It explores security risk and intrusive aspect of personalized advertisement. To carry out this study survey method has been adopted and data collected from 631 respondents has been analysed through SPSS. The result shows that personalized advertisements are trending among young and middle age adults and young adults are found more inclined towards them. It has been found that young consumers are perceiving such ads positively and often found involved in shopping through them. Finally, the research throws light on the challenges that abundance of data will bring up for marketers and summarizes suggestions made by analysing content to enrich advertising industry.

**Keywords** - *Personalized Advertising, Digital Media, Consumer Perception, Big Data and Analytics.*

## INTRODUCTION

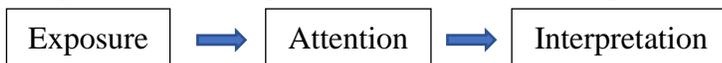
Advertisements has become an integral part of person’s life. A day starts with reading the newspaper while breakfast, through interacting with mobile and computers in workplace and ends to watching television with

family. All these mediums of mass communication are flooded with advertisements. But, Advertisement from the time of its evolution has changed many faces. It came into existence with a simple objective of informing people which now turned to a highly sophisticated tool of persuasion at a subliminal level. Advertisements are one of the largest generators of revenue in world economic system, whose major share is now occupied by online advertisements. Digital media has become a prime platform for advertisers to execute their promotional activities and reach their target customers.

The development of modern technology facilitated the collection of already available large amount of data and information about the potential customers. Due to this fact, a lot of business have started investing in personalizing individual's experience through customization of content they come across on digital platforms. Now, when consumers are exposed to such personalized ad, they get motivated through them which ultimately leads to generation of profits (Gerdman, Thomas, & Nordqvist, F., 2017). Personalization embeds the application of artificial intelligence (AI), and machine learning (ML) in cognitive and social psychology (Chandra, S., et.al, 2022).

**Personalized Advertising** – Previously advertising and marketing efforts are focused on targeting the whole market which has changed over a period of time and now the offerings are designed individual specific which is known as personalized advertising (Simonson, 2005). Chandra, S., et.al. (2022) in their study also defined personalized advertising as offering the right product and service to the right customer at the right time and right place. With the help of new technologies like collaborative filtering which is used for building a recommender system, which models user-item relations using data such as feedback and ratings to predict user preference and generate tailored content (Luo, J. et.al., 2023). Today, personalized advertising has become the most effective and profitable for promotion of goods and services. Companies are spending an extensive amount of their budget on personalized advertising.

**Consumer Perception** - Perception is the process by which people select, organize and interpret external and internal stimuli to create their own view of the world. The external stimuli are the sensation that bombard them almost constantly, which prod them to see, smell, touch hear and taste what is there. The internal stimulus can be either physiological or psychological (Thomas F., & Mader, Diane C. 1990). Overall perception is simply the process of Selecting, organizing and interpreting information inputs in order to produce meaning that would aid in consumption decision-making.



**Figure 1. Process of perception** (Thomas F., & Mader, Diane C. 1990).

The aim of this study is to identify how digital consumers of different age groups perceive such personalized advertisements. It will explore security risk and intrusive aspect of personalized advertisement. By understanding consumer perception in detail, the present study contributes to the new and advanced insights that adds fresh and upgraded knowledge to the topic been researched.

## STRUCTURE OF THE MANUSCRIPT

After section I comprising the title, abstract, and introduction, the following section II consists of Literature Review followed by Research Objectives, Hypothesis, Methodology, Result and Analysis, Conclusion, Suggestions and lastly, it enlists the references in APA format.

## REVIEW OF LITERATURE

Luo, J. et al. (2023), analysed Privacy-preserving recommendation system based on user classification. In this study, researchers propose RSUC, a privacy-preserving Recommender System based on User Classification. To attain better data confidentiality, RSUC incorporates homographic encryption. To mitigate performance issues, RSUC classifies similar users in groups and computes the recommendation in a group while retaining privacy and accuracy. The security analysis of this study suggests that RSUC is secure under the semi-honest adversary model. The result of the experiment conducted indicates that RSUC achieves 4x performance improvement over the standard approach and offers 54x better overall performance over the existing solution.

Chandra, S. et al. (2022), explained Personalization in personalized marketing: Trends and ways forward. This study gives an intellectual structure to the field of personalized marketing by identifying, organizing, and analyzing all available literature through a bibliometric review process using performance analysis and science mapping. The researchers in the present study did a comprehensive review of 383 publications and identified the publication and citation trends, the most renowned authors, journals and publications, and six main themes (i.e. personalized recommendation, personalized relationship, personalization-privacy paradox, personalized advertising, personalization concept and discourse in marketing, and customer insights in personalized marketing). It adds up to insightful information and knowledge in the field of personalized marketing. The result of this study indicates that personalization is considered a subset of segmentation, which doesn't justify the true essence of personalization.

Boerman, S. C. et al. (2021), analysed When is personalized advertising crossing personal boundaries? How type of information, data sharing, and personalized pricing influence consumer perceptions of personalized advertising. This study identifies which form of personalized ads are perceived as acceptable and in which situations negative feelings predominate. The researcher conducted a 4 (type of information) x 2 (sharing of information) x 3 (personalized pricing) scenario-based experiment among a representative sample of the Dutch population (N = 1244). The results of this study conclude that people in general have a negative attitude towards personalized advertising. Personalized ads that use individual-specific and personal information like e-mail content and name, when shared with other parties, retargeted with higher personalized prices, led to a negative perception of personalized advertising and high resistance to the context, message, and source of the advertiser. Further, the study adds that advertisements that feature higher prices based on personal information led to even stronger negative perceptions.

As it is already discussed that personalization of online advertising has a substantial impact on consumer perception but at the same time some consumers find it intrusive as well because they perceive it as invasion of their personal space. Also, perceived security risk, placement and timings are other important factors that affect the effectiveness of online personalized ad. The present study is an attempt to look varying perception of digital consumers of different age group from Bhopal and Indore region.

## RESEARCH OBJECTIVES

- Identifying the trend of Personalized Advertising among Digital Consumers of different age group
- Comparing and Analyzing Perception of Digital Consumers of different age group towards Personalized Advertisement.
- Determining Awareness among Digital Consumers towards privacy measures to control Personalized Advertisement exposure.

## HYPOTHESIS

- H 1 Personalized Advertisements are trending among Young Digital Consumers.
- H 2 Personalized Advertisements has a positive impact on Digital Consumer Perception.

## METHODOLOGY

The research is primarily quantitative in nature and the research design for the present study is descriptive in nature. For collection of primary data questionnaire as a tool has been developed and distributed offline as well as online (Google form) for data collection. The universe of study is Bhopal and Indore region of Madhya Pradesh. Purposive sampling technique was adopted for sample selection. Total 682 responses were received out of which 631 were found valid for final data analysis. SPSS as a statistical tool has been used for data analysis and hypothesis testing.

## RESULTS & ANALYSIS

- **Table 1. Reliability Test**

S. No.	Variables Name	Reliability Statistics	
		Cronbach's Alpha	No. of Items
1.	Perception of Digital Consumers towards Personalized Advertisements	.968	110

- Cronbach Alpha method was adopted to check the reliability of scale and internal consistency of instrument. After calculating reliability, analysis found important value of Cronbach's Alpha i.e., **0.968** for Perception of Digital Consumers towards Personalized Advertisements which is higher than the standard value of Cronbach Alpha i.e., 0.70. It means that **questionnaire was highly reliable**.

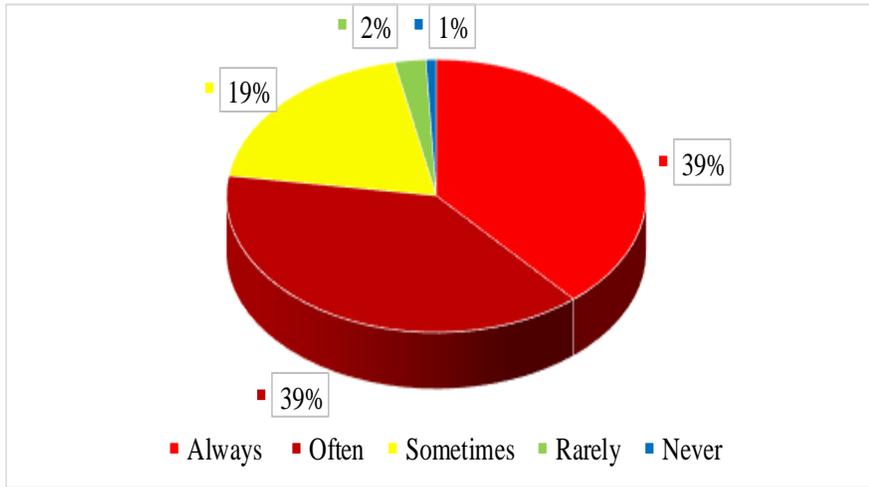
- **Table 2. Demographic Representation**

S. No.	Category (s), Frequency (%)			
1.	Gender	Male	Female	
		316 (50.1%)	315 (49.9%)	
2.	Age	Young Adults (18-35)	Middle Age Adults (36-55)	Elder Adults (55+)
		250 (39.6%)	200 (31.7%)	181 (28.7%)
		3.	Place	Bhopal
435 (68.9%)	196 (31.1%)			

In demographic representation shown in table 2, demographics were shown as per the responses recorded by the respondents. As far as gender is concerned out of 631 respondents there were 50.1% males and 49.9% females. Out of which 39.6% were young adults belonging to 18-35 years age group, 31.7% were middle age adults belonging to 36-55 years age group and 28.7% were elders belonging to 55+ age group. Majority of respondents that is 68.9% were from Bhopal region and 31.3% were from Indore region.

## Psychographic Representation

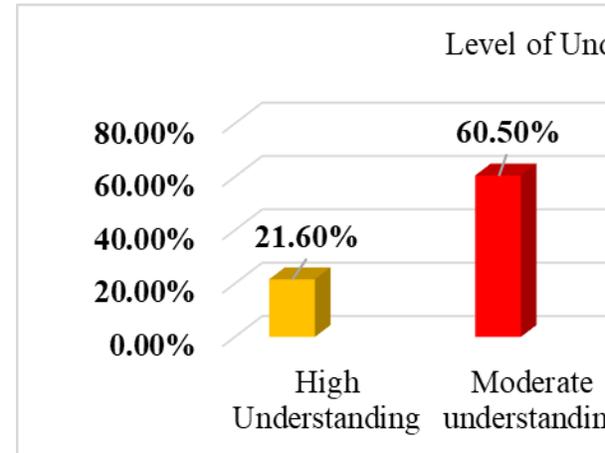
Graph 1 – Presence of Advertisements Online.



### Q.1. While surfing how often do you see Online Advertisements?

Graph 1 depicts the presence of advertisements online. Out of 631 respondents surveyed 39% are always and 39% are often exposed to online advertisements while surfing. The data indicates a strong presence of online advertisements.

### Q.2. What level of understanding do you have about Personalized Advertisements?



Graph 2 – level of understanding about personalized advertising

Graph 2 depicts the level of understanding among digital consumers towards personalized advertisements. Out of total 631 respondents It has been found that maximum of respondents i.e., 60.5% have moderate understanding about personalized advertising and 21.6% has high understanding.

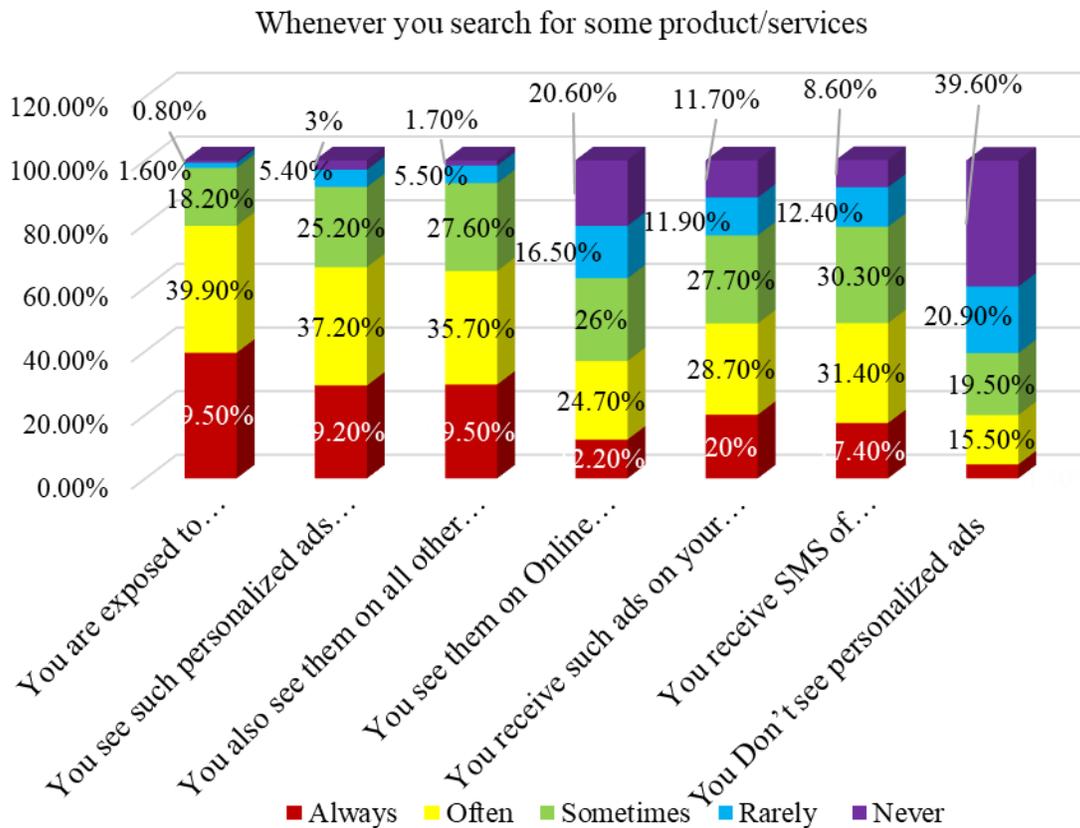
### Q.3. What are Personalized Advertisements in your view?

Personalized Advertisements are;	SA	A	N	D	SD
1. Ads customized to users based on their demographics, interest and online behavior	37.6%	53.10%	6.8%	2.1%	0.5%
2. Ads that are retargeted based on customer’s previous searches, and purchase history	39.6%	49%	9.4%	2.1%	0%
3. Ads that we see on our personal social networking sites	22%	53.1%	17%	7.6%	0.3%
4. Tailored advertising that messages directly to their needs	18.9%	59.4%	14.3%	6.2%	1.3%
5. Advertisements tailored to an individual’s characteristics, interest or taste	20%	58.2%	14.3%	4.9%	2.7%

Table 3 – Defining Personalized Advertisements

Table 3 presents different definitions of personalized advertisements and its understanding among digital consumers. 90.7% of total respondents either strongly agreed or agreed that Personalised advertisements are Ads customized to users based on their demographics, interest and online behaviour. 88.6% of total respondents either strongly agreed or agreed that personalized advertisements are Ads that are retargeted based on customer’s previous searches, and purchase history. The data indicates that “Personalized advertisements are ads customised to users based on their demographics, interest, previous searches, online behaviour and caters to their need”.

**Q.4. Presence of Personalized Advertisements on various online platforms;**



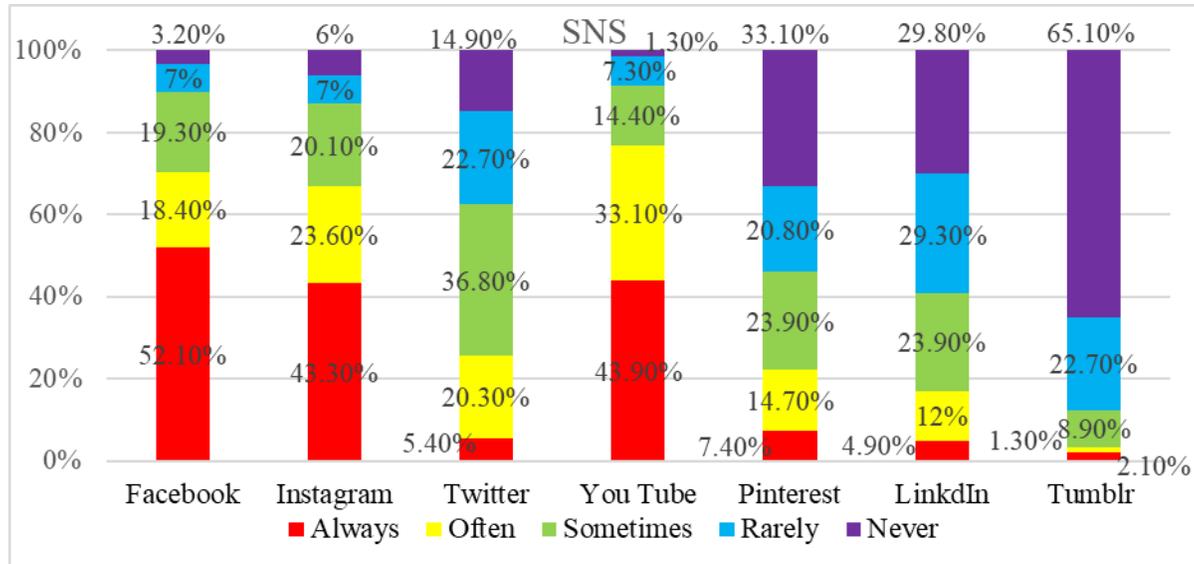
Graph 4 – Representing Presence of Personalized Ads on various platforms

Through question no. 4 researcher has tried to identify trends of personalized advertisements online. The data analysis of same identifies that Out of total respondents 79.4% said that they are always or often exposed to personalized advertisements of same and similar products after searching them online. 66.4% of total respondents always or often find them on their SNS. 65.2% of total respondents always or often found them on other websites they surf.

37.5% of total respondents rarely or never found them on online gaming portals, and only 36.2% always or often found them on gaming portals. 48.7% of total respondents always or often receive those ads on their email. 48.8% of total respondents always or often get SMS with some offering. 60.5% of total respondents responded that it never or rarely happens that they don't see personalized ads. The data indicates strong presence of Personalized advertisements on SNS as well as on other websites that digital consumers surf. The chi square test has been applied on this question showed a significant result for the hypothesis (H 1).

The p value found is less than significance level  $\alpha = 0.05$ . which Indicates that alternate hypothesis is accepted.

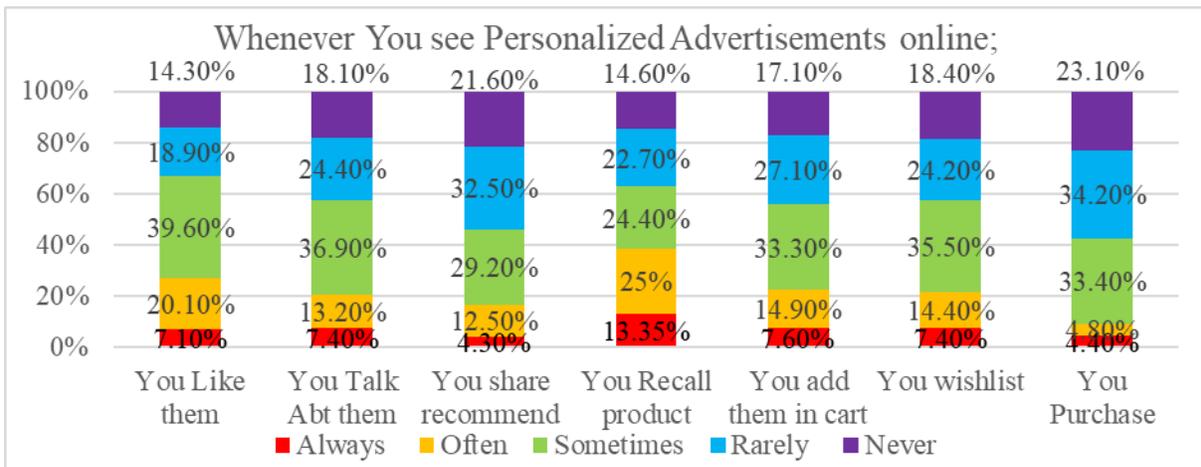
**Q.5. On which of the following social networking site you mostly see personalized ads?**



Graph 5 – Representing Personalized Ads presence on SNS

Graph 5 depicts presence of personalized advertisements on social networking sites. Out of total respondents 77% always or often see personalized advertisements on YouTube. 70.5% of total respondents always or often found them on Facebook. 66.9% of total respondents always or often found them on Instagram. The data indicates strong presence of Personalized Advertisements on YouTube, Facebook and Instagram.

**Q.6. How do you respond when you are exposed to personalized advertisement;**

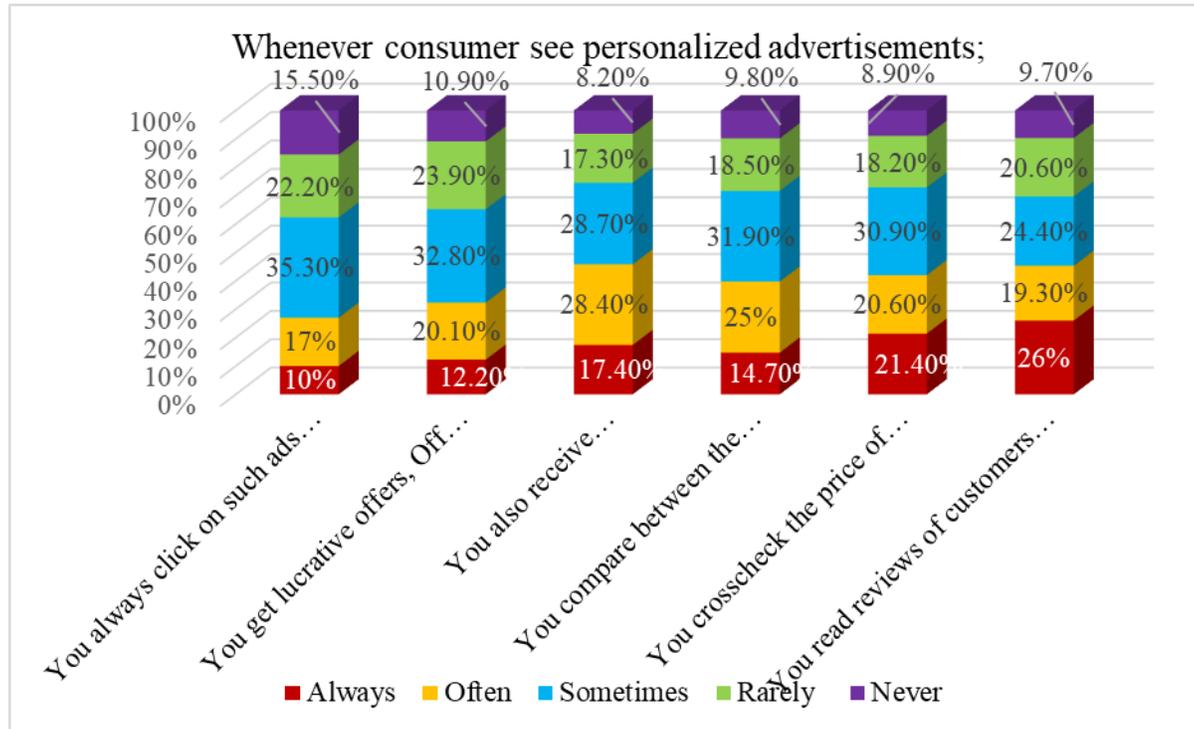


Graph 6 – Responses of Digital consumers on exposure of personalized ad online

Graph 6 represents that when digital consumers are exposed to personalized advertisements, out of total respondents only 27.2% always or often like them while 39.6% like them sometimes. 20.6% always or often talk about them with their family and friends and 36.9% sometimes does the same. Majority of respondents that is 54.1% rarely or never share or recommend such ads to their friends and family. 38.35% of total respondents always or often recall the product that they have wish listed or added in cart earlier after seeing

personalized ad. Only 22.5% of total respondents always or often add the product to cart. Only 9.2% of total respondents always or often end up buying that product and 33.4% sometimes end up buying. The data indicates that although consumers are responding positively to personalized advertisements but the conversion to sell through them happens only sometimes.

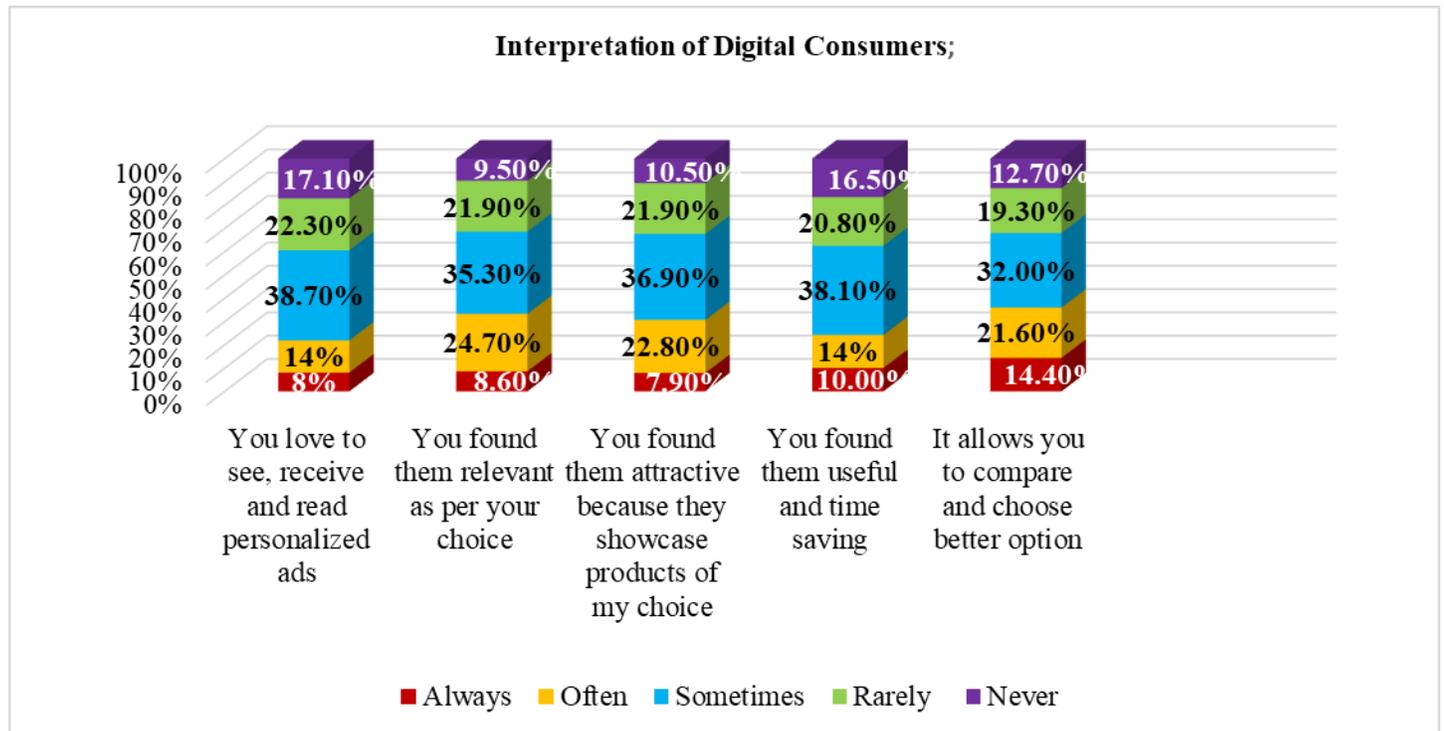
**Q.7. How much attentive you are towards such personalized advertisements?**



Graph 7 – Representing attentiveness of digital consumers towards Personalized ads.

It can be seen in Graph 7 that Out of total respondents 27% always or often and 35.3% sometimes clicks on personalized ads to see its details. Out of total respondents 27% always or often and 35.3% sometimes clicks on personalized ads to see its details. 45.8% always or often and 28.7% sometimes receives recommendation of similar products. 39.7% always or often and 31.9% sometimes compare between the similar products. 42% always or often and 30.9% crosscheck and compare the price of product on different ecommerce sites. Out of total respondents 45.3% always or often and 24.4% also read reviews of customers and analyse ratings given to that product. The data indicates that digital consumers are attentive towards personalized advertisements and they also check other options, do price comparison and analyse reviews and ratings before purchase.

**Q.8. Types of interpretation you make after watching a personalized advertisement;**

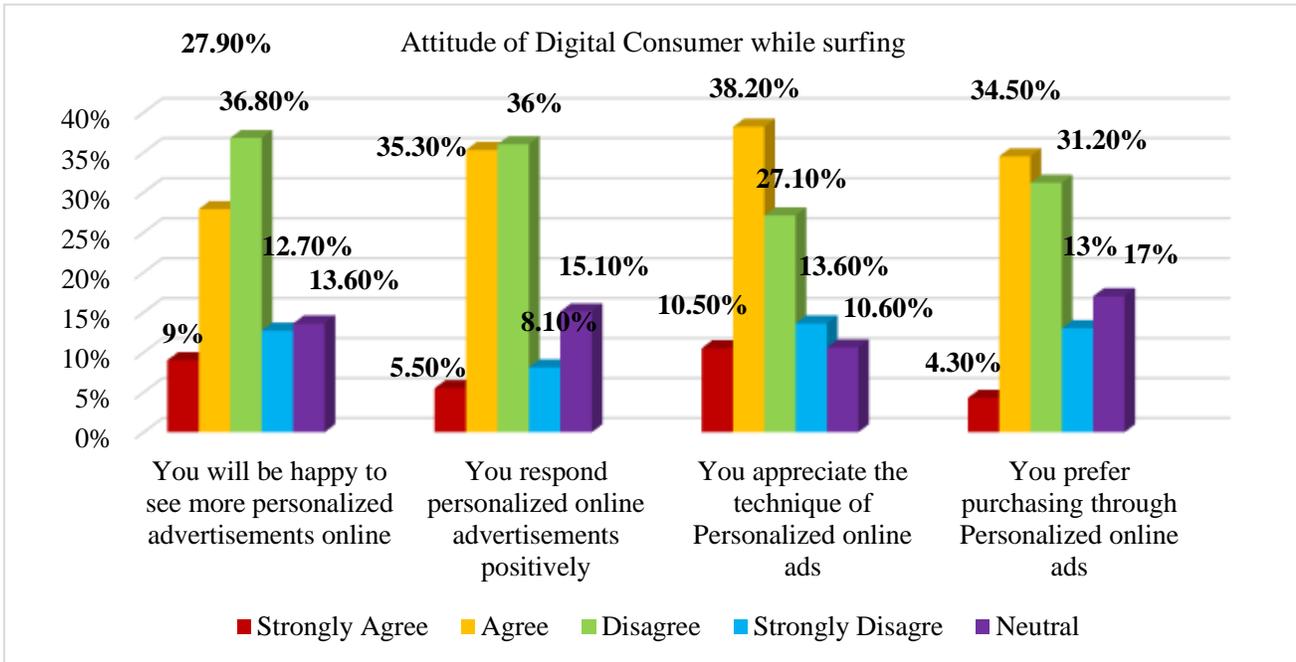


Graph 8 – Representing interpretation of digital consumers after watching personalized ad

As it can be seen in above Graph 8 Out of total respondents only 22% always or often and 38.7% sometimes love to see and receive personalized advertisements. 33.3% of total respondents always or often and 35.3% sometimes found them relevant as per their choice. 30.7% of total respondents always or often and 36.9% sometimes found them attractive. 24% of total respondents always or often and 38.1% sometimes found them useful and time saving. 36% of total respondents always or often and 32% sometimes believe that such ads allow them to compare and choose better option. The data indicates that majority of digital consumers are interpreting personalized advertisements in a right way and sometimes they even end up shopping.

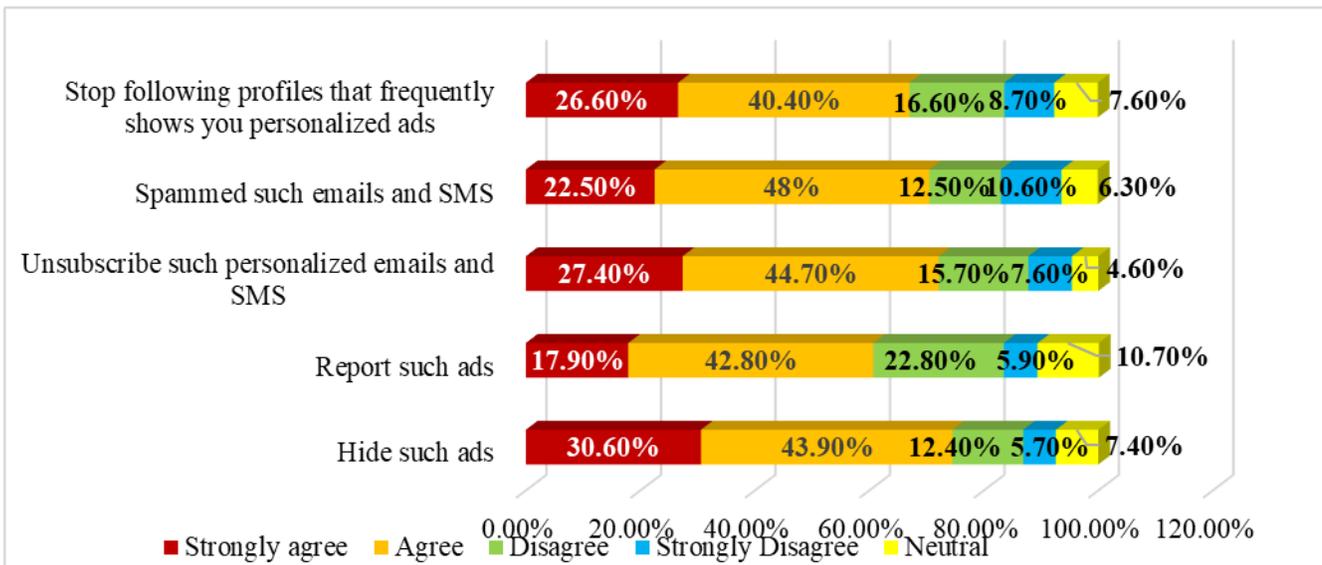
**Q.9. Digital Consumer’s attitude towards Personalized Advertisements;**

Graph 9 depicts attitude of digital consumers towards personalized advertisements. The analysis of data indicates that 36.9% of total respondents agrees that they will be happy to see more personalized advertisements while 49.5% disagreed to this statement. 40.8% of total respondents agreed that they respond positively to personalized advertisements and 44.9% disagreed to this statement. 48.7% of total respondents agreed that they appreciate the technique used for personalization of advertisements while 40.7% disagreed on this statement. 38.8% of total respondents agreed that they prefer to do purchasing through personalized advertisements while 44.2% disagreed on this statement. The data indicates that digital consumers are having a moderate positive attitude towards personalized advertisements. One sample t-test applied to this question shows a significant result for the alternate hypothesis (H 2), the p-value is found to be less than significance level 0.05 therefore alternate hypothesis is accepted.



Graph – 9 Representing attitude of digital consumers towards personalized advertisements

**Q.10. To limit the exposure of Personalized Advertisements what type of privacy measures you take;**



Graph 10 – Presenting the awareness among digital consumers towards privacy measures

It can be seen in Graph 10 that to limit the exposure of personalized advertisements 74.5% of total respondents agreed that they hide such ads. 60.7% of total respondents agreed that they report such ads. 72.1% of total respondents agreed that they unsubscribe such emails and SMS. 70.5% of total respondents agreed that they Spam such mails and SMS. 67% of total respondents agreed that they stop following such profiles that frequently show them personalized ads. The data indicates that maximum respondents are aware of the privacy measures to be taken to control exposure of online personalized advertisements.

## CONCLUSION

The study concludes that personalized advertisements are trending among young digital consumers as analysis of data indicates its strong presence on online media platforms. Also, such ads are found majorly on YouTube followed by Facebook and Instagram. Trend has been defined as a prevailing tendency; through data analysis it has also been found that maximum consumers are responding positively to personalized advertisements by liking and sharing them. The study also highlights a positive perception of digital consumers towards personalized advertisements. Perception is built through three steps i.e., exposure, attention and interpretation which ultimately leads to consumer attitude. It has been found in study that digital consumers are having a good exposure of personalized advertisements, they are found to be very attentive towards personalized advertisements as they check other options, do price comparison and analyse reviews and ratings before purchase. Also, Majority of digital consumers are interpreting personalized advertisements in a right way and sometimes they even end up shopping. The study revealed that consumers are having a moderate positive attitude towards personalized advertisements and young consumers followed by middle-age adults are found more inclined towards such ads. As far as consumer privacy is concerned it has been found that maximum respondents are aware of the privacy measures to be taken to control exposure of online personalized advertisements. Maximum of the respondents know how to hide and report such ads and how to unsubscribe such mails and SMS.

## SUGGESTIONS

With the development of Digital Data online, Internet has drastically expanded the modern marketer's tool kit. As users regularly share their personal data online and web cookies track every click, marketers should be cautious in using their personal data. By careful analytics they can gain unprecedented insight into consumers and serve up solutions tailored to their individual needs. By understanding consumers, advertisers may deliver unique shopping experiences that exceed their expectations and drive customer loyalty. When Personalization is performed in an acceptable way, consumers will not only pay attention to it but also interpret it correctly. Research has also shown that personalized advertisements are having a positive impact on digital consumer perception.

## REFERENCES

- Boerman, S. C., Kruikemeier, S., & Bol, N. (2021). When is personalized advertising crossing personal boundaries? How type of information, data sharing, and personalized pricing influence consumer perceptions of personalized advertising. *Computers in Human Behavior Reports*, 4, 100144. <https://doi.org/10.1016/j.chbr.2021.100144>
- Bright, L. F., & Daugherty, T. (2012). Does Customization impact advertising effectiveness? An exploratory study of consumer perception of advertising in customized online environment. *Journal of Marketing Communications*, 18 (1): 19-37. DOI:[10.1080/13527266.2011.620767](https://doi.org/10.1080/13527266.2011.620767)
- Chandra, S., Verma, S., Lim, W. M., Kumar, S., & Donthu, N. (2022). Personalization in personalized marketing: Trends and ways forward. *Psychology & Marketing*, 39(8), 1529–1562. <https://doi.org/10.1002/mar.21670>
- Chaudhuri, S., Dayal, U., & Narasayya, V. (2011). An Overview of Business Intelligence Technology. *Communications of the ACM*. <http://cacm.acm.org/magazines/2011/8/114953-an-overview-of-business-intelligence-technology/fulltext>
- Gerdman, T. & Nordqvist, F. (2017). An Exploratory Study on Perceptions of Personalised Display Ads Online. Master Thesis, Jonkoping University, Sweden. <http://www.diva-portal.org/smash/get/diva2:1107779/FULLTEXT01.pdf>

Kenny, D., & Marshall, J. F. (2000). Contextual Marketing: The Real Business of the Internet. *Harvard Business Review*, 78(6), 119-125.

Luo, J., Yang, X., Yi, X., & Han, F. (2023). Privacy-preserving recommendation system based on user classification. *Journal of Information Security and Applications*, 79, 103630. <https://doi.org/10.1016/j.jisa.2023.103630>

Mader, T. F., & Mader, D. C. (1990). *Understanding One Another; Communication Interpersonally*.

Nesamoney, D. (2017). Personalized Digital Advertising; How data and technology are transforming how we market.

Simonson, I. (2005). Determinants of Customers' Responses to Customized Offers: Conceptual Framework and Research Propositions. *Journal of Marketing*, Vol. 69, pp. 32-45. Sage publication