

A Study on Consumer Behaviour Towards Beauty Industry using AR Mobile Application

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ABSTRACT

In earlier stage consumer used to buy their product through the retail shop. In recent years the digital technologies have taken fast development and the worldwide availability of internet services have significantly transformed consumer shopping behaviour. Now a days consumer has start using AR technology to purchase their products which helps to avoid the irrelevant product before buying. Hence, the present study aims to understand the consumer behaviour towards online shopping using mobile application. This study focuses on the factors that influence on online shopping using AR technology. The study also considers demographic factors which play a crucial role in online buying behaviour. The primary data has been used in this study. The sample size of the study 120 and has been used convenience sampling method. The study reveals that the majority of the respondents are below 20 years age group says that the female respondents are more interested to buy cosmetic product using AR technology. There is no significance difference between gender of the respondents and the influencing factors towards online shopping

Keywords: Consumer, Online shopping, AR technology

INTRODUCTION

In recent years online shopping has changed the customer behaviour. Most of the consumers using mobile phones for online shopping to buy variety of product. Before AR technology, innovation customers had to visit stores to get satisfaction with the products. There were no virtual try on, which was making hard to do online shopping or get personalized choices. Apparel industry was the first to launch AR technology in online shopping followed by beauty industry. So, beauty industry decides to implement their new ideas for consumer to make them get satisfaction while purchasing the product. In this application virtual try on feature help the customer to check cosmetics to their skin tone before buying the product. Online shopping helps the consumer easy to purchase the product because it gives convenience, variety of choice, offers, and time saving features. One limitation of online shopping faces is that the product cannot be touch before purchase but AR tool help to fill this gap like the physical and digital shopping experiences. It allows you to shop from anywhere, anytime and compare prices easily before making a purchase. AR technology imposes digital transformation on to the real-world environment, enabling consumers to virtually try on products such as clothing & Accessories, Electronic & Gadgets, fashion, Beauty & Personal care, Home & Kitchen Product. This direct experience enhance customer engagement, reduces uncertainty and increase satisfaction which can significantly influence purchasing behaviour. AR allows customer to visualize how products will look or function in real life, thereby reducing return rates and boosting

confidence in purchase decisions. For the past few years online shopping has been more active because of consumer purchase more products. AR tools help to buy the product using online platforms like brand apps, social media filter, in store AR mirror, Retailer website or others. Mostly youngster playing a significant role in online shopping using smart phones, laptop, Tablet, computer and I pad. Because the customer can buy the product from wherever they want. The study considers some of the factors how AR technology influences the customer behaviour, factors like better product visualization, improve decision making, reduce return, try before you buy and trust worthy. By analysing demographic factor age, gender, marital status, place of domicile, educational qualification, occupation, family monthly income and type of family this helps to analyse the study customer behaviour towards AR technology.

REVIEW OF LITERATURE

Dr. A. Kokila (2023)¹ has conducted “A Study Focus on Customers Level of Satisfaction Towards Online Shopping in Erode Town”. The aim of the study is to determinant that socio economic and demographic factors of the respondents and analyse the customer level of satisfaction towards online shopping. The study used tools like descriptive analysis and chi square test were used in this study. The major findings of this research were website responsiveness, website transaction security and website responsiveness are the most important dimensions that affect customer satisfaction. website personalization is the least important for customer satisfaction, website quality is an important factor for customer satisfaction. A good layout, functioning website helps promote customer satisfaction while shopping online. Website reality such as timely delivery of products, being truthful about its offering, fast delivery is also very important for customer satisfaction.

Muhammed Muntaqheem, Satish D Raiker (2019)² has analysed “A study on consumer behaviour towards online and offline shopping”. The purpose of the study is to find out consumer motivations, perceived benefits and drawbacks, long term impacts of online shopping versus physical store shopping. The study is based on these tools like percentage analysis and chi-square. The major findings of the study male population tend to shop more online shopping rather than physical shopping. The safety of payment more preference is given to shopping malls related to physical shopping and flip kart is the best site used for online shopping as it gives more discounts and offers.

Kavitha Rajayogan & Dr. Muthumani.S (2019)³ has examined “Consumers Attitude Towards Online Shopping In Tamil Nadu – A Study”. The main purpose of the study is to analyse the attitude of consumers towards online shopping in major cities in Tamil Nadu and also find the factors that are influencing online shopping. The main statistical tools used in the study are ANOVA and correlation. The findings of the study revealed that the attitude of consumer towards internet shopping on the basis of their income and gender. Hence the hypothesis is accepted. It is found that high income has more attitudes towards online shopping. The attitude of consumer towards internet shopping is having positive correlation and is significant towards age, gender, income, education level and marital status. It's also having a negative correlation toward family size.

OBJECTIVE OF THE STUDY

To evaluate the factor influencing toward online shopping towards beauty industry using AR technology.

RESEARCH METHODOLOGY

In this research design descriptive research method and structured questionnaire were framed to find out

the demographic factors influencing the online shopping using AR technology. The sample size of the study is 120 respondents. The study used primary data questionnaire were collected from the age of below 20 to 40 years. The statistical tool used in this study are Percentage analysis, T- test & ANOVA. This study is descriptive in nature.

DATA ANALYSIS AND INTERPRETATION

Table No. 1 – Demographic Factors of the Respondents

Factors	Classification	No. of. Respondents	Percentage
Age	Below 20 years	60	50.0
	20 to 25 years	32	26.7
	26 to 30 years	19	15.8
	31 to 40 years	9	7.5
Gender	Male	13	10.8
	Female	107	89.2
Marital Status	Unmarried	77	64.2
	Married	43	35.8
Place of Domicile	Rural	30	25.0
	Urban	78	65.0
	Semi Urban	12	10.0
Educational Qualification	Up to School level	13	10.8
	Undergraduate	70	58.3
	Postgraduate	25	20.8
	Professional	9	7.5
	Diploma	3	2.5
Occupation	Business	5	4.2
	Employed	24	20.0
	Professional	12	10.0
	Student	68	56.7
	Homemaker	11	9.2
Family Monthly Income	Up to Rs.10,000	30	25.0
	Rs. 10,001 to Rs 30,000	47	39.2
	Rs. 30,001 to Rs. 45,000	26	21.7
	Rs. 45,001 to Rs. 60,000	6	5.0
	Above Rs. 60,000	11	9.2
Type of family	Nuclear Family	86	71.7
	Joint Family	34	28.3

Source: computed data

INTERPRETATION

From the above table it is clear that among 120 respondents using AR app for online shopping of cosmetic products, the highest of 50 percentage of the respondents belongs to the age group of below 20 years, followed by 26.7 percentage of the respondents belongs to the age group of 20-25 years, the lowest of 7.5 percentage of the respondents belongs to the age group of 31 to 40 years. Majority 50.0 percentages of the

respondents belong to the age group below 20 years says that this age group shows much interested using in AR application. Among 120 respondents using AR app for online shopping of cosmetic products, the highest of 89.2 percentage of the respondents belongs to the female, followed by the lowest of 10.8 percentage of the respondents belongs to the male. Majority 89.2 percentages of the respondents belong to the female, shows that females are much interested to buy cosmetic product using AR technology. Among 120 respondents using AR app for online shopping of cosmetic products, the highest of 64.2 percentage of the respondents belongs to the Unmarried, followed by the lowest of 35.8 percentage of the respondents belongs to the Married. Majority 64.2 percentages of the respondents belong to the Unmarried, shows that they are able to sense the product using AR which give them more confident before making a purchase. Among 120 respondents using AR app for online shopping of cosmetic products, the highest of 65.0 percentage of the respondents belongs to the Urban, followed by the lowest of 10.0 percentage of the respondents belongs to the Semi Urban. Majority 65.0 percentages of the respondents belong to the Urban consumers believe their AR technology to improve their decision making. Among 120 respondents using AR app for online shopping of cosmetic products, the highest of 58.3 percentage of the respondents belongs to the Undergraduate, followed by the lowest of 2.5 percentage of the respondents belongs to the Diploma. Majority 58.3 percentages of the respondents belong to the Undergraduate are highly influenced by social media trends and use of AR helps to choose their product apt to their skin tone which satisfy them as a in person shopping. Among 120 respondents using AR app for online shopping of cosmetic products, the highest of 56.7 percentage of the respondents belongs to the students, followed by the lowest of 4.2 percentage of the respondents belongs to the Business. Majority 56.7 percentages of the respondents belong to the students, they are quick to adapt the new technology for fun and to get new shopping experience while shopping the products. Among 120 respondents using AR app for online shopping of cosmetic products, the highest of 39.2 percentage of the respondents belongs to the Rs. 10,001 to Rs. 30,000, followed by the lowest of 5.0 percentage of the respondents belongs to the Rs. 45,001 to 60,000. Majority 39.2 percentages of the respondents belong to the family monthly income of Rs. 10,001 to Rs. 30,000 says that online products are more comfortable for comparison of price, trust worthy, time saving. Among 120 respondents using AR app for online shopping of cosmetic products, the highest of 71.7 percentage of the respondents belongs to the nuclear family, followed by the lowest of 28.3 percentage of the respondents belongs to the joint family. Majority 71.7 percentages of the respondents belong to the nuclear family are using AR technology to choose variety of product to their taste.

T – Test

H0: There is no significance difference between gender of the respondent and the influencing factors towards online shopping.

Table No. 2 – T – Test – Influence Score – Gender

Gender	N	Mean	Std. Deviation	T	Table value	Sig
Male	13	3.628	0.667	1.806	0.182	NS
Female	107	3.604	0.521			

NS – Not significant

INTERPRETATION

In the above table T- Test is used to find the difference between gender and the influencing factors towards online shopping. In the mentioned table ($F = 1.806$, $p = 0.182$), there is no significant difference between

the gender and the influencing factors towards online shopping since the P value ($p=0.182$) is greater than 0.05, Hence the null hypothesis is accepted.

H₀: There is no significance difference between Marital status of the respondent and the influencing factors towards online shopping.

Table No. 3 – T- Test – Influence Score – Marital Status

Marital Status	N	Mean	Std. Deviation	T	Table value	Sig
Unmarried	77	3.6082	.61527	14.060	0.000	S
Married	43	3.6019	.35752			

Significant at 1% level

INTERPRETATION

In the above table T - Test is used to find the difference between Marital Status and the influencing factors towards online shopping. In the mentioned table ($F= 14.060$, $p= 0.000$), there is significant difference between the Marital status and the influencing factors towards online shopping since the P value ($p=0.000$) is greater than 0.05, Hence the null hypothesis is rejected.

H₀: There is no significance difference between Types of family of the respondent and the influencing factors towards online shopping.

Table No. 4 – T- Test – Influence Score – Type of family

Type of Family	N	Mean	Std. Deviation	T	Table value	Sig
Nuclear Family	86	3.6130	.52773	.078	.780	NS
Joint Family	34	3.5879	.56280			

NS – Not Significant

INTERPRETATION

In the above table T – Test is used to find the difference between Types of family and the influencing factors towards online shopping. In the mentioned table ($F= .078$, $p= .780$), there is no significant difference between the types of family and the influencing factors towards online shopping since the P value ($p=.780$) is greater than 0.05, Hence the null hypothesis is accepted.

Table No. 5 - Factors Influencing Towards Online Shopping Using AR Technology

Descriptive Statistics					
Factors	N	Minimum	Maximum	Mean	Std. Deviation
Surety of /product quality	120	1	5	3.68	0.927
Comparison of Prices	120	1	5	3.82	0.979
Savings	120	1	5	3.47	1.012
Time Management	120	1	5	3.57	0.914
Value for Money	120	1	5	3.433	0.9678
Pre-Purchase Precautions	120	1	5	3.82	0.840
Branded Products	120	1	5	3.55	0.960
Better product visualization	120	1	5	3.39	1.31

Improve decision making	120	1	5	3.05	1.24
Reduce Return	120	1	5	3.00	1.28
Try before you buy	120	1	5	3.28	1.35
Trust worthy	120	1	5	3.33	0.290
Valid N (list wise)	120				

Source: Computed data

INTERPRETATION

It is seen from the above table that, most of the items have mean ratings is 3 and the highest mean rating is 3.82 for the statement comparison of prices and Pre – Purchase Precaution followed by Surety of product quality (3.68) and Time Management (3.57). All other statements have ratings above 3.4 (least influence) and below 3.82 (moderate influence). That is on the average, the respondents have stated that the influence of factors towards online shopping using AR technology fall between least and moderate influence. The lowest mean rating is 3.00 for security which also falls between least influence (3.4) and moderate influence (3.82). All items have a minimum rating 1 and maximum rating 5. Influence scores were found out for all the respondents by adding the ratings given by the respondents to the set 12 of items given in the rating scale for influence about online shopping using AR technology. Higher scores will indicate more positive influence towards online shopping. These scores were further analysed based on demographic profile of the respondents.

ANOVA

ANOVA test is used to find out if there is any significant difference between the respondent demographic factors of age, gender, place of domicile, educational qualification, occupation, monthly income and number of family members and the factors of consumer behaviour towards online shopping of cosmetic products using AR technology at 5 percent level of significance. Higher score is the more factors of consumer behaviour towards online shopping of cosmetic products using AR technology. The mean score has been compared with the demographic factors to know the level of factors of consumer behaviour towards online shopping of cosmetic products using AR technology.

H0: There is no significance difference between demographic factors and factors of consumer behaviour towards online shopping of cosmetic products using AR technology.

Table No. 6 - ANOVA – Demographic Factor and Consumer Behaviour towards Online Shopping

		Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	.834	3	.278	.968	.410
	Within Groups	33.307	116	.287		
	Total	34.140	119			
Gender	Between Groups	5.197	31	.168	2.307	.001
	Within Groups	6.395	88	.073		
	Total	11.592	119			
Place of Domicile	Between Groups	10.954	31	.353	1.097	.359
	Within Groups	28.346	88	.322		
	Total	39.300	119			

Educational Qualification	Between Groups	21.806	31	.703	.931	.577
	Within Groups	66.519	88	.756		
	Total	88.325	119			
Occupation	Between Groups	30.743	31	.992	.880	.647
	Within Groups	99.123	88	1.126		
	Total	129.867	119			
Family Monthly Income	Between Groups	39.597	31	1.277	.896	.625
	Within Groups	125.394	88	1.425		
	Total	164.992	119			
Number of members in the family	Between Groups	35.452	31	1.144	1.305	.168
	Within Groups	77.140	88	.877		
	Total	112.592	119			

Source: Computed data

INTERPRETATION

The results of the ANOVA table show the calculated P-value for age is 0.410, 0.001 for gender, 0.359 for place of domicile, 0.577 for education qualification, 0.647 for occupation, 0.896 for family monthly income and 0.168 for number of family members. The P value at 5% level of significance is more than 0.05 for the all the factors except gender. Hence it can be concluded that there is no significance difference between all the factors like age, place of domicile, educational qualification, occupation, monthly income and number of family members and factors of consumer behaviour towards online shopping of cosmetic products using AR technology. Since the P value at 5% level of significance is less than 0.05 for gender it can be concluded that there is significant difference between gender and factors of consumer behaviour towards online shopping of cosmetic products using AR technology. Hence the null hypothesis is accepted for of age, place of domicile, educational qualification, occupation, monthly income and number of family members. Hence the null hypothesis is rejected for gender.

FINDINGS

Demographic Factors

Majority 50.0 percentages of the respondents belong to the age group below 20 years says that this age group shows much interested using in AR application.

Majority 89.2 percentages of the respondents belong to the female, shows that females are much interested to buy cosmetic product using AR technology.

Majority 64.2 percentages of the respondents belong to the Unmarried, shows that they are able to sense the product using AR which give them more confident before making a purchase.

Majority 65.0 percentages of the respondents belong to the Urban consumers believe their AR technology to improve their decision making.

Majority 58.3 percentages of the respondents belong to the Undergraduate are highly influenced by social media trends and use of AR helps to choose their product apt to their skin tone which satisfy them as a in person shopping.

Majority 56.7 percentages of the respondents belong to the students, they are quick to adapt the new technology for fun and to get new shopping experience while shopping the products.

Majority 39.2 percentages of the respondents belong to the family monthly income of Rs. 10,001 to Rs.

30,000 says that online products are more comfortable for comparison of price, trust worthy and time saving.

Majority 71.7 percentages of the respondents belong to the nuclear family are using AR technology to choose variety of product to their taste.

Factors Influencing Towards Online Shopping Using AR Technology

The lowest mean rating is 3.00 for security which also falls between least influence (3.4) and moderate influence (3.82).

T- test & ANOVA was conducted to verify the hypothesis. There is no significance difference between Marital status of the respondent and the influencing factors towards online shopping. Hence the null hypothesis is accepted.

There is no significant difference between the Marital status and the influencing factors towards online shopping. Hence the null hypothesis is rejected.

There is no significant difference between the types of family and the influencing factors towards online shopping. Hence the null hypothesis accepted.

There is no significance difference between all the factors like age, place of domicile, educational qualification, occupation, monthly income and number of family members. Hence the null hypothesis accepted.

There is no significance difference between gender. Hence the null hypothesis rejected

CONCLUSION

From this study it is clear that the consumer behaviour of online shopping through AR technology helps to comparison of price, pre purchase precaution and surety of product quality. AR allows consumer to interact with products in a more realistic and immersive way helping them to visualize items before purchasing. This reduces uncertainty and make confidence in online buying and to take decisions. This study shows that consumer especially youngers are mostly attracted to AR enabled platforms due to their interactive and engaging features. Over all AR technology not only improve customer satisfaction but also changes the purchasing behaviour of the customer.

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