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The Impact of Demographic Variability on Online Buying Behaviour: A Case Study of Panipat District of Haryana, India

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Abstract: This study investigates the demographic features of consumers engaging in online shopping and examines how these variables are associated with their shopping experiences. By analysing data categorized by age, gender, education level, and status, the research aims to find out the patterns and relationships that can improve the marketing strategies and user experience updating for online retailers. The findings of the study provide an understanding of the behaviours of online shopping consumers and relationships of various demographic groups with issue faced, online buying frequency, return experiences etc.

Keywords: Demographics, online Shopping, online buying frequency, return experiences

1 INTRODUCTION

The online buying behaviour of consumers significantly depends on the various demographic factors, such as age, income, education, and location influence consumer preferences and purchasing decisions. Younger generations prefer online shopping due to their tech-friendly behaviour and tendency of frequent use of social media. Educational background also plays a significant role regarding proper navigation and trust in e-commerce platforms, attributed to the confidence in online shopping. Employment status is also an important factor towards online shopping, as the employed consumers prefer to buy online due to their busy schedule. Rapid growth in the digital infrastructure, particularly the cheaper internet facilities provided by various telecom companies, is attributed to the dramatic improvement in the number of online consumers. Urban consumers find it convenient to shop online, while rural consumers find it difficult, might be due to less digital literacy and internet accessibility. The rise of digital payment platforms like GPay, Phone Pay etc., and smartphone accessibility made online shopping more comprehensive. Understanding these demographic trends is very helpful to formulate marketing strategies through which marketing objectives such as consumer satisfaction and related concerns can be addressed effectively.

Researchers have also pointed out the impact of social media affecting the online buying behaviour in India (Dhanajeyan, 2021; Maity & Sandhu, 2021), depicting how digital engagement affects the consumers decisions. Chaudhuri et al., 2021, studied the Impact of demographic factors on the buying behaviour in buying grocery products and found that buying tendency vary across the demographic factors. Dixit et al. and 2022; Garai & Sen, 2022, explored the variation between online and offline consumer behaviour in emerging cities and found that demographic variations play a key role in online purchasing behaviour. Region specific studies performed in Tripura and Lucknow showed how demographic factors motivate the consumer for online shopping (Roy & Datta, 2022; Kapoor et al., 2022). Age and product categories are also significant factors to influence the tendency of consumers in buying apparels products (Trivedi et al., 2023). Digital awareness and difference in region also contribute to altering online buying behaviours of consumers (Singh & Rani, 2023). The psychological and economic factors are also responsible for impulsive buying behaviour of the consumers (Gottumukkala et al., 2023; Rani & Rex, 2023). The shifting of consumers from traditional shopping platforms also depends on the demography of the consumers (Khan et al., 2025). Additionally, Various socioeconomic factors like digital access, and income levels also responsible for distinctive online buying behaviours of consumers (Turkson et al., 2024). The demographic factors are prominent to drive the customer behaviour towards online shopping (Sutha et al., 2024; Basalma, 2024).

As the online buying behaviour of consumers is highly dependable on demographic variations, this study aims to analyse the demographic characteristics of the respondents. This study also explores the relationship between demographic variables and their experience towards online shopping, especially in the region of Panipat district of Haryana, India. It seeks to provide an understanding of how demographics factors affect the online buying behaviour in the said district, giving valuable insights to retailers, policymakers, and businesses personals to improve online engagement of consumers.

2 OBJECTIVES OF THE STUDY

The key objectives of this study are as follows:

1. Analyse the demographic characteristics of the respondents.

2. Explore the relationship between demographic variables and their experience towards online shopping.

3 RESEARCH METHODOLOGY

This study is based on primary and secondary data. The primary data was collected via a structured questionnaire and direct interaction with online consumers. A total of 151 responses were received from the respondents lives in the Panipat district of Haryana, India. A free version of PSPP software is used to analyse the data. Pearson Chi-Square tests are applied to explore associations between demographic variables and issue faced, return experience, online buying frequency, overall satisfaction level, security feeling during online shopping.

4 RESULTS AND DISCUSSION

4.1 Demographic Variations of Online Consumers

The data as shown in Table 1 is categorized based on age, gender, education level, and status to provide a comprehensive overview of the sample composition. The largest segment of online shoppers of this study falls within the 27-30 years age group (35.8%), followed by 19-22 years (30.5%). The 23-26 age group accounts for 27.8%, showing a strong presence of young adults who may have disposable income. Younger consumers (15-18 years) represent only 6%, possibly due to limited financial independence. Female shoppers (52.3%) slightly greater male shoppers (47.7%), suggesting that online shopping might appeal more to women, due to product variety and convenience. Consumers with high school and undergraduate education are equally represented at 34.4% each, while postgraduates account for 31.1%. This shows that online shopping spans all educational backgrounds, with younger consumers. Employed consumers (41.7%) make up the largest group, showing that financial stability positively influences e-commerce activity. Students (31.8%) also form a sizeable part, likely benefiting from discounts and convenience. Unemployed consumers (26.5%) may rely on online shopping for budget-friendly options.

Table 1 Demographic Variations of Online Consumers

Demographic Variable	Category	Frequency	Percentage
Age	15-18	9	6.0
	19-22	46	30.5
	23-26	42	27.8
	27-30	54	35.8
	Total	**151**	**100**
Gender	Female	79	52.3
	Male	72	47.7
	Total	**151**	**100**
Education	High School	52	34.4
	Undergraduate	52	34.4
	Postgraduate	47	31.1
	Total	**151**	**100**
Status	Student	48	31.8
	Unemployed	40	26.5
	Employed	63	41.7
	Total	**151**	**100**

4.2 Issues Faced during Online Shopping

As shown in the Figure 1, product quality (34.40%) is the most frequent issue faced by the respondents during online shopping, indicating that consumers often receive items that do not meet expectations. Payment issue (23.80%) is a second major concern, suggesting that complications in transaction processing. Delivery Delay (23.20%) is another common challenge, pointing to logistical inefficiencies or delays from courier services that negatively affect the shopping experience. No Issues (18.50%), a relatively small percentage, suggest that only a fraction of consumers have had entirely satisfactory experiences.

4.3 Return Experience of the Respondents

A significant 27.20% of consumers find returns difficult (Figure 2). Conversely, 23.80% report a very easy return experience, suggesting that certain platforms have effectively streamlined their return policies. Meanwhile, 25.80% of consumers feel neutral, showing that their return experiences vary depending on the situation. Furthermore, 23.20% find returns easy, emphasizing that simplified procedures greatly contribute to overall customer satisfaction.

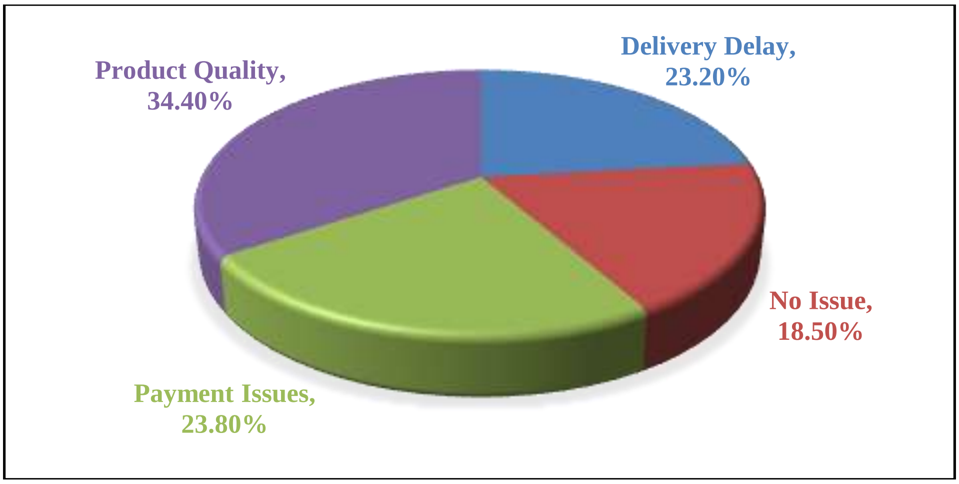

Figure 1 Issues faced during online shopping.

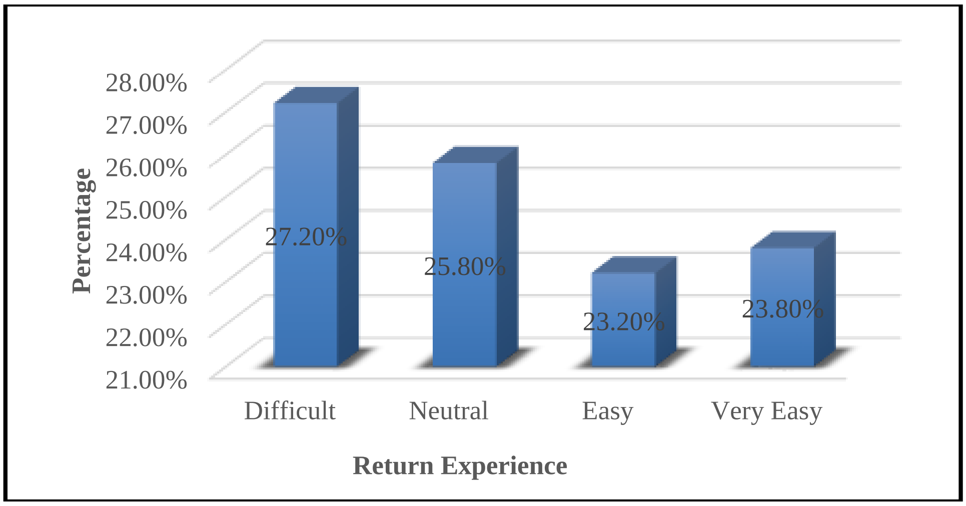

Figure 2 Return Experience of the respondents in online shopping.

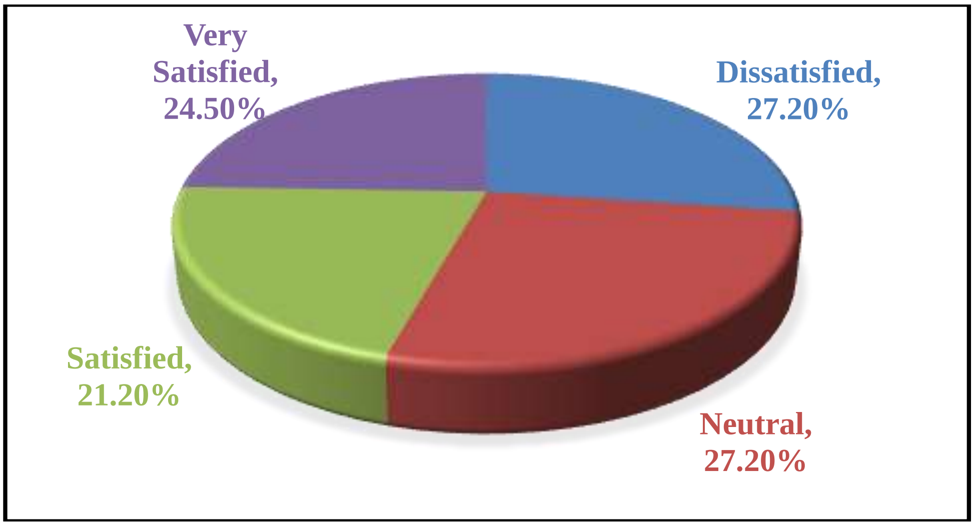

Figure 3 Customer service satisfaction level of the respondents in online shopping.

Consumer satisfaction with customer service in online shopping (Figure 3) varies across different platforms. A significant **27.2%** of consumers report dissatisfaction, due to slow response times, unclear policies, or ineffective issue resolution. On the other hand, **27.2%** feel neutral, showing mixed experiences depending on the platform or the specific situation. Meanwhile, **21.2%** of consumers express satisfaction, benefiting from responsive help and efficient support systems. Notably, **24.5%** of shoppers are highly satisfied, suggesting that some platforms excel in providing initiative-taking and seamless customer service. To improve consumer trust, e-commerce businesses should focus on faster response times, personalized support, and transparent communication, ensuring a more positive shopping experience for users.

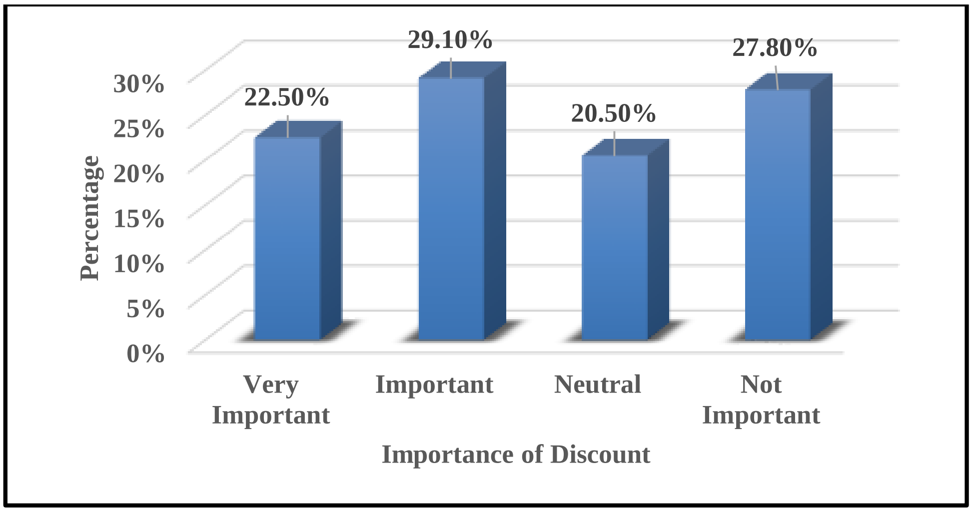

Figure 4 Importance of discount for the respondents in online shopping.

Discounts play a significant role in consumer decisions when shopping online (Figure 4), but opinions on their importance vary. According to the data, **29.1%** of consumers find discounts important, while **22.5%** consider them important, showing that the majority value price reductions when making purchases. However, **20.5%** stay neutral, showing that discounts might not be the primary factor influencing their choices. Interestingly, **27.8%** view discounts as unimportant, suggesting that other factors like product quality, brand loyalty, or convenience may matter more to them. To attract more customers, e-commerce platforms can focus on personalized discount strategies, ensuring competitive pricing while keeping product value.

4.4 Association of Online Experiences with Occupational Status

4.4.1 Issues faced across different occupational status.

Table 2 Issues Face and Occupational Status

Status	Issue Faced				
	Delivery Delay	None	Payment Issues	Product Quality	Total
Student	16	7	8	17	48
Unemployed	7	10	11	12	40
Employed	12	11	17	23	63
Total	**35**	**28**	**36**	**52**	**151**
Pearson Chi-Square		**Value**	**df**	**Asymptotic Sig. (2-tailed)**	
		6.34	6	.386	

As shown in Table 2, among all groups, product quality appeared as the most reported issue faced by the 52 consumers. The primary issues faced by them are related to product quality and delivery delays. Unemployed individuals showed a relatively balanced distribution of issues faced. The issue faced during online shopping is found to be highest for employed individuals, especially in product quality and payment issues.

Chi Square Test

The p-value (0.386) > 0.05, showing that the issue faced during online shopping is independent with occupational status of respondents.

4.4.2 Return Experience Patterns Across Different Occupational Status

Table 3 Return Experience and Occupational Status

Status	Return Experience				
	Difficult	Easy	Neutral	Very Easy	Total
Student	13	9	12	14	48
Unemployed	9	14	7	10	40
Employed	19	12	20	12	63
Total	**41**	**35**	**39**	**36**	**151**
Pearson Chi-Square		**Value**	**df**	**Asymptotic Sig. (2-tailed)**	
		6.95	6	.325	

The data of Table 3 shows that most students and unemployed consumers are found to have easy return experience. Most employed individuals face difficult return experiences, showing possible challenges with return policies or processes.

Chi Square Test

The p-value (0.325) > 0.05, indicating that there is no significant relationship between return experience of consumers with their occupational status during online shopping.

4.4.3 Overall Satisfaction Trends Across Different Occupational Status

Table 4 Overall Satisfaction and Occupational Status

Status	Overall Satisfaction				
	Dissatisfied	Neutral	Satisfied	Very Satisfied	Total
Student	9	8	16	15	48
Unemployed	10	14	9	7	40
Employed	14	17	22	10	63
Total	**33**	**39**	**47**	**32**	**151**
Pearson Chi-Square		**Value**	**df**	**Asymptotic Sig. (2-tailed)**	
		8.00	6	.238	

Among students, satisfaction levels are relatively balanced (Table 4). Unemployed individuals, however, showed a higher tendency toward neutral responses, indicating uncertainty or mixed level of satisfaction. Most employed individuals are satisfied with services provided with various online platforms.

Chi Square Test

The p-value (0.238) > 0.05, means there is no association between overall satisfaction level and occupational status of respondents during online shopping.

4.4.4 Online Buying Trends Across Different Occupational Status

Table 5 Online Buying Frequency and Occupational Status

Status	Online Buying Frequency				
	Daily	Monthly	Rarely	Weekly	Total
Student	16	14	9	9	48
Unemployed	10	10	9	11	40
Employed	15	13	18	17	63
Total	**41**	**37**	**36**	**37**	**151**
		Value	**df**	**Asymptotic Sig. (2-tailed)**	
Pearson Chi-Square		3.91	6	.688	

The online buying frequency highlights a diverse range of shopping habits across different occupational status of the consumers (Table 5). The data shows that daily purchasing is more frequent among students, suggesting frequent online engagement. The balanced pattern can be seen for unemployed individuals across all categories. Employed individuals having the highest number of rarely buying responses, might be due to their busy schedules during weekdays.

Chi Square Test

The p-value (0.688) > 0.05, showing that there is no relationship between online buying frequency and occupational status of respondents.

4.5 Association of Online Experiences with Educational Levels

4.5.1 Return Experience Across Different Education Levels

Table 6 Return Experience and Education Levels

Education	Return Experience				
	Difficult	Easy	Neutral	Very Easy	Total
High School	14	13	13	12	52
Undergraduate	11	15	15	11	52
Postgraduate	16	7	11	13	47
Total	**41**	**35**	**39**	**36**	**151**
		Value	**df**	**Asymptotic Sig. (2-tailed)**	
Pearson Chi-Square		4.46	6	.615	

High school graduates reported an even distribution of experiences, showing varied satisfaction levels. Undergraduate respondents also showed a balanced spread, with *Easy* and *Neutral* return experiences being the most selected categories. Most Postgraduate individuals found it difficult to return the products purchased, showing possible challenges with return policies or processes.

Chi Square Test

The p-value (0.615) > 0.05, showing that there is no significant relation between return experience and educational level of respondents during online shopping.

4.5.2 Security Feeling Across Different Education Levels

Table 7 shows that the consumers of the level of high school found secure feelings during online shopping, with secure (15) and very secure (14). Most undergraduate individuals also opted for either secure or very secure feeling, showing overall the secure feeling during online purchase. Postgraduate individuals showed a mixed pattern of security feelings as can be seen from the Table 7.

Chi-Square test

The p-value (0.434) > 0.05, showing that the educational level of respondents is statistically insignificant with respect to security feeling during online shopping.

Table 7 Security Feeling and Education Levels

Education	Security Feeling				
	Insecure	Neutral	Secure	Very Secure	Total
High School	15	8	15	14	52
Undergraduate	14	16	15	7	52
Postgraduate	12	10	12	13	47
Total	**41**	**34**	**42**	**34**	**151**
Pearson Chi-Square		**Value**	**df**	**Asymptotic Sig. (2-tailed)**	
		5.90	6	.434	

4.5.3 Online Buying Trends Across Different Education Levels

Table 8 Online Buying Frequency and Education Levels

Education	Online Buying Frequency				
	Daily	Monthly	Rarely	Weekly	Total
High School	13	14	12	13	52
Undergraduate	14	12	15	11	52
Postgraduate	14	11	9	13	47
Total	**41**	**37**	**36**	**37**	**151**
Pearson Chi-Square		**Value**	**df**	**Asymptotic Sig. (2-tailed)**	
		1.83	6	.935	

The data in the Table 8, online buying frequency among different education levels of consumers shows a balanced approach of online shopping habits. High school level respondents showing regular engagement in online shopping, as can be seen from the data. Postgraduate individuals (14, daily and 13, weekly) are also found to be more frequent in online shopping. The data shows the mixed trends of buying frequency of undergraduate individuals.

Chi-Square test

The p-value (0.935) > 0.05, indicating that there is no significant relationship between education level and online buying frequency.

5 CONCLUSION

This study points out the importance of external factors such as product quality, store policies, financial stability, and service efficiency in shaping customer experiences, rather than demographic attributes alone. Businesses aiming to improve consumer satisfaction should focus on enhancing service reliability, offering flexible return options, and ensuring transparency in product quality and pricing, rather than targeting specific demographic groups based solely on occupational or educational status.

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