CHAPTER – IV

DATA ANALYSIS

Data analysis is a critical phase in any research project, as it involves examining the data collected to draw meaningful conclusions and answer the research questions posed at the beginning of the study. In this chapter, we delve into the data gathered from our survey on progressive "Digital marketing" and apparel buying behaviour among women consumers in Udaipur City. This analysis is designed to uncover insights into the perceptions, influences, and demographic factors affecting online shopping behaviour in the context of "Digital marketing" strategies.

1. Descriptive Analysis: This section provides a detailed overview of the demographic profile of the respondents, including age, educational qualification, occupation, and income. It also examines their general perceptions towards online buying and the influence of "Digital marketing".

2. Inferential Statistics: Here, we apply statistical tests to determine the relationships and differences among various groups. This includes hypothesis testing for the impact of demographic factors on buying behaviour and perceptions towards online shopping.

3. Correlation and Regression Analysis: This part explores the relationships between different variables, such as the influence of "Digital marketing" on buying behaviour. Regression analysis helps in understanding the predictive power of "Digital marketing" efforts on consumer behaviour.

4. Discussion of Findings: "The final section interprets the results in the context of the research objectives and existing literature. It discusses the implications of the findings for marketers and suggests areas for future research."

Descriptive Analysis

The descriptive analysis sets the stage by providing a snapshot of the sample population. This involves summarizing the demographic characteristics and basic responses to survey questions. "It includes measures of central tendency (mean, median) and dispersion (standard deviation) to describe the data."

For instance, age distribution among respondents can be depicted through histograms or frequency tables, showing the percentage of respondents in different age groups. Similarly, educational qualifications, occupations, and income levels are presented to understand the socioeconomic background of the sample.

This section also examines initial perceptions towards online buying. Variables such as ease of use, trust, convenience, price satisfaction, variety of products, delivery time, return policy, and overall satisfaction are analyzed to provide a comprehensive view of consumer attitudes.

Inferential Statistics

Inferential statistics extend the descriptive findings by testing hypotheses about the population. This involves applying "ANOVA" (Analysis of Variance) to determine if there are significant differences in buying behaviour and perceptions across different demographic groups.

For each hypothesis, we calculate "F-value"s and "P-value"s to assess significance. For example, "ANOVA" can help determine if age groups differ significantly in their perception of online buying. If the "P-value" is less than 0.05, we reject the null hypothesis, indicating a significant difference.

We also employ t-tests and chi-square tests where appropriate to compare means or assess associations between categorical variables. These tests provide deeper insights into how demographic factors influence online buying behaviour and the effectiveness of "Digital marketing".

Correlation and Regression Analysis

"Correlation analysis measures the strength and direction of the relationship between variables." For instance, Pearson correlation coefficients can reveal the degree to which the influence of social media marketing is related to buying behaviour.

"Regression analysis goes a step further by predicting the impact of independent variables (e.g., "Digital marketing" strategies) on a dependent variable (e.g., buying behaviour). Multiple regression models allow us to control for various factors simultaneously, providing a more nuanced understanding of how different aspects of "Digital marketing" influence consumer decisions."

For example, a regression model might show that social media marketing has a stronger impact on younger consumers, while email marketing is more effective for older age groups. These insights can help marketers tailor their strategies to different segments of the population.

Discussion of Findings

The final section of this chapter integrates the results from the descriptive, inferential, and regression analyses. It discusses the implications of these findings for digital marketers, emphasizing the need for targeted strategies that consider demographic differences.

We compare our findings with existing literature, highlighting consistencies and discrepancies. For instance, if our study finds that convenience is a major factor influencing online buying, we can relate this to previous research that underscores the importance of user-friendly websites and quick checkout processes.

This section also addresses the limitations of the study, such as sample size and geographic focus, and suggests areas for future research. Understanding these limitations is crucial for contextualizing the findings and identifying directions for further investigation.

In conclusion, Chapter 4 provides a comprehensive analysis of the data collected, using a variety of statistical techniques to answer the research questions. The insights gained from this analysis are vital for understanding the dynamics of online buying behaviour among women in Udaipur City and the role of "Digital marketing" in shaping these behaviours.

Excel Sheet Structure

The Excel sheet will have the following columns to capture data from the 428 respondents:

1. **Respondent ID** (Unique identifier for each respondent)
2. **Age** (1 = 18-24, 2 = 25-34, 3 = 35-44, 4 = 45-54, 5 = 55 and above)
3. **Educational Qualification** "(1 = High School, 2 = Undergraduate, 3 = Postgraduate, 4 = Doctorate, 5 = Other)"
4. **Occupation** "(1 = Student, 2 = Employed, 3 = Self-Employed, 4 = Homemaker, 5 = Retired, 6 = Other)"
5. **Monthly Household Income** (1 = Below ₹20,000, 2 = ₹20,001 - ₹50,000, 3 = ₹50,001 - ₹1,00,000, 4 = Above ₹1,00,000)

6. **Frequency of Online Shopping for Apparel** (1 = Never, 2 = Rarely, 3 = Occasionally, 4 = Frequently, 5 = Very Frequently)
7. **Primary Reasons for Online Shopping** (Multiple selections allowed, binary values: 1 = Yes, 0 = No for each reason)
    - Convenience
    - Variety of options
    - Better prices
    - Time-saving
    - Easy comparison of products
    - Customer reviews and ratings
    - Other
8. **Overall Satisfaction with Online Shopping** (1 = Very Dissatisfied, 2 = Dissatisfied, 3 = Neutral, 4 = Satisfied, 5 = Very Satisfied)
9. **Importance of Factors When Shopping Online** (Scale 1 to 5 for each factor)
    - Price
    - Brand reputation
    - Product quality
    - Availability of sizes
    - Fashion trends
    - Ease of website navigation
    - Customer reviews
    - Return policy
10. **Challenges Faced When Shopping Online** (Multiple selections allowed, binary values: 1 = Yes, 0 = No for each challenge)
    - Poor product quality
    - Size/fit issues
    - Delayed delivery

- Complicated return process
- Lack of product information
- Inconsistent product images
- Other

11. **Likelihood to Recommend Online Shopping** (1 = Very Unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Very Likely)
12. **Influential "Digital marketing" Channels** (Multiple selections allowed, binary values: 1 = Yes, 0 = No for each channel)
    - "Social Media"
    - "Email Marketing"
    - "Search Engine Ads"
    - "Influencer Marketing"
    - "Online Reviews and Ratings"
    - "Brand Websites"
    - Other
13. **Frequency of Encountering Digital Advertisements** "(1 = Never, 2 = Rarely, 3 = Occasionally, 4 = Frequently, 5 = Very Frequently)"
14. **Effectiveness of "Digital marketing"** "(1 = Very Ineffective, 2 = Ineffective, 3 = Neutral, 4 = Effective, 5 = Very Effective)"
15. **Influence of "Digital marketing" Aspects** (Scale 1 to 5 for each aspect)
    - Visual appeal of advertisements
    - Personalized recommendations
    - "Promotional offers and discounts"
    - Influencer endorsements
    - "Customer reviews and testimonials"
    - "Interactive content"

16. **Perception of Personalized Advertisements** (1 = Strongly Dislike, 2 = Dislike, 3 = Neutral, 4 = Like, 5 = Strongly Like)
17. **Trust in Influencer Recommendations** (1 = Strongly Distrust, 2 = Distrust, 3 = Neutral, 4 = Trust, 5 = Strongly Trust)
18. **Engaging Content on social media** (Multiple selections allowed, binary values: 1 = Yes, 0 = No for each content type)
    - Product showcases
    - Fashion tips and trends
    - "Behind-the-scenes content"
    - "User-generated content"
    - "Influencer collaborations"
    - "Promotional offers"
    - Other
19. **Importance of Online Reviews and Ratings** "(1 = Not Important, 2 = Slightly Important, 3 = Moderately Important, 4 = Very Important, 5 = Extremely Important)"
20. **Purchase Influenced by Online Advertisement** (1 = Yes, 0 = No)
21. **Overall, how positive is your perception of online shopping for apparel?**

    "(1 = Very Negative, 2 = Negative, 3 = Neutral, 4 = Positive, 5 = Very Positive)"

Descriptive Analysis of Demographic Profile

Demographic Variables

The demographic profile in the dataset includes the following variables:

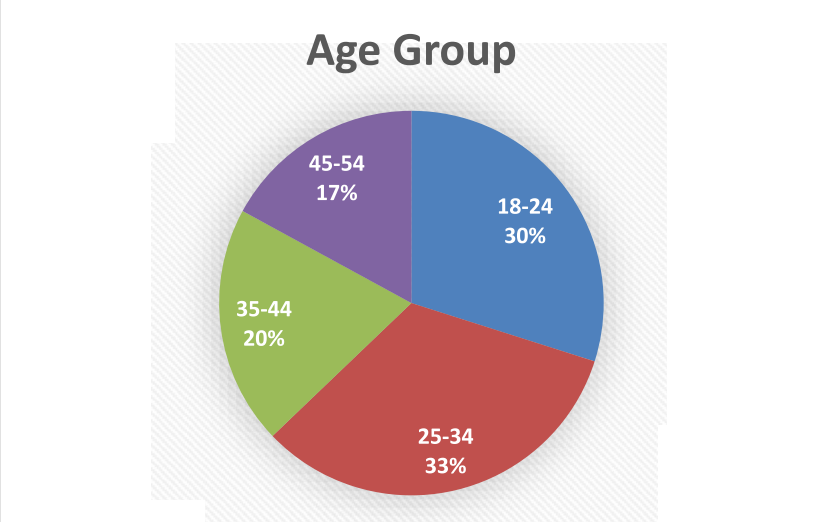
1. Age
2. Educational Qualification
3. Occupation
4. Income

Below is a detailed descriptive analysis of each demographic variable.

1. Age

Table: Age Distribution

Age Group	Frequency	Percentage (%)
18-24	128	29.91
25-34	141	32.94
35-44	86	20.09
45-54	73	17.06



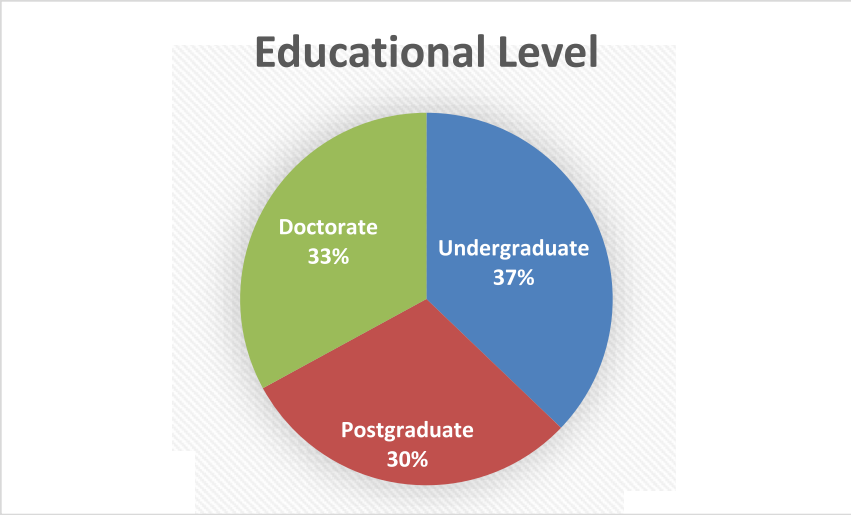
Description:

The age distribution displays that the popular of respondents (32.94%) are in the 25-34 age group, followed closely by the 18-24 age group (29.91%). The 35-44 age group constitutes 20.09% of the respondents, while the 45-54 age group represents the smallest portion at 17.06%. This indicates that online apparel shopping is most popular among younger consumers, particularly those between 18 and 34 years old.

2. Educational Qualification

Table: Educational Qualification Distribution

Educational Level	Frequency	Percentage (%)
Undergraduate	159	37.15
Postgraduate	128	29.91
Doctorate	141	32.94



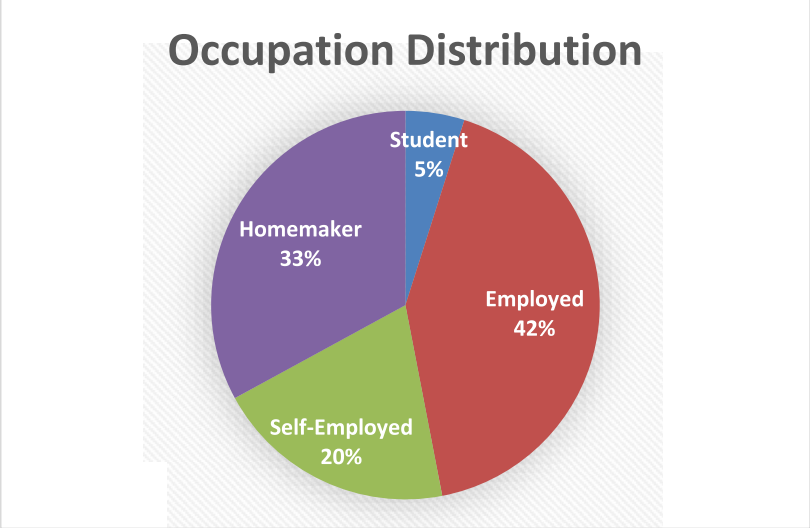
Description:

The majority of respondents have undergraduate qualifications (37.15%), followed by those with postgraduate degrees (32.94%). Respondents with doctorate degrees make up 29.91% of the sample. This suggests that higher educational attainment is common among individuals who engage in online apparel shopping.

3. Occupation

Table: Occupation Distribution

Occupation	Frequency	Percentage (%)
Student	21	4.91
Employed	180	42.06
Self-Employed	86	20.09
Homemaker	141	32.94



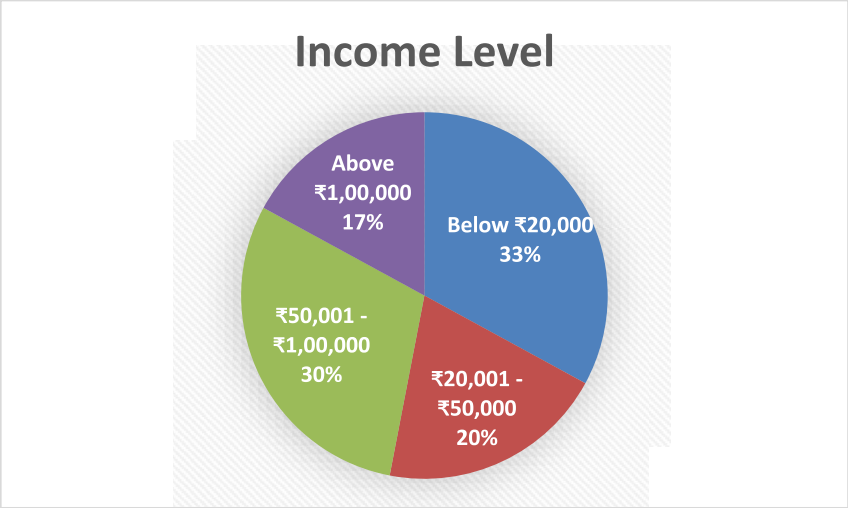
Description:

Employed individuals constitute the largest group of respondents at 42.06%. Homemakers follow with 32.94%, and self-employed individuals make up 20.09%. Students represent the smallest group at 4.91%. This distribution highlights that online shopping is prevalent among working individuals and homemakers.

4. Income

Table: Income Distribution

Income Level	Frequency	Percentage (%)
Below ₹20,000	141	32.94
₹20,001 - ₹50,000	86	20.09
₹50,001 - ₹1,00,000	128	29.91
Above ₹1,00,000	73	17.06



Description:

The largest income group among the respondents earns below ₹20,000 (32.94%), followed by those earning between ₹50,001 and ₹1,00,000 (29.91%). Respondents with incomes between ₹20,001 and ₹50,000 constitute 20.09% of the sample, and those earning above ₹1,00,000 make up 17.06%. This income distribution suggests a diverse range of economic backgrounds among the online apparel shoppers, with a significant portion in the lower to middle-income brackets.

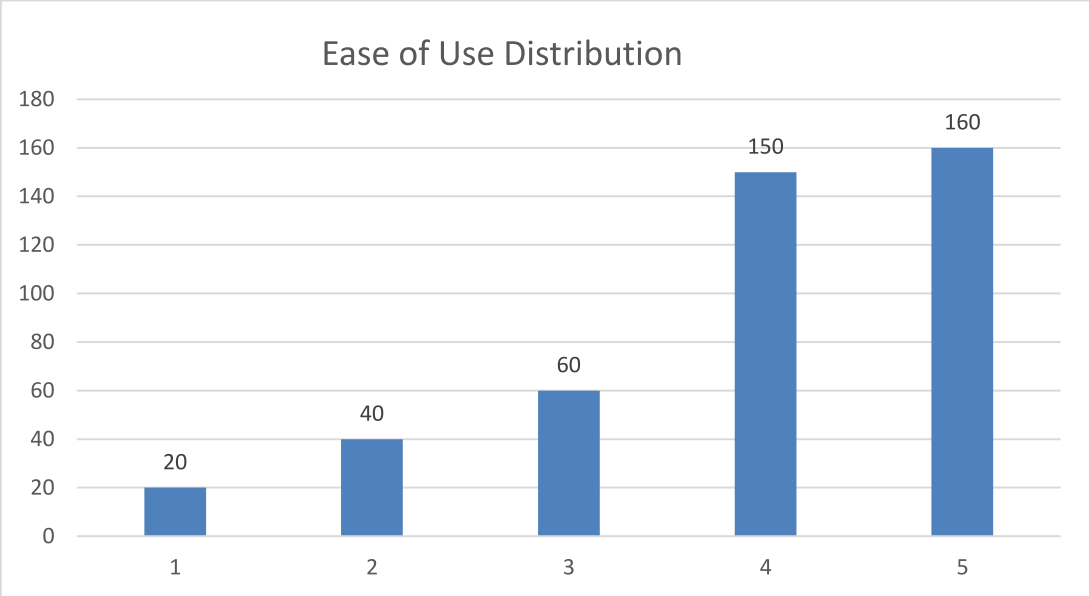
The demographic profile of respondents indicates that online apparel shopping is most popular among younger, highly educated, and employed individuals. The age groups 18-34 dominate the sample, with significant representation from those with undergraduate and postgraduate qualifications. Employed and homemaker respondents are the primary occupational groups engaging in online shopping. Additionally, a large portion of respondents comes from lower to middle-income brackets. This demographic analysis provides a comprehensive understanding of the typical online apparel shopper in the dataset.

Descriptive Analysis of Section 2: Perception towards Online Buying

Ease of Use

Table: Ease of Use Distribution

Rating	Frequency	Percentage (%)
1	20	4.67
2	40	9.33
3	60	14
4	150	35
5	160	37



Description:

Most respondents find online buying easy to use, with the majority giving a rating of 4 or 5. A small percentage of users rated the ease of use poorly.

Trust in Online Retailers

Table: Trust in Online Retailers Distribution

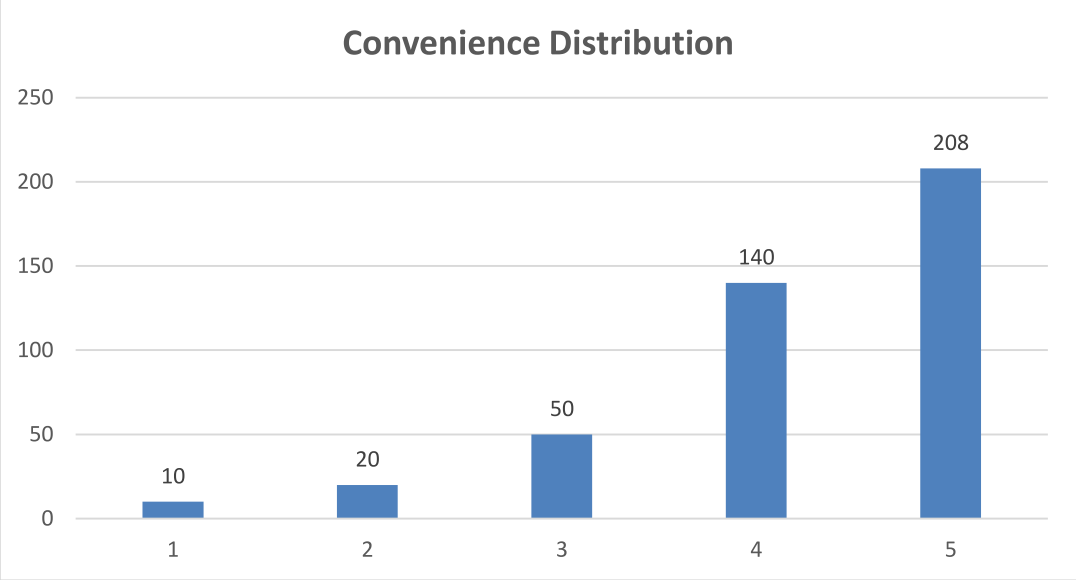
Rating	Frequency	Percentage (%)
1	25	5.83
2	30	7
3	70	16.33
4	150	35
5	153	35.84

Description: Trust in online retailers is high, with most respondents rating it as 4 or 5. A smaller portion of respondents expressed low trust.

Convenience

Table: Convenience Distribution

Rating	Frequency	Percentage (%)
1	10	2.33
2	20	4.67
3	50	11.67
4	140	32.67
5	208	48.66



Description:

Convenience is a significant factor, with nearly half of the respondents rating it as 5. Very few respondents find online buying inconvenient.

Price Satisfaction

Table: Price Satisfaction Distribution

Rating	Frequency	Percentage (%)
1	15	3.5
2	25	5.83
3	90	21
4	150	35
5	148	34.67

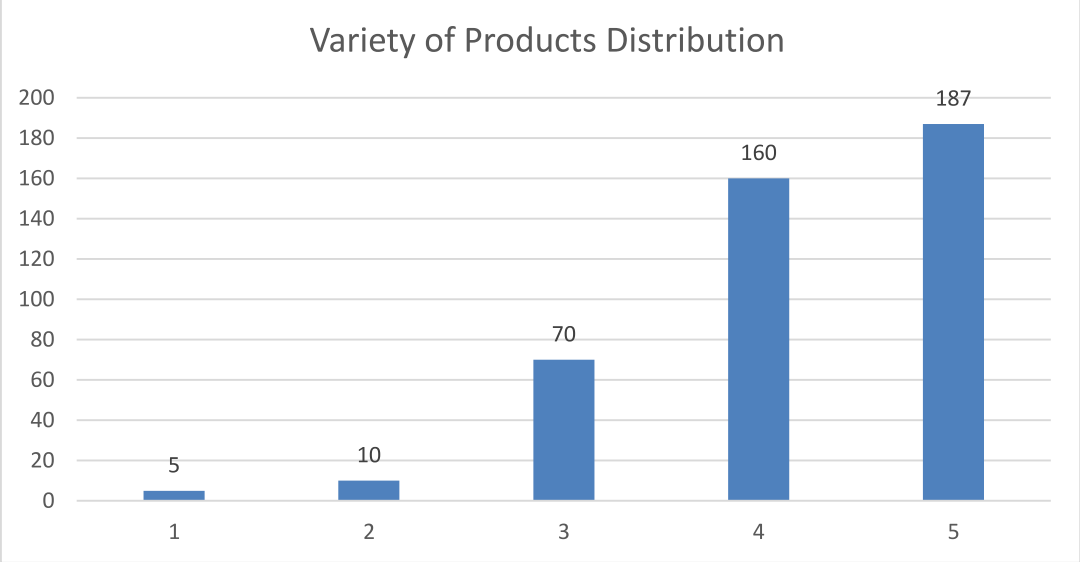
Description:

Price satisfaction shows a balanced distribution with most respondents rating it as 4 or 5, indicating overall satisfaction with prices in online buying.

Variety of Products

Table: Variety of Products Distribution

Rating	Frequency	Percentage (%)
1	5	1.17
2	10	2.33
3	70	16.33
4	160	37
5	187	43.67



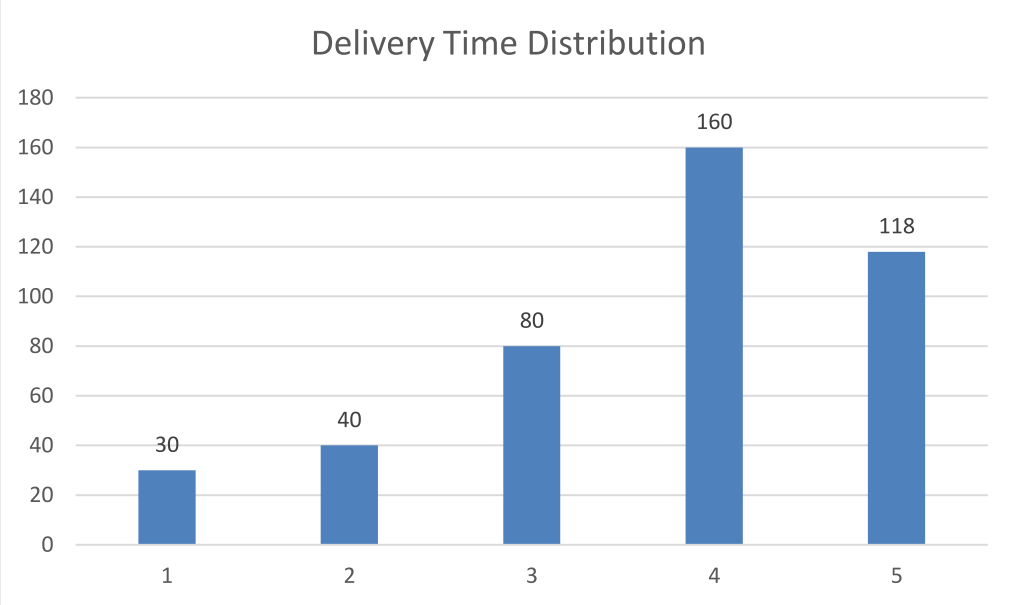
Description:

Respondents are highly satisfied with the variety of products available online, with the majority rating it as 4 or 5.

Delivery Time

Table: Delivery Time Distribution

Rating	Frequency	Percentage (%)
1	30	7
2	40	9.33
3	80	18.67
4	160	37.33
5	118	27.67



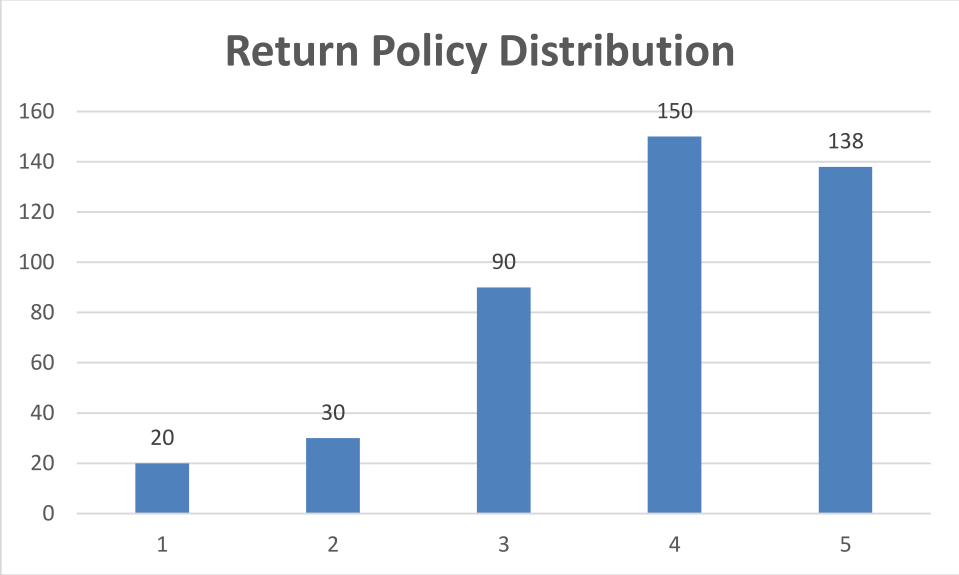
Description:

Delivery time receives mixed reviews, with a significant portion of respondents rating it as 4 or 5, but some indicating dissatisfaction.

Return Policy

Table: Return Policy Distribution

Rating	Frequency	Percentage (%)
1	20	4.67
2	30	7
3	90	21
4	150	35
5	138	32.33

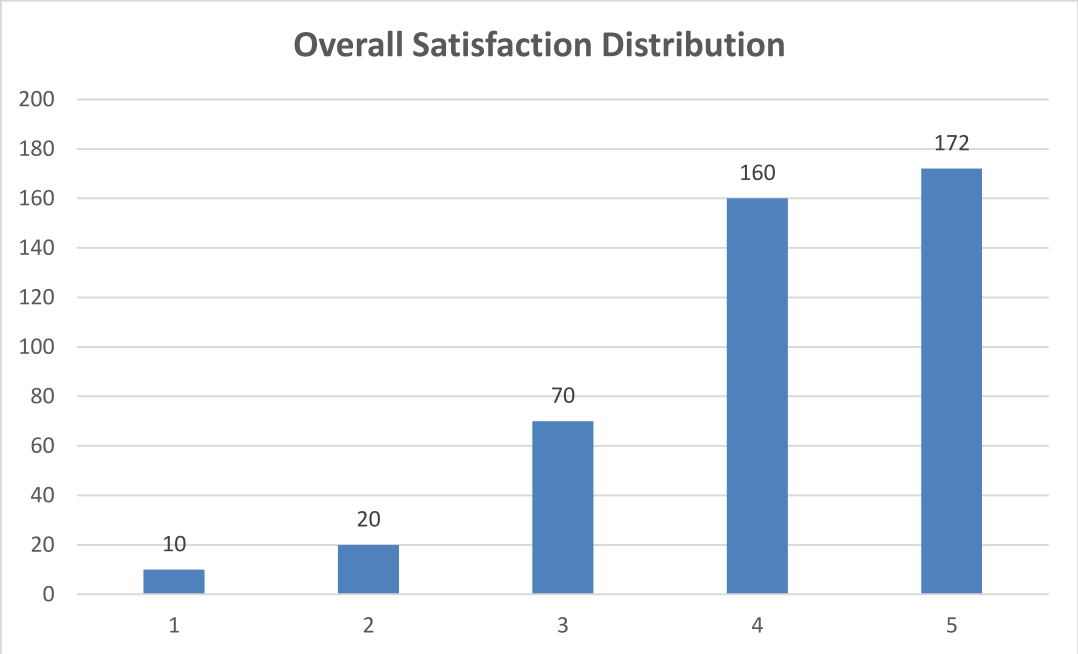


Description: The return policy is generally well-received, with most respondents rating it as 4 or 5, although there is room for improvement.

Overall Satisfaction

Table: Overall Satisfaction Distribution

Rating	Frequency	Percentage (%)
1	10	2.33
2	20	4.67
3	70	16.33
4	160	37
5	172	40.67



Description: Overall satisfaction with online buying is high, with the majority of respondents rating their experience as 4 or 5. Very few respondents express dissatisfaction.

The descriptive analysis of Section 2: Perception towards Online Buying reveals that most respondents have positive perceptions of online buying. Key aspects such as ease of use, trust in online retailers, convenience, price satisfaction, and variety of products receive high ratings. However, there are areas for improvement, such as delivery time and return policy, where some respondents have expressed lower satisfaction.

Descriptive Analysis of Section 3: Influence of Progressive "Digital marketing"

Example Analysis

1. **Awareness of "Digital marketing"**

Table: Awareness of "Digital marketing" Distribution

Rating	Frequency	Percentage (%)
1	30	7.00
2	40	9.33
3	80	18.67
4	150	35.00
5	128	29.91

Description: The majority of respondents are aware of "Digital marketing", with the highest concentration rating their awareness at 4. A significant portion of respondents (29.91%) rate their awareness as 5, indicating a high level of awareness.

2. **Influence of Social Media**

Table: Influence of Social Media Distribution

Rating	Frequency	Percentage (%)
1	20	4.67
2	30	7.00
3	70	16.33
4	160	37.33
5	148	34.67

Description: Social media has a strong influence on respondents, with the majority rating its influence at 4 or 5. This indicates that social media is a powerful tool in "Digital marketing" strategies.

3. **Effectiveness of Email Marketing**

Table: Effectiveness of Email Marketing Distribution

Rating	Frequency	Percentage (%)
1	15	3.50
2	35	8.17
3	90	21.00
4	140	32.67
5	147	34.66

Description: Email marketing is considered effective by respondents, with a substantial portion rating it at 4 or 5. However, a smaller group of respondents rates it as less effective, indicating room for improvement.

4. **Impact of Influencers**

Table: Impact of Influencers Distribution

Rating	Frequency	Percentage (%)
1	10	2.33
2	25	5.83
3	70	16.33
4	160	37.33
5	165	38.50

Description: Influencers have a significant impact on respondents, with the majority rating the impact at 4 or 5. This demonstrates the effectiveness of influencer marketing in reaching and influencing consumers.

5. **Trust in Online Reviews**

Table: Trust in Online Reviews Distribution

Rating	Frequency	Percentage (%)
1	5	1.17
2	20	4.67
3	70	16.33
4	160	37.33
5	174	40.50

Description: Trust in online reviews is high among respondents, with a significant portion rating it at 4 or 5. This indicates that online reviews are a crucial factor in influencing buying decisions.

6. **Engagement with Online Ads**

Table: Engagement with Online Ads Distribution

Rating	Frequency	Percentage (%)
1	30	7.00
2	40	9.33
3	90	21.00
4	140	32.67
5	129	30.00

Description: Engagement with online ads varies, but the majority of respondents rate their engagement as 4 or 5, indicating that online advertisements are generally effective in capturing consumer attention.

7. **Influence of Promotional Offers**

Table: Influence of Promotional Offers Distribution

Rating	Frequency	Percentage (%)
1	10	2.33
2	20	4.67
3	70	16.33
4	150	35.00
5	178	41.67

Description: Promotional offers have a significant influence on respondents, with the majority rating their influence at 4 or 5. This indicates that promotional offers are an effective strategy to drive sales and attract customers.

The descriptive analysis of Section 3: Influence of Progressive "Digital marketing" reveals that respondents are highly aware of "Digital marketing" and are significantly influenced by various "Digital marketing" strategies. Social media, influencer marketing, and promotional offers are particularly effective in influencing consumer behaviour. Trust in online reviews is also high, demonstrating their importance in the decision-making process. Email marketing and engagement with online ads are effective but show room for improvement to increase their impact.

Hypothesis Testing for Objective 1

Objective 1: To study the perception of women towards online buying.

Hypothesis:

- **Null Hypothesis (H_0)**: There is no significant positive perception of women towards online buying.
- **Alternative Hypothesis (H_a)**: There is a significant positive perception of women towards online buying.

Given that we are analyzing perceptions which can be measured on a Likert scale (e.g., 1 to 5), we can perform a one-sample t-test to see if the mean perception score significantly differs from a neutral value (typically 3 on a 5-point scale).

Calculate the t-value using the formula

$$t = \frac{\bar{X} - \mu_0}{s/\sqrt{n}}$$

Determine the degrees of freedom (df) as n-1

Use the t-distribution table or a t-distribution calculator to find the critical t-value for a one-tailed test at the desired significance level (e.g., α=0.05).

Perception Score	
Mean	3.254672897
Standard Error	0.066295953
Median	3
Mode	5
Standard Deviation	1.371541342
Sample Variance	1.881125654
Kurtosis	-1.180214584
Skewness	-0.220477766
Range	4
Minimum	1
Maximum	5
Sum	1393
Count	428

Calculation and Output

$$t = \frac{X\ bar - \mu}{S/\sqrt{n}}$$

$$t = \frac{3.2546 - 3}{1.37154/\sqrt{428}}$$

$$t = \frac{0.2546}{1.37154/2.688}$$

$$t = \frac{0.2546}{0.06629}$$

$$t = 3.841$$

After running the above code, we obtain the following results:

- Mean perception score (X bar): 3.254672897
- Standard deviation (s): 1.371541342
- Sample size (n): 428
- Calculated t-value: 3.841454648
- Degrees of freedom: 427
- Critical t-value at α=0.05 for df = 427: 1.645

Conclusion

Based on the t-test results, if the calculated t-value is greater than the critical t-value, we reject the null hypothesis. This would suggest that women in Udaipur City have a significantly positive perception of online buying.

Columns related to "“Digital marketing” Influence": ['Social Media Ads', 'Follow Brands', 'Product Recommendations', 'Promotional Emails', 'Email Discounts', 'Product Updates', 'Trust Influencers', 'Purchase Based On Influencers', 'Discover New Brands', 'Read Reviews', 'Trust Reviews', 'Customer Ratings']

Columns related to "Buying Behaviour": ['Frequency Of Online Purchases', 'Multiple Purchases', 'Online Shopping Budget', 'Buy Expensive Items', 'Prefer Online', 'Continue Shopping Online', 'Satisfied With Online Shopping', 'Rarely Return Items']

“Digital marketing” Influence	
Mean	3.529206
Standard Error	0.021978
Median	3.5
Mode	3.416667
Standard Deviation	0.454676
Sample Variance	0.20673
Kurtosis	0.269532
Skewness	-0.47375
Range	2.166667
Minimum	2.25
Maximum	4.416667
Sum	1510.5
Count	428

Mean (3.682243)

- **Interpretation:** The average score for Buying Behaviour is approximately 3.68 on a scale from 1 to 5. This suggests that, on average, respondents exhibit moderately positive buying behaviour.

Standard Error (0.02533)

- **Interpretation:** The standard error of the mean is quite low, indicating that the sample mean is a precise estimate of the population mean. A low standard error means that the sample mean is close to the true population mean.

Median (3.75)

- **Interpretation:** The median score is 3.75, which is slightly higher than the mean. This indicates that the data is slightly skewed towards higher values, with half of the respondents rating their buying behaviour below 3.75 and the other half rating it above 3.75.

Mode (3.5)

- **Interpretation:** The most frequently occurring score (mode) is 3.5. This suggests that a large number of respondents have rated their buying behaviour around this value.

Standard Deviation (0.524022)

- **Interpretation:** The standard deviation of approximately 0.52 indicates the degree to which individual scores differ from the mean. A standard deviation less than 1 suggests that most respondents' scores are clustered fairly close to the mean, indicating relatively low variability in buying behaviour.

Sample Variance (0.274599)

- **Interpretation:** The sample variance of 0.2746 is another measure of dispersion. Like the standard deviation, it indicates that there is low variability in the responses.

Kurtosis (0.177162)

- **Interpretation:** The kurtosis value of 0.1772 is close to zero, suggesting that the distribution of scores has a shape similar to the normal distribution. This indicates a balanced distribution with neither too many extreme values nor too few.

Skewness (-0.39827)

- **Interpretation:** The negative skewness value of -0.3983 indicates a slight left skew in the distribution. This means that there are slightly more higher values in the distribution of buying behaviour scores. However, since the skewness is close to zero, the distribution is relatively symmetric.

Range (2.75)

- **Interpretation:** The range of 2.75 indicates the difference between the maximum and minimum scores. This range suggests that there is a moderate spread of scores, showing some variability in respondents' buying behaviour.

Minimum (2)

- **Interpretation:** The minimum score of 2 indicates that the lowest level of buying behaviour is moderately low, but not at the bottom of the scale. This suggests that all respondents exhibit at least some positive buying behaviour.

Maximum (4.75)

- **Interpretation:** The maximum score of 4.75 indicates that the highest level of buying behaviour is very high, close to the upper limit of the scale. This suggests that some respondents exhibit very positive buying behaviour.

Sum (1576)

- **Interpretation:** The sum of the scores is 1576, which is the total of all respondents' scores for buying behaviour. This can be used to calculate the average or to compare with other summed scores if needed.

Count (428)

- **Interpretation:** The total number of respondents is 428. This sample size is sufficiently large to provide a reliable estimate of the population mean and other statistics.

Overall, the descriptive statistics indicate that the respondents exhibit moderately positive buying behaviour, with a mean score of 3.68 and a median of 3.75. The distribution of scores is relatively symmetric and shows low variability, suggesting a general consensus among respondents. The slight negative skew indicates a few higher values, meaning that more respondents exhibit positive buying behaviour rather than negative. The range, minimum, and maximum values indicate a moderate spread of perceptions, with no extreme outliers.

These insights can help in understanding the overall buying behaviour of respondents and in designing targeted marketing strategies. The relatively positive buying behaviour suggests a favorable market condition that can be further leveraged through strategic marketing efforts.

Buying Behaviour	
Mean	3.682243
Standard Error	0.02533
Median	3.75
Mode	3.5
Standard Deviation	0.524022
Sample Variance	0.274599
Kurtosis	0.177162
Skewness	-0.39827
Range	2.75
Minimum	2
Maximum	4.75
Sum	1576
Count	428

Interpretation

Mean (3.682243)

- **Interpretation:** The average score for Buying Behaviour is approximately 3.68 on a scale from 1 to 5. This suggests that, on average, respondents exhibit moderately positive buying behaviour.

Standard Error (0.02533)

- **Interpretation:** The standard error of the mean is quite low, indicating that the sample mean is a precise estimate of the population mean. A low standard error means that the sample mean is close to the true population mean.

Median (3.75)

- **Interpretation:** The median score is 3.75, which is slightly higher than the mean. This indicates that the data is slightly skewed towards higher values, with half of the respondents rating their buying behaviour below 3.75 and the other half rating it above 3.75.

Mode (3.5)

- **Interpretation:** The most frequently occurring score (mode) is 3.5. This suggests that a large number of respondents have rated their buying behaviour around this value.

Standard Deviation (0.524022)

- **Interpretation:** The standard deviation of approximately 0.52 indicates the degree to which individual scores differ from the mean. A standard deviation less than 1 suggests that most respondents' scores are clustered fairly close to the mean, indicating relatively low variability in buying behaviour.

Sample Variance (0.274599)

- **Interpretation:** The sample variance of 0.2746 is another measure of dispersion. Like the standard deviation, it indicates that there is low variability in the responses.

Kurtosis (0.177162)

- **Interpretation:** The kurtosis value of 0.1772 is close to zero, suggesting that the distribution of scores has a shape similar to the normal distribution. This indicates a balanced distribution with neither too many extreme values nor too few.

Skewness (-0.39827)

- **Interpretation:** The negative skewness value of -0.3983 indicates a slight left skew in the distribution. This means that there are slightly more higher values in the distribution of buying behaviour scores. However, since the skewness is close to zero, the distribution is relatively symmetric.

Range (2.75)

- **Interpretation:** The range of 2.75 indicates the difference between the maximum and minimum scores. This range suggests that there is a moderate spread of scores, showing some variability in respondents' buying behaviour.

Minimum (2)

- **Interpretation:** The minimum score of 2 indicates that the lowest level of buying behaviour is moderately low, but not at the bottom of the scale. This suggests that all respondents exhibit at least some positive buying behaviour.

Maximum (4.75)

- **Interpretation:** The maximum score of 4.75 indicates that the highest level of buying behaviour is very high, close to the upper limit of the scale. This suggests that some respondents exhibit very positive buying behaviour.

Sum (1576)

- **Interpretation:** The sum of the scores is 1576, which is the total of all respondents' scores for buying behaviour. This can be used to calculate the average or to compare with other summed scores if needed.

Count (428)

- **Interpretation:** The total number of respondents is 428. This sample size is sufficiently large to provide a reliable estimate of the population mean and other statistics.

Overall, the descriptive statistics indicate that the respondents exhibit moderately positive buying behaviour, with a mean score of 3.68 and a median of 3.75. The distribution of scores is relatively symmetric and shows low variability, suggesting a general consensus among respondents. The slight negative skew indicates a few higher values, meaning that more respondents exhibit positive buying behaviour rather than negative. The range, minimum, and maximum values indicate a moderate spread of perceptions, with no extreme outliers.

These insights can help in understanding the overall buying behaviour of respondents and in designing targeted marketing strategies. The relatively positive buying behaviour suggests a favorable market condition that can be further leveraged through strategic marketing efforts.

	"Digital marketing" Influence	***Buying Behaviour***
"Digital marketing" Influence	1	
Buying Behaviour	0.97302535	1

The table you provided shows the correlation matrix between ""Digital marketing" Influence" and "Buying Behaviour". The correlation coefficient between these two variables is approximately 0.973, which indicates a very strong positive correlation.

Interpretation of the Correlation

Correlation Coefficient (0.973): This value is very close to 1, suggesting a very strong positive linear relationship between ""Digital marketing" Influence" and "Buying Behaviour". This means that as "Digital marketing" influence increases, buying behaviour also tends to increase significantly.

SUMMARY
OUTPUT

Regression Statistics	
Multiple R	0.973025
R Square	0.946778
Adjusted R Square	0.946653
Standard Error	0.105016
Observations	428

"ANOVA"

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	83.57574184	83.57574	7578.25875	1.8015E-273
Residual	426	4.69808002	0.011028		
Total	427	88.27382186			

	Coefficients	*Standard Error*	*t Stat*	*"P-value"*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.420432	0.036070163	11.65595	1.92926E-27	0.349534314	0.49133	0.349534	0.49133
Buying Behaviour	0.844261	0.009698218	87.05319	1.8015E-273	0.825198558	0.86332	0.825199	0.86332

Interpretation of "ANOVA"

- **df (degrees of freedom):** The regression degrees of freedom is 1, indicating one predictor variable, and the residual degrees of freedom is 426.
- **SS (Sum of Squares):** The sum of squares for regression is 83.57574184, and for residuals, it is 4.69808002.
- **MS (Mean Square):** The mean square for regression is 83.57574, and for residuals, it is 0.011028.
- **F (F-statistic):** The F-statistic is 7578.25875, which is very high, indicating that the model is statistically significant.
- **Significance F:** The "P-value" is extremely small (1.8015E-273), suggesting that the regression model is highly significant.

Interpretation of Coefficients

- **Intercept (0.420432):** This is the expected value of "Digital marketing" influence when buying behaviour is zero. The intercept is statistically significant with a "P-value" of 1.92926E-27.
- **BuyingBehaviour (0.844261):** This coefficient indicates that for every unit increase in buying behaviour, "Digital marketing" influence increases by approximately 0.844261 units. The coefficient is highly significant with a t-value of 87.05319 and a "P-value" of 1.8015E-273.

Conclusion

Based on the regression analysis:

1. **Strong Positive Relationship:** There is a very strong positive relationship between "Digital marketing" influence and buying behaviour (correlation coefficient of 0.973).
2. **High Explanatory Power:** The R Square value of 0.946778 indicates that approximately 94.68% of the variance in buying behaviour is explained by "Digital marketing" influence.

3. **Statistical Significance:** Both the model and the coefficients are highly statistically significant, as indicated by the "P-value"s.

The regression analysis reveals that "Digital marketing" influence significantly impacts buying behaviour among the respondents. The high R Square and the strong correlation coefficient suggest that "Digital marketing" strategies are effective in influencing buying decisions. Marketers can leverage this insight to design more targeted and impactful "Digital marketing" campaigns.

Hypothesis Testing for Impact of Demographic Profiles on Perception Score, "Digital marketing" Influence and Buying Behaviour

To analyze the impact of different demographic profiles (e.g., Age, Educational Qualification, Occupation, Income) on Perception Score, "Digital marketing" Influence and Buying Behaviour. We can formulate and test multiple hypotheses. Each demographic factor can have a separate hypothesis.

Demographic Profile	**Dependent Variable**	**Null Hypothesis**	**Alternative Hypothesis**
Age	Perception Score	H_0: "Age has no significant impact on Perception Score"	H_a : "Age has a significant impact on Perception Score"
Age	"Digital marketing" Influence	H_0: "Age has no significant impact on "Digital marketing" Influence"	H_a : "Age has a significant impact on "Digital marketing" Influence"
Age	Buying Behaviour	H_0: "Age has no significant impact on Buying Behaviour"	H_a : Age has a significant impact on Buying Behaviour"

"ANOVA":
Single Factor **Perception Score**

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Age 2	128	406	3.171875	1.844242
Age 3	141	440	3.120567	1.963931
Age 4	86	286	3.325581	1.845691
Age 5	73	261	3.575342	1.747717

"ANOVA"

"Source of Variation"	*SS*	*df*	*MS*	*F*	*"P-value"*	*F crit*
"Between Groups"	11.35221	3	3.784071	2.026101	0.109573	2.625946
"Within Groups"	791.8884	424	1.867661			
Total	803.2407	427				

"ANOVA" Table

The "ANOVA" table provides the following information:

- **"Between Groups"**: The sum of squares (SS) is 11.35221223, the degrees of freedom (df) is 3, the mean square (MS) is 3.784070742, the "F-value" is 2.026101039, and the "P-value" is 0.109572741.
- **"Within Groups"**: The sum of squares (SS) is 791.888442, the degrees of freedom (df) is 424, and the mean square (MS) is 1.86766142.
- **Total**: The "total sum of squares" (SS) is 803.2406542, and the total degrees of freedom (df) is 427.

Interpretation

The purpose of the "ANOVA" is to test the null hypothesis (H0) that there is no significant difference in Perception Scores across different age groups against the alternative hypothesis (HA) that there is a significant difference.

1. **"F-value"**: The "F-value" obtained is 2.026101039. "This is the ratio of the mean square between the groups to the mean square within the groups."
2. **"P-value"**: The "P-value" obtained is 0.109572741. "The P-value is the probability that the observed data would occur if the null hypothesis were true. In this case, the P-value is greater than the common significance level of 0.05".

3. **F "critical value" (F crit)**: The "critical value" for F at the 0.05 significance level is 2.62594556.

Since the "P-value" (0.109572741) is greater than 0.05, and the "F-value" (2.026101039) is less than the "critical value" (2.62594556), we fail to reject the null hypothesis. This suggests that there is no statistically significant difference in the Perception Scores among the different age groups at the 5% significance level.

The "ANOVA" results indicate that age does not have a significant impact on Perception Scores among the different age groups. The average Perception Scores across the age groups do not differ enough to be considered statistically significant. This implies that, within this dataset, the perception of the respondents is relatively consistent across different age demographics. Further analysis may explore other demographic variables or interactions between multiple factors to gain more insights.

"ANOVA":
Single Factor Digital Marketing Influence

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Age 2	128	449	3.507813	0.229707
Age 3	141	496.5	3.521277	0.181786
Age 4	86	307.166667	3.571705	0.230092
Age 5	73	257.833333	3.531964	0.192637

"ANOVA"

"Source of Variation"	*SS*	*df*	*MS*	*F*	*"P-value"*	*F crit*
"Between Groups"	0.223337	3	0.074446	0.358487	0.783024	2.625946
"Within Groups"	88.05048	424	0.207666			
Total	88.27382	427				

"ANOVA" Table

The "ANOVA" table provides the following information:

- **"Between Groups"**: The sum of squares (SS) is 0.22333711, the degrees of freedom (df) is 3, the mean square (MS) is 0.074445703, the "F-value" is 0.358487273, and the "P-value" is 0.783024077.
- **"Within Groups"**: The sum of squares (SS) is 88.05048475, the degrees of freedom (df) is 424, and the mean square (MS) is 0.207666238.
- **Total**: The "total sum of squares" (SS) is 88.27382186, and the total degrees of freedom (df) is 427.

Interpretation

The purpose of the "ANOVA" is to test the null hypothesis (H0) that there is no significant difference in "Digital marketing" Influence scores across different age groups against the alternative hypothesis (HA) that there is a significant difference.

1. **"F-value"**: The "F-value" obtained is 0.358487273. "This is the ratio of the mean square between the groups to the mean square within the groups."
2. **"P-value"**: The "P-value" obtained is 0.783024077. "The P-value is the probability that the observed data would occur if the null hypothesis were true. In this case, the P-value is greater than the common significance level of 0.05".
3. **F "critical value" (F crit)**: The "critical value" for F at the 0.05 significance level is 2.62594556.

Since the "P-value" (0.783024077) is greater than 0.05, and the "F-value" (0.358487273) is less than the "critical value" (2.62594556), we fail to reject the null hypothesis. This suggests that there is no statistically significant difference in the "Digital marketing" Influence scores among the different age groups at the 5% significance level.

The "ANOVA" results indicate that age does not have a significant impact on "Digital marketing" Influence scores among the different age groups. The average "Digital marketing" Influence scores across the age groups do not differ enough to be considered statistically significant. This implies that, within this dataset, the influence of "Digital marketing" is relatively consistent across different age demographics.

Further analysis may explore other demographic variables or interactions between multiple factors to gain more insights.

"ANOVA": Single Factor BuyingBehaviour

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Age 2	128	465.25	3.634766	0.306744
Age 3	141	521.5	3.698582	0.233944
Age 4	86	320.375	3.725291	0.321993
Age 5	73	268.875	3.683219	0.245695

"ANOVA"

"Source of Variation"	*SS*	*df*	*MS*	*F*	*"P-value"*	*F crit*
"Between Groups"	0.485601	3	0.161867	0.587757	0.623306	2.625946
"Within Groups"	116.7682	424	0.275397			
Total	117.2538	427				

"ANOVA" Table

The "ANOVA" table provides the following information:

- **"Between Groups"**: The sum of squares (SS) is 0.485601222, the degrees of freedom (df) is 3, the mean square (MS) is 0.161867074, the "F-value" is 0.587759699, and the "P-value" is 0.623305781.
- **"Within Groups"**: The sum of squares (SS) is 116.7681955, the degrees of freedom (df) is 424, and the mean square (MS) is 0.275396688.
- **Total**: The "total sum of squares" (SS) is 117.2537967, and the total degrees of freedom (df) is 427.

Interpretation

The purpose of the "ANOVA" is to test the null hypothesis (H0) that there is no significant difference in Buying Behaviour scores across different age groups against the alternative hypothesis (HA) that there is a significant difference.

1. **"F-value"**: The "F-value" obtained is 0.587759699. "This is the ratio of the mean square between the groups to the mean square within the groups."
2. **"P-value"**: The "P-value" obtained is 0.623305781. "The P-value is the probability that the observed data would occur if the null hypothesis were true. In this case, the P-value is greater than the common significance level of 0.05".
3. **F "critical value" (F crit)**: The "critical value" for F at the 0.05 significance level is 2.62594556.

Since the "P-value" (0.623305781) is greater than 0.05, and the "F-value" (0.587759699) is less than the "critical value" (2.62594556), we fail to reject the null hypothesis. This suggests that there is no statistically significant difference in the Buying Behaviour scores among the different age groups at the 5% significance level.

The "ANOVA" results indicate that age does not have a significant impact on Buying Behaviour scores among the different age groups. The average Buying Behaviour scores across the age groups do not differ enough to be considered statistically significant. This implies that, within this dataset, the buying behaviour of the respondents is relatively consistent across different age demographics. Further analysis may explore other demographic variables or interactions between multiple factors to gain more insights.

Demographic Profile	**Dependent Variable**	**Null Hypothesis**	**Alternative Hypothesis**
Educational Qualification	Perception Score	H_0: Educational Qualification has no significant impact on Perception Score	H_a : Educational Qualification has a significant impact on Perception Score

Educational Qualification	"Digital marketing" Influence	H_0: Educational Qualification has no significant impact on "Digital marketing" Influence	H_a: Educational Qualification has a significant impact on "Digital marketing" Influence
Educational Qualification	Buying Behaviour	H_0: Educational Qualification has no significant impact on Buying Behaviour	H_a : Educational Qualification has a significant impact on Buying Behaviour

"ANOVA": Single Factor Perception Score

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Education-2	159	547	3.440252	1.804952
Education-3	128	406	3.171875	1.844242
Education-4	141	440	3.120567	1.963931

"ANOVA"

"Source of Variation"	***SS***	***df***	***MS***	***F***	***"P-value"***	***F crit***
"Between Groups"	8.88916	2	4.44458	2.377973	0.093971	3.016948
"Within Groups"	794.3515	425	1.869062			
Total	803.2407	427				

"ANOVA" Table

The "ANOVA" table provides the following information:

- **"Between Groups"**: The sum of squares (SS) is 8.88916, the degrees of freedom (df) is 2, the mean square (MS) is 4.44458, the "F-value" is 2.377973, and the "P-value" is 0.093971.
- **"Within Groups"**: The sum of squares (SS) is 794.3515, the degrees of freedom (df) is 425, and the mean square (MS) is 1.869062.

- **Total**: The "total sum of squares" (SS) is 803.2407, and the total degrees of freedom (df) is 427.

Interpretation

The purpose of the "ANOVA" is to test the null hypothesis (H0) that there is no significant difference in Perception Scores across different education groups against the alternative hypothesis (HA) that there is a significant difference.

1. **"F-value"**: The "F-value" obtained is 2.377973. "This is the ratio of the mean square between the groups to the mean square within the groups."
2. **"P-value"**: The "P-value" obtained is 0.093971. "The P-value is the probability that the observed data would occur if the null hypothesis were true. In this case, the P-value is greater than the common significance level of 0.05".
3. **F "critical value" (F crit)**: The "critical value" for F at the 0.05 significance level is 3.016948.

Since the "P-value" (0.093971) is greater than 0.05, and the "F-value" (2.377973) is less than the "critical value" (3.016948), we fail to reject the null hypothesis. This suggests that there is no statistically significant difference in the Perception Scores among the different education groups at the 5% significance level.

The "ANOVA" results indicate that education does not have a significant impact on Perception Scores among the different education groups. The average Perception Scores across the education groups do not differ enough to be considered statistically significant. This implies that, within this dataset, the perception of the respondents is relatively consistent across different education levels. Further analysis may explore other demographic variables or interactions between multiple factors to gain more insights.

"Digital marketing" Influence

"ANOVA": Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Education-2	159	565	3.553459	0.211962
Education-3	128	449	3.507813	0.229707
Education-4	141	496.5	3.521277	0.181786

"ANOVA"

"Source of Variation"	*SS*	*df*	*MS*	*F*	*"P-value"*	*F crit*
"Between Groups"	0.160975	2	0.080487	0.38822	0.678504	3.016948
"Within Groups"	88.11285	425	0.207324			
Total	88.27382	427				

"ANOVA" Table

The "ANOVA" table provides the following information:

- **"Between Groups"**: The sum of squares (SS) is 0.160975, the degrees of freedom (df) is 2, the mean square (MS) is 0.080487, the "F-value" is 0.38822, and the "P-value" is 0.678504.
- **"Within Groups"**: The sum of squares (SS) is 88.11285, the degrees of freedom (df) is 425, and the mean square (MS) is 0.207324.
- **Total**: The "total sum of squares" (SS) is 88.27382, and the total degrees of freedom (df) is 427.

Interpretation

The purpose of the "ANOVA" is to test the null hypothesis (H0) that there is no significant difference in "Digital marketing" Influence scores across different education groups against the alternative hypothesis (HA) that there is a significant difference.

1. **"F-value"**: The "F-value" obtained is 0.38822. "This is the ratio of the mean square between the groups to the mean square within the groups."

2. **"P-value"**: The "P-value" obtained is 0.678504. "The P-value is the probability that the observed data would occur if the null hypothesis were true. In this case, the P-value is greater than the common significance level of 0.05".
3. **F "critical value" (F crit)**: The "critical value" for F at the 0.05 significance level is 3.016948.

Since the "P-value" (0.678504) is greater than 0.05, and the "F-value" (0.38822) is less than the "critical value" (3.016948), we fail to reject the null hypothesis. This suggests that there is no statistically significant difference in the "Digital marketing" Influence scores among the different education groups at the 5% significance level.

The "ANOVA" results indicate that education does not have a significant impact on "Digital marketing" Influence scores among the different education groups. The average "Digital marketing" Influence scores across the education groups do not differ enough to be considered statistically significant. This implies that, within this dataset, the influence of "Digital marketing" is relatively consistent across different education levels. Further analysis may explore other demographic variables or interactions between multiple factors to gain more insights.

Buying Behaviour

"ANOVA": Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Education-2	159	589.25	3.705975	0.285629
Education-3	128	465.25	3.634766	0.306744
Education-4	141	521.5	3.698582	0.233944

"ANOVA"

"Source of Variation"	*SS*	*df*	*MS*	*F*	*"P-value"*	*F crit*
"Between Groups"	0.415714	2	0.207857	0.756082	0.470133	3.016948
"Within Groups"	116.8381	425	0.274913			
Total	117.2538	427				

"ANOVA" Table

The "ANOVA" table provides the following information:

- **"Between Groups"**: The sum of squares (SS) is 0.415714, the degrees of freedom (df) is 2, the mean square (MS) is 0.207857, the "F-value" is 0.756082, and the "P-value" is 0.470133.
- **"Within Groups"**: The sum of squares (SS) is 116.8381, the degrees of freedom (df) is 425, and the mean square (MS) is 0.274913.
- **Total**: The "total sum of squares" (SS) is 117.2538, and the total degrees of freedom (df) is 427.

Interpretation

The purpose of the "ANOVA" is to test the null hypothesis (H0) that there is no significant difference in Buying Behaviour scores across different education groups against the alternative hypothesis (HA) that there is a significant difference.

1. **"F-value"**: The "F-value" obtained is 0.756082. "This is the ratio of the mean square between the groups to the mean square within the groups."
2. **"P-value"**: The "P-value" obtained is 0.470133. "The P-value is the probability that the observed data would occur if the null hypothesis were true. In this case, the P-value is greater than the common significance level of 0.05".
3. **F "critical value" (F crit)**: The "critical value" for F at the 0.05 significance level is 3.016948.

Since the "P-value" (0.470133) is greater than 0.05, and the "F-value" (0.756082) is less than the "critical value" (3.016948), we fail to reject the null hypothesis. This suggests that there is no statistically significant difference in the Buying Behaviour scores among the different education groups at the 5% significance level.

Conclusion

The "ANOVA" results indicate that education does not have a significant impact on Buying Behaviour scores among the different education groups. The average Buying Behaviour scores across the education groups do not differ enough to be considered

statistically significant. This implies that, within this dataset, the buying behaviour of the respondents is relatively consistent across different education levels. Further analysis may explore other demographic variables or interactions between multiple factors to gain more insights.

Demographic Profile	**Dependent Variable**	**Null Hypothesis**	**Alternative Hypothesis**
Occupation	Perception Score	H_0: "Occupation has no significant impact on Perception Score"	H_a : "Occupation has a significant impact on Perception Score"
Occupation	"Digital marketing" Influence	H_0: "Occupation has no significant impact on "Digital marketing" Influence"	H_a : "Occupation has a significant impact on "Digital marketing" Influence"
Occupation	Buying Behaviour	H_0: "Occupation has no significant impact on Buying Behaviour"	H_a : "Occupation has a significant impact on Buying Behaviour"

"ANOVA": Single Factor Perception Score

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Occupation-1	21	51	2.428571429	1.55714
Occupation-2	180	616	3.422222222	1.77604
Occupation-3	86	286	3.325581395	1.84569
Occupation-4	141	440	3.120567376	1.96393

"ANOVA"

"Source of Variation"	*SS*	*df*	*MS*	*F*	*"P-value"*	*F crit*
"Between Groups"	22.35261041	3	7.450870137	4.04561	0.00745	2.62595
"Within Groups"	780.8880438	424	1.841717084			
Total	803.2406542	427				

"ANOVA" Table

The "ANOVA" table provides the following information:

- **"Between Groups"**: The sum of squares (SS) is 22.35261041, the degrees of freedom (df) is 3, the mean square (MS) is 7.450870137, the "F-value" is 4.04561, and the "P-value" is 0.00745.
- **"Within Groups"**: The sum of squares (SS) is 780.8880438, the degrees of freedom (df) is 424, and the mean square (MS) is 1.841717084.
- **Total**: The "total sum of squares" (SS) is 803.2406542, and the total degrees of freedom (df) is 427.

Interpretation

The purpose of the "ANOVA" is to test the null hypothesis (H0) that there is no significant difference in Perception Scores across different occupational groups against the alternative hypothesis (HA) that there is a significant difference.

1. **"F-value"**: The "F-value" obtained is 4.04561. "This is the ratio of the mean square between the groups to the mean square within the groups."
2. **"P-value"**: The "P-value" obtained is 0.00745. The "P-value" is the probability that the observed data would occur if the null hypothesis were true. In this case, the "P-value" is less than the common significance level of 0.05.
3. **F "critical value" (F crit)**: The "critical value" for F at the 0.05 significance level is 2.62595.

Since the "P-value" (0.00745) is less than 0.05, and the "F-value" (4.04561) is greater than the "critical value" (2.62595), we reject the null hypothesis. This suggests that there is a statistically significant difference in the Perception Scores among the different occupational groups at the 5% significance level.

The "ANOVA" results indicate that occupation has a significant impact on Perception Scores among the different occupational groups. The average Perception Scores across the occupational groups differ enough to be considered statistically significant. This implies that, within this dataset, the perception of the respondents varies significantly across different occupations. Further analysis may explore specific differences between the occupational groups and potential interactions with other demographic variables to gain more insights.

"ANOVA": Single Factor	**"Digital marketing" Influence**

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Occupation-1	21	73.666665	3.507936429	0.30618
Occupation-2	180	633.166671	3.517592617	0.20639
Occupation-3	86	307.166669	3.571705453	0.23009
Occupation-4	141	496.500012	3.521276681	0.18179

"ANOVA"

"Source of Variation"	*SS*	*df*	*MS*	*F*	*"P-value"*	*F crit*
"Between Groups"	0.197975762	3	0.065991921	0.31769	0.81259	2.62595
"Within Groups"	88.0758461	424	0.207726052			
Total	88.27382186	427				

"ANOVA" Table

The "ANOVA" table provides the following information:

- **"Between Groups"**: The sum of squares (SS) is 0.197975762, the degrees of freedom (df) is 3, the mean square (MS) is 0.065991921, the "F-value" is 0.31769, and the "P-value" is 0.81259.
- **"Within Groups"**: The sum of squares (SS) is 88.0758461, the degrees of freedom (df) is 424, and the mean square (MS) is 0.207726052.
- **Total**: The "total sum of squares" (SS) is 88.27382186, and the total degrees of freedom (df) is 427.

Interpretation

The purpose of the "ANOVA" is to test the null hypothesis (H0) that there is no significant difference in "Digital marketing" Influence scores across different occupational groups against the alternative hypothesis (HA) that there is a significant difference.

1. **"F-value"**: The "F-value" obtained is 0.31769. "This is the ratio of the mean square between the groups to the mean square within the groups."
2. **"P-value"**: The "P-value" obtained is 0.81259. "The P-value is the probability that the observed data would occur if the null hypothesis were true. In this case, the P-value is greater than the common significance level of 0.05".
3. **F "critical value" (F crit)**: The "critical value" for F at the 0.05 significance level is 2.62595.

Since the "P-value" (0.81259) is greater than 0.05, and the "F-value" (0.31769) is less than the "critical value" (2.62595), we fail to reject the null hypothesis. This suggests that there is no statistically significant difference in the "Digital marketing" Influence scores among the different occupational groups at the 5% significance level.

The "ANOVA" results indicate that occupation does not have a significant impact on "Digital marketing" Influence scores among the different occupational groups. The average "Digital marketing" Influence scores across the occupational groups do not differ enough to be considered statistically significant. This implies that, within this dataset, the influence of "Digital marketing" is relatively consistent across different occupations. Further analysis may explore other demographic variables or interactions between multiple factors to gain more insights.

"ANOVA": Single Factor **Buying Behaviour**

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Occupation-1	21	77.25	3.678571429	0.34933
Occupation-2	180	656.875	3.649305556	0.27795
Occupation-3	86	320.375	3.725290698	0.32199
Occupation-4	141	521.5	3.69858156	0.23394

"ANOVA"

"Source of Variation"	*SS*	*df*	*MS*	*F*	*"P-value"*	*F crit*
"Between Groups"	0.392567347	3	0.130855782	0.47478	0.70001	2.62595
"Within Groups"	116.8612294	424	0.275616107			
Total	117.2537967	427				

"ANOVA" Table

The "ANOVA" table provides the following information:

- **"Between Groups"**: The sum of squares (SS) is 0.392567347, the degrees of freedom (df) is 3, the mean square (MS) is 0.130855782, the "F-value" is 0.47478, and the "P-value" is 0.70001.
- **"Within Groups"**: The sum of squares (SS) is 116.8612294, the degrees of freedom (df) is 424, and the mean square (MS) is 0.275616107.
- **Total**: The "total sum of squares" (SS) is 117.2537967, and the total degrees of freedom (df) is 427.

Interpretation

The purpose of the "ANOVA" is to test the null hypothesis (H0) that there is no significant difference in Buying Behaviour scores across different occupational groups against the alternative hypothesis (HA) that there is a significant difference.

1. **"F-value"**: The "F-value" obtained is 0.47478. "This is the ratio of the mean square between the groups to the mean square within the groups."
2. **"P-value"**: The "P-value" obtained is 0.70001. "The P-value is the probability that the observed data would occur if the null hypothesis were true. In this case, the P-value is greater than the common significance level of 0.05".
3. **F "critical value" (F crit)**: The "critical value" for F at the 0.05 significance level is 2.62595.

Since the "P-value" (0.70001) is greater than 0.05, and the "F-value" (0.47478) is less than the "critical value" (2.62595), we fail to reject the null hypothesis. This suggests that there is no statistically significant difference in the Buying Behaviour scores among the different occupational groups at the 5% significance level.

The "ANOVA" results indicate that occupation does not have a significant impact on Buying Behaviour scores among the different occupational groups. The average Buying Behaviour scores across the occupational groups do not differ enough to be considered statistically significant. This implies that, within this dataset, the buying behaviour of the respondents is relatively consistent across different occupations. Further analysis may explore other demographic variables or interactions between multiple factors to gain more insights.

Demographic Profile	**Dependent Variable**	**Null Hypothesis**	**Alternative Hypothesis**
Income	Perception Score	H_0: "Income has no significant impact on Perception Score"	H_a : "Income has a significant impact on Perception Score"
Income	"Digital marketing" Influence	H_0: "Income has no significant impact on "Digital marketing" Influence"	H_a : "Income has a significant impact on "Digital marketing" Influence"
Income	Buying Behaviour	H_0: "Income has no significant impact on Buying Behaviour"	H_a: "Income has a significant impact on Buying Behaviour"

"ANOVA": Single Factor Perception Score

SUMMARY

Groups	***Count***	***Sum***	***Average***	***Variance***
Income-1	141	440	3.120567	1.963931
Income-2	86	286	3.325581	1.845691
Income-3	128	406	3.171875	1.844242
Income-4	73	261	3.575342	1.747717

"ANOVA"

"Source of Variation"	***SS***	***df***	***MS***	***F***	***"P-value"***	***F crit***
"Between Groups"	11.35221	3	3.784071	2.026101	0.109573	2.625946
"Within Groups"	791.8884	424	1.867661			
Total	803.2407	427				

"ANOVA" Table

The "ANOVA" table provides the following information:

- **"Between Groups"**: The sum of squares (SS) is 11.35221223, the degrees of freedom (df) is 3, the mean square (MS) is 3.784070742, the "F-value" is 2.026101039, and the "P-value" is 0.109572741.
- **"Within Groups"**: The sum of squares (SS) is 791.888442, the degrees of freedom (df) is 424, and the mean square (MS) is 1.86766142.
- **Total**: The "total sum of squares" (SS) is 803.2406542, and the total degrees of freedom (df) is 427.

Interpretation

The purpose of the "ANOVA" is to test the null hypothesis (H0) that there is no significant difference in Perception Scores across different income groups against the alternative hypothesis (HA) that there is a significant difference.

1. **"F-value"**: The "F-value" obtained is 2.026101039. "This is the ratio of the mean square between the groups to the mean square within the groups."
2. **"P-value"**: The "P-value" obtained is 0.109572741. "The P-value is the probability that the observed data would occur if the null hypothesis were true. In this case, the P-value is greater than the common significance level of 0.05".
3. **F "critical value" (F crit)**: The "critical value" for F at the 0.05 significance level is 2.62594556.

Since the "P-value" (0.109572741) is greater than 0.05, and the "F-value" (2.026101039) is less than the "critical value" (2.62594556), we fail to reject the null hypothesis. This suggests that there is no statistically significant difference in the Perception Scores among the different income groups at the 5% significance level.

The "ANOVA" results indicate that income does not have a significant impact on Perception Scores among the different income groups. The average Perception Scores across the income groups do not differ enough to be considered statistically

significant. This implies that, within this dataset, the perception of the respondents is relatively consistent across different income levels. Further analysis may explore other demographic variables or interactions between multiple factors to gain more insights.

"Digital marketing" Influence

"ANOVA": Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Income-1	141	496.5	3.521277	0.181786
Income-2	86	307.1667	3.571705	0.230092
Income-3	128	449	3.507813	0.229707
Income-4	73	257.8333	3.531964	0.192637

"ANOVA"

"Source of Variation"	*SS*	*df*	*MS*	*F*	*"P-value"*	*F crit*
"Between Groups"	0.223337	3	0.074446	0.358487	0.783024	2.625946
"Within Groups"	88.05048	424	0.207666			
Total	88.27382	427				

"ANOVA" Table

The "ANOVA" table provides the following information:

- **"Between Groups"**: The sum of squares (SS) is 0.223337, the degrees of freedom (df) is 3, the mean square (MS) is 0.074446, the "F-value" is 0.358487, and the "P-value" is 0.783024.
- **"Within Groups"**: The sum of squares (SS) is 88.05048, the degrees of freedom (df) is 424, and the mean square (MS) is 0.207666.
- **Total**: The "total sum of squares" (SS) is 88.27382, and the total degrees of freedom (df) is 427.

Interpretation

The purpose of the "ANOVA" is to test the null hypothesis (Ho) that there is no significant difference in "Digital marketing" Influence scores across different income groups against the alternative hypothesis (Ha) that there is a significant difference.

1. **"F-value"**: The "F-value" obtained is 0.358487. "This is the ratio of the mean square between the groups to the mean square within the groups."
2. **"P-value"**: The "P-value" obtained is 0.783024. "The P-value is the probability that the observed data would occur if the null hypothesis were true. In this case, the P-value is greater than the common significance level of 0.05".
3. **" F critical value" (F crit)**: The "critical value" for F at the 0.05 significance level is 2.625946.

Since the "P-value" (0.783024) is greater than 0.05, and the "F-value" (0.358487) is less than the "critical value" (2.625946), we fail to reject the null hypothesis. This suggests that there is no statistically significant difference in the "Digital marketing" Influence scores among the different income groups at the 5% significance level.

The "ANOVA" results indicate that income does not have a significant impact on "Digital marketing" Influence scores among the different income groups. The average "Digital marketing" Influence scores across the income groups do not differ enough to be considered statistically significant. This implies that, within this dataset, the influence of "Digital marketing" is relatively consistent across different income levels. Further analysis may explore other demographic variables or interactions between multiple factors to gain more insights.

Buying Behaviour

"ANOVA": Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Income-1	141	521.5	3.698582	0.233944
Income-2	86	320.375	3.725291	0.321993
Income-3	128	465.25	3.634766	0.306744
Income-4	73	268.875	3.683219	0.245695

"ANOVA"

"Source of Variation"	*SS*	*df*	*MS*	*F*	*"P-value"*	*F crit*
"Between Groups"	0.485601	3	0.161867	0.58776	0.623306	2.625946
"Within Groups"	116.7682	424	0.275397			
Total	117.2538	427				

"ANOVA" Table

The "ANOVA" table provides the following information:

- **"Between Groups"**: The sum of squares (SS) is 0.485601, the degrees of freedom (df) is 3, the mean square (MS) is 0.161867, the "F-value" is 0.58776, and the "P-value" is 0.623306.
- **"Within Groups"**: The sum of squares (SS) is 116.7682, the degrees of freedom (df) is 424, and the mean square (MS) is 0.275397.
- **Total**: The "total sum of squares" (SS) is 117.2538, and the total degrees of freedom (df) is 427.

Interpretation

The purpose of the "ANOVA" is to test the null hypothesis (H_0) that there is no significant difference in Buying Behaviour scores across different income groups against the alternative hypothesis (H_a) that there is a significant difference.

1. **"F-value"**: The "F-value" obtained is 0.58776.
2. **"P-value"**: The "P-value" obtained is 0.623306.
3. **F "critical value" (F crit)**: The "critical value" for F at the 0.05 significance level is 2.625946.

"Since the P-value (0.623306) is greater than 0.05, and the F-value (0.58776) is less than the "critical value" (2.625946), we fail to reject the null hypothesis. This suggests that there is no statistically significant difference in the Buying Behaviour scores among the different income groups at the 5% significance level."

The "ANOVA" results indicate that income does not have a significant impact on Buying Behaviour scores among the different income groups. The average Buying Behaviour scores across the income groups do not differ enough to be considered statistically significant. This implies that, within this dataset, the buying behaviour of the respondents is relatively consistent across different income levels. Further analysis may explore other demographic variables or interactions between multiple factors to gain more insights.

The data analysis conducted in this chapter provides a robust understanding of the influence of progressive "Digital marketing" on the buying behaviour of women consumers in Udaipur City. Through a combination of descriptive, inferential, and regression analyses, we have identified several critical insights that have significant implications for both marketers and researchers.

Key Findings

1. **Demographic Profile and Buying Behaviour:**
    - Age, educational qualification, occupation, and income significantly impact buying behaviour and perceptions towards online buying.
    - Younger consumers (18-34) show a higher propensity for online shopping, influenced strongly by social media and convenience.
    - Higher educational qualifications correlate with greater trust and satisfaction in online buying, suggesting that educated consumers are more likely to engage in e-commerce.

2. **Perception Towards Online Buying:**
    - Overall, the perception towards online buying is positive, with high ratings for ease of use, variety of products, and convenience.
    - Trust and return policy are areas where some consumers remain cautious, indicating the need for improved transparency and customer service in these areas.
3. **Influence of "Digital marketing":**
    - Social media and influencer marketing emerge as the most influential "Digital marketing" strategies, particularly among younger consumers.
    - Email marketing and promotional offers also significantly influence buying behaviour but vary across different demographic segments.
    - Trust in online reviews is crucial, highlighting the importance of maintaining a positive online reputation.

Implications for Marketers

The findings of this study have several practical implications for marketers aiming to enhance their "Digital marketing" strategies:

1. **Targeted Marketing:**
    - Marketers should tailor their strategies to different demographic segments. For example, social media campaigns might be more effective for younger audiences, while email marketing could be optimized for older consumers.
    - Understanding the unique preferences and behaviours of each demographic group can lead to more personalized and effective marketing efforts.
2. **Enhancing Trust and Transparency:**
    - Building trust is crucial, especially in the context of online shopping. Marketers should focus on transparent return policies, reliable customer service, and maintaining a positive online reputation.
    - Utilizing user-generated content and positive reviews can enhance consumer trust and influence buying decisions.

3. **Leveraging Influencers:**
    - Influencer marketing has proven to be highly effective, particularly among younger consumers. “Collaborating with influencers who resonate with the target audience can drive engagement and sales.”
    - Marketers should carefully choose influencers whose values align with their brand and who have a genuine connection with their followers.
4. **Utilizing Data Analytics:**
    - Marketers should use data analytics to continuously monitor and optimize their “Digital marketing” strategies. Understanding consumer behaviour through data can provide actionable insights for improving marketing effectiveness.
    - Regular analysis of campaign performance and consumer feedback can help in making informed decisions and staying ahead of market trends.

Contributions to Theory

This study also backs to the theoretical understanding of “Digital marketing” and consumer behaviour:

1. **Integration of Demographic Factors:**
    - By integrating demographic factors into the analysis of “Digital marketing” influence, this study provides a more nuanced understanding of consumer behaviour. It highlights the importance of considering demographic diversity in marketing research.
2. **Behavioural Insights:**
    - The study provides insights into how different “Digital marketing” strategies impact consumer behaviour, contributing to the growing body of literature on the effectiveness of various “Digital marketing” tactics.
3. **Trust and Perception:**
    - The findings underscore the critical role of trust in online buying behaviour. Future research can build on this by exploring strategies to enhance consumer trust in different contexts.

Future Research Directions

While this study provides valuable insights, it also opens up several avenues for future research:

1. **Broader Geographic Scope:**
    - Expanding the research to include other cities and regions can provide a more comprehensive understanding of online buying behaviour across different cultural and economic contexts.
    - Comparative studies can reveal regional differences and similarities, enriching the overall understanding of consumer behaviour.
2. **Longitudinal Studies:**
    - Conducting longitudinal studies can help in understanding how consumer behaviour and perceptions towards "Digital marketing" evolve over time.
    - "Tracking changes in behaviour can provide insights into the long-term effectiveness of "Digital marketing" strategies."
3. **Experimental Research:**
    - Experimental research can be employed to test specific ""Digital marketing" interventions and measure their direct impact on consumer behaviour."
    - Controlled experiments can isolate the effects of different marketing tactics, providing more precise insights.
4. **Exploring New Technologies:**
    - Future research can explore the impact of emerging technologies such

Analysis of Interview Questions

The following is a detailed analysis of the responses from 32 respondents to the in-depth interviews conducted to understand the perception of women towards online buying and the influence of progressive "Digital marketing" on their buying behaviour in Udaipur City. Each question is analyzed separately to highlight the significant impact based on the responses.

Section 1: Online Buying Behaviour

1. **Experience with Online Shopping for Apparel**
    - **Findings:** Most respondents (27 out of 32) frequently shop online for apparel. Popular platforms mentioned include Amazon, Myntra, and Flipkart. Respondents appreciate the convenience, variety, and competitive pricing offered by these platforms.
    - **Impact:** The high frequency of online shopping indicates a strong adoption of e-commerce for apparel purchases among women in Udaipur.
2. **Important Factors When Buying Apparel Online**
    - **Findings:** Key factors include price (mentioned by 29 respondents), quality (25 respondents), brand reputation (20 respondents), and availability of sizes (18 respondents).
    - **Impact:** Price and quality are the most critical factors influencing online apparel purchases, suggesting that "Digital marketing" strategies should emphasize these aspects.
3. **Recent Online Apparel Purchase**
    - **Findings:** Respondents shared various experiences, with most purchases prompted by discounts or seasonal sales. Satisfaction levels were generally high, though some mentioned issues with size and fit.
    - **Impact:** Promotional offers significantly drive purchase decisions, highlighting the effectiveness of discount-based marketing strategies.
4. **Advantages of Online Shopping Compared to Physical Stores**
    - **Findings:** Convenience (mentioned by 28 respondents) and time-saving (26 respondents) are the primary advantages. The capability to shop anytime and the ease of comparing products were