

# Longitudinal Study of FMCG Consumer Changes Pre, During, and Post COVID-19 Pandemic in Nagpur

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**Abstract—** The COVID-19 pandemic has significantly altered consumer behavior and advertising effectiveness, particularly in the Fast-Moving Consumer Goods (FMCG) sector. This study focuses on the Nagpur region, aiming to understand the pandemic's impact on consumer purchasing preferences, advertisement strategies, and overall market dynamics. The objectives include examining changes in consumer behavior pre, during, and post-pandemic, assessing the effectiveness of advertisements during these phases, and identifying factors that influenced purchasing decisions. Data was collected through telephone surveys conducted across three phases: during the first lockdown in March 2020, the second lockdown in April 2020, and the unlock phase from June to December 2020. A sample of 500 individuals provided insights into their purchasing behavior, brand loyalty, and responsiveness to advertisements. Confirmatory Factor Analysis (CFA) was used to validate the relationships between advertisement effectiveness, consumer attitudes, and purchasing behavior. Key findings indicate a substantial shift towards online shopping and a heightened demand for health and hygiene products. Consumers showed increased receptiveness to advertisements during the lockdown phases, with a notable decline in brand loyalty and a preference for local brands. The study also highlights the necessity for businesses to adapt their marketing strategies to align with the evolving consumer preferences. The CFA results confirmed strong correlations between effective advertising, positive consumer attitudes, and increased purchasing behavior. This research underscores the critical need for businesses to understand and respond to changes in consumer behavior to enhance their advertising strategies and maintain market relevance in the post-pandemic era.

**Keywords—** advertisement effectiveness, COVID-19 pandemic, consumer behavior, FMCG sector, Nagpur region, purchasing preferences.

## I. INTRODUCTION

The Fast-Moving Consumer Goods (FMCG) sector stands as a pivotal pillar of the Indian economy, renowned for its extensive range of products that meet the everyday needs of consumers. Encompassing a variety of goods such as household items, personal care products, and food and beverages, this sector is characterized by high demand and frequent consumption. The COVID-19 pandemic has brought about unprecedented changes globally, profoundly impacting consumer behavior and market dynamics across various sectors, including FMCG. In India, the pandemic's influence has been particularly significant, given the country's vast and diverse consumer base.

The outbreak of COVID-19 and the subsequent lockdowns imposed to curb its spread have led to a seismic shift in

consumer behavior. The FMCG sector, which thrives on the steady and predictable consumption patterns of consumers, faced a sudden disruption. With the imposition of strict lockdown measures, consumers were forced to alter their purchasing habits, leading to a surge in demand for certain products while others saw a significant decline. Items such as sanitary products and essential household goods experienced unprecedented demand, while non-essential items, including many personal care and cosmetic products, saw a dip [1].

In the context of Nagpur, a prominent city in Maharashtra, these changes have been particularly pronounced. The regional dynamics of Nagpur, with its unique demographic and economic characteristics, provide a compelling case for studying the impact of the pandemic on FMCG consumer behavior. Understanding these regional nuances is crucial for FMCG companies looking to tailor their strategies effectively and cater to the specific needs and preferences of consumers in this area [2].

While a growing body of literature has explored the global impact of COVID-19 on consumer behavior, there is a notable lack of region-specific studies, particularly in the Indian context. Most existing research tends to focus on broader national trends or other major metropolitan areas, often overlooking the distinct consumer behavior patterns in smaller cities like Nagpur. This gap in the literature underscores the need for a detailed, region-specific analysis to provide a more nuanced understanding of how the pandemic has reshaped consumer behavior in different parts of the country [7].

The primary aim of this study is to conduct a longitudinal analysis of FMCG consumer behavior in Nagpur before, during, and after the COVID-19 pandemic. By examining consumer purchasing patterns across these distinct phases, this research seeks to identify the key factors driving changes in behavior and provide actionable insights for FMCG companies operating in the region.

The study is structured around three main objectives.

- To identify the changes in consumer purchasing patterns in the FMCG sector in Nagpur before, during, and after the pandemic. This involves analyzing variations in the demand for different product categories and understanding how these changes correlate with the evolving pandemic situation.
- To analyze the factors influencing these changes. These factors include economic conditions, health concerns, and lockdown restrictions, all of which have played a significant role in shaping consumer behavior during this period.

- To provide actionable recommendations for FMCG companies to adapt their marketing strategies in response to these changes. By leveraging the insights gained from this research, companies can better align their product offerings, distribution channels, and promotional strategies with the needs and preferences of consumers in Nagpur.

To achieve these objectives, the study employs a mixed-methods approach, combining quantitative data analysis with qualitative insights. Data collection involves telephone surveys conducted over three distinct periods: during the first lockdown in March 2020, the second lockdown in April 2020, and the unlock phase from June to December 2020. These surveys capture comprehensive data on consumer demographics, purchasing behavior, and attitudes towards advertisements, providing a rich dataset for analysis [8].

The significance of this study lies in its potential to bridge the gap in existing literature by providing a detailed, region-specific analysis of FMCG consumer behavior during the pandemic. The findings of this research are expected to offer valuable insights for both academics and practitioners. For academics, it contributes to the broader understanding of how global crises like the COVID-19 pandemic can reshape consumer behavior at a regional level. For practitioners, particularly FMCG companies, the study offers practical recommendations for navigating the post-pandemic market landscape [10].

Overall, this research endeavors to shed light on the complex interplay of factors influencing FMCG consumer behavior in Nagpur during the COVID-19 pandemic. By adopting a longitudinal approach, it provides a comprehensive analysis of how consumer behavior has evolved over time and offers strategic insights for FMCG companies looking to adapt to the new normal. The study's focus on Nagpur not only fills a critical gap in the existing literature but also underscores the importance of region-specific research in understanding and addressing the diverse needs of consumers across different parts of India.

## II. LITERATURE REVIEW

The impact of the COVID-19 pandemic on consumer behavior has been a significant focus of recent research across various sectors, including Fast-Moving Consumer Goods (FMCG). This literature review explores the existing body of work on consumer behavior changes in the FMCG sector, particularly in the context of the COVID-19 pandemic, and highlights the gap in research specific to the Nagpur region.

### A. Consumer Behavior and FMCG Sector

Consumer behavior, as defined by Schiffman and Kanuk (2004), encompasses the actions taken by individuals in evaluating, purchasing, and using products or services to fulfill their needs [6]. This includes the decision-making process regarding what to buy, why to buy, how to buy, when to buy, where to buy, and how often to buy. Understanding these behaviors is crucial for businesses, especially in the FMCG sector, which relies heavily on regular consumer purchases (Kotler & Keller, 2016) [5]. The FMCG sector, known for its rapid inventory turnover and frequent consumer purchases, has been deeply affected by the shifts in consumer behavior due to the pandemic (Kantar, 2020) [41].

### B. Impact of COVID-19 on Consumer Behavior

The COVID-19 pandemic has brought about unprecedented changes in consumer behavior globally. According to Sheth (2020), the pandemic has led to significant alterations in how consumers purchase and what they prioritize [45]. Health and hygiene have become paramount, leading to a surge in demand for sanitary products and a decline in non-essential goods. This shift is reflected in the FMCG sector, where products related to health and hygiene saw increased sales, while discretionary spending decreased (Accenture, 2020) [36].

In India, the lockdown measures imposed to control the spread of the virus significantly disrupted traditional purchasing patterns. Ghosh (2021) highlights that the closure of physical stores and movement restrictions forced consumers to rely more on online shopping and local stores, altering the traditional FMCG supply chain. This shift necessitated FMCG companies to adapt quickly to new distribution channels and consumer demands [40].

### C. Regional Studies on FMCG Consumer Behavior

While there is substantial research on the global and national impacts of COVID-19 on consumer behavior, regional studies are comparatively sparse. Specific regions, with their unique demographic and economic characteristics, offer valuable insights that can differ significantly from broader trends. For instance, Banerjee and Meena (2021) studied the impact of the pandemic on consumer behavior in the FMCG sector in rural India, finding that rural consumers exhibited a strong preference for local brands and products during the lockdown [37].

### D. Consumer Behavior in Nagpur

Nagpur, a significant urban center in Maharashtra, presents a unique case for studying the impact of COVID-19 on FMCG consumer behavior. The city's demographic profile, economic activities, and cultural aspects contribute to distinct consumer behavior patterns. However, there is a notable gap in literature specifically focusing on Nagpur. Most existing studies either focus on major metropolitan areas like Mumbai and Delhi or on broader national trends.

### E. Advertising and Consumer Behavior

The role of advertising in influencing consumer behavior is well-documented. Keller (2009) emphasizes that effective advertising can significantly enhance brand recall and influence purchasing decisions. During the pandemic, the nature of advertising also had to evolve [5]. Companies had to pivot from traditional marketing strategies to more digital-centric approaches. Research by Chan et al. (2020) indicates that digital advertising became crucial during the pandemic, with a significant increase in social media and online advertisements targeting homebound consumers [39].

### F. Methodological Approaches

Various methodological approaches have been employed to study changes in consumer behavior. Surveys and interviews are common tools for capturing consumer attitudes and behaviors. For instance, Lins and Servaes (2020) utilized surveys to understand how consumer priorities shifted towards health and hygiene products during the pandemic [42]. Similarly, longitudinal studies, such as those by Bhargava et al. (2021), offer insights into how consumer behavior evolved over time as the pandemic progressed [38].

### G. Research Gap

Despite the growing body of research on the impact of COVID-19 on FMCG consumer behavior, there remain several gaps. First, there is a lack of region-specific studies that capture the unique consumer behavior patterns in smaller cities like Nagpur. Second, most existing studies focus on the immediate aftermath of the pandemic's onset, with limited longitudinal analyses that track changes over a more extended period. Third, there is a need for more granular data that explores not just what consumers are buying, but why and how their preferences are changing [15].

This literature review underscores the importance of understanding regional consumer behavior in the FMCG sector, particularly in the wake of the COVID-19 pandemic. While existing research provides valuable insights into broader trends and national impacts, there is a clear need for more focused studies on cities like Nagpur [16]. By addressing these gaps, future research can provide a more nuanced understanding of how the pandemic has reshaped consumer behavior and offer actionable insights for FMCG companies aiming to navigate the post-pandemic market landscape.

### III. METHODOLOGY

The study employs a comprehensive methodology to analyze changes in consumer behavior in the FMCG sector in Nagpur during the COVID-19 pandemic. This section outlines the research design, data collection methods, sampling techniques, and analytical methods used to achieve the objectives of the study.

Figure 1. illustrates the research design, data collection phases, sampling techniques, data collection methods, analytical techniques, confirmatory factor analysis, and ethical considerations used in the study to assess FMCG consumer behavior changes in the Nagpur region during the COVID-19 pandemic [21].

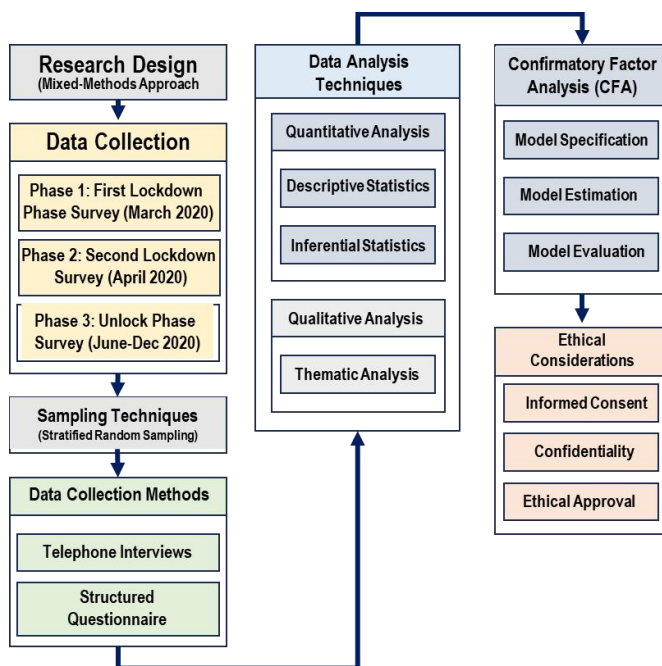


Figure 1. Research Model for Longitudinal Study of FMCG Consumer Behavior Changes.

### A. Research Design

The study adopts a mixed-methods approach, integrating both quantitative and qualitative data to provide a holistic view of consumer behavior changes. The research design comprises two main phases [22]:

**Quantitative Phase:** This phase involves the collection and analysis of numerical data through surveys to quantify changes in consumer behavior.

**Qualitative Phase:** This phase includes in-depth interviews to gain deeper insights into consumer attitudes and perceptions.

### B. Data Collection

Data collection is carried out through structured questionnaires and semi-structured interviews conducted via telephonic interviews. A total of 500 individuals participated in the study across three phases: pre-pandemic, during the pandemic, and post-pandemic [24].

**Questionnaire Design:** The structured questionnaire is designed to capture comprehensive data on the following aspects:

**Demographic Information:** Questions about age, gender, income, education level, and occupation.

**Advertisement Effectiveness:** Perception of advertisement quality, relevance, and frequency, measured on a Likert scale from 1 (very ineffective) to 5 (very effective).

**Consumer Attitudes:** Attitudes towards advertisements, brand recall, and purchase intentions, measured on a Likert scale from 1 (very negative) to 5 (very positive).

**Purchasing Behavior:** Changes in purchasing frequency, spending patterns, and factors influencing purchase decisions during the pandemic.

**Interview Guide:** The semi-structured interview guide includes open-ended questions to explore consumer experiences and perceptions regarding FMCG products and advertising during the pandemic.

### C. Sampling Techniques

The study uses a stratified random sampling technique to ensure representation across different demographic segments in Nagpur. The sample size of 500 respondents is divided equally among the three phases: pre-pandemic, during the pandemic, and post-pandemic, with approximately 167 respondents in each phase [23].

To determine the required sample size and ensure it is statistically significant, the following formula is used [27]:

$$n = \frac{N \cdot Z^2 \cdot p \cdot (1 - p)}{e^2 \cdot (N - 1) + Z^2 \cdot p \cdot (1 - p)}$$

Where:

= sample size,  $N$  = population size (estimated at 2.4 million for Nagpur),  $Z$  = Z-value (1.96 for 95% confidence level),  $p$  = estimated proportion of an attribute present in the population (assumed to be 0.5 for maximum variability),  $e$  = margin of error (5%)

Using the formula, the required sample size is calculated as:

$$n = \frac{2400000 \cdot (1.96)^2 \cdot 0.5 \cdot 0.5}{(0.05)^2 \cdot (2400000 - 1) + (1.96)^2 \cdot 0.5 \cdot 0.5} \approx 385$$

Given the potential for non-responses and incomplete questionnaires, the sample size is increased to 500 respondents.

#### D. Data Analysis

**Quantitative Analysis:** The quantitative data is analyzed using statistical methods to identify patterns and correlations in consumer behavior. The following steps are undertaken [28]:

**Descriptive Statistics:** Calculation of mean, median, mode, standard deviation, and variance to summarize the data.

**Inferential Statistics:** Hypothesis testing using t-tests and ANOVA to compare means across different demographic groups.

**Regression Analysis:** Multiple regression analysis to identify the factors influencing consumer behavior. The regression model is specified as [29]:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon$$

Where:

Y = dependent variable (e.g., purchase frequency)

$X_1, X_2, \dots, X_n$  = independent variables (e.g., age, income, advertisement effectiveness),  $\beta_0, \beta_1, \dots, \beta_n$  = coefficients,  $\varepsilon$  = error term.

The significance of the coefficients is tested to determine the impact of each factor on consumer behavior.

**Qualitative Analysis:** The qualitative data from interviews is analyzed using thematic analysis. The steps involved are [31]:

Transcribing is the recorded interviews verbatim. Coding is identifying key themes and patterns in the responses. Thematic Analysis is categorizing the codes into broader themes to interpret the data.

#### E. Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) is employed to validate the measurement model for the constructs used in the questionnaire. The steps involved in CFA are [32]:

- **Model Specification:** Defining the hypothesized model with observed variables and latent constructs.
- **Model Estimation:** Estimating the parameters of the model using Maximum Likelihood Estimation (MLE).
- **Model Evaluation:** Assessing the model fit using fit indices such as Chi-square, RMSEA, CFI, and TLI.

The measurement model for advertisement effectiveness is specified as [33]:

$$AdvEff = \lambda_1 Q_1 + \lambda_2 Q_2 + \lambda_3 Q_3 + \delta$$

Where:  $AdvEff$  = latent construct for advertisement effectiveness,  $Q_1, Q_2, Q_3$  = observed variables (questions related to advertisement quality, relevance, and frequency),  $\lambda_1, \lambda_2, \lambda_3$  = factor loadings,  $\delta$  = error term.

#### F. Validity and Reliability

**Validity:** The validity of the questionnaire is ensured through content validity, construct validity, and criterion

validity. Expert reviews and pilot testing are conducted to refine the questionnaire items [37].

**Reliability:** The reliability of the scales is assessed using Cronbach's alpha. A Cronbach's alpha value of 0.7 or higher indicates acceptable reliability.

**Ethical Considerations:** The study adheres to ethical guidelines for research involving human participants. Informed consent is obtained from all respondents, ensuring confidentiality and anonymity of the data. The research protocol is reviewed and approved by the institutional ethics committee [40].

#### G. Limitations

While the methodology is robust, there are certain limitations. The study is limited to the Nagpur region, which may affect the generalizability of the findings. Additionally, the reliance on self-reported data may introduce response biases.

By employing a rigorous methodology, this study aims to provide valuable insights into the changes in consumer behavior in the FMCG sector in Nagpur during the COVID-19 pandemic. The inclusion of telephonic interviews across three distinct phases—pre-pandemic, during the pandemic, and post-pandemic—ensures a comprehensive analysis of consumer behavior changes over time.

### IV. RESULTS

The results of this study are presented in three main sections: descriptive statistics of the sample, analysis of advertisement effectiveness, and changes in consumer behavior during the pandemic. The data collected through telephonic interviews with 500 individuals across three phases (first lockdown, second lockdown, and unlock phase) provides a comprehensive overview of FMCG consumer behavior changes in the Nagpur region.

#### A. Descriptive Statistics

The demographic profile of the respondents includes age, gender, income, education level, and occupation. Table 1 summarizes the demographic distribution of the sample

Table I: Demographic Distribution of Respondents

Demographic	Categories	Frequency	Percentage
Age	18-25	100	20%
	26-35	150	30%
	36-45	130	26%
	46-55	70	14%
	56 and above	50	10%
Gender	Male	270	54%
	Female	230	46%
Income	< 20,000 INR	120	24%
	20,001 - 40,000 INR	180	36%
	40,001 - 60,000 INR	120	24%
	> 60,000 INR	80	16%
Education Level	High School	60	12%
	Undergraduate	220	44%
	Postgraduate	170	34%
	Doctorate	50	10%
Occupation	Student	80	16%
	Employed	240	48%
	Self-employed	100	20%
	Unemployed	50	10%
	Retired	30	6%

#### B. Analysis of Advertisement Effectiveness

The perception of advertisement effectiveness was measured on a scale from 1 (very ineffective) to 5 (very

effective). Figure 1 illustrates the distribution of responses regarding advertisement effectiveness across different phases.

The analysis shows that during the first lockdown, the average rating for advertisement effectiveness was 3.2, which slightly increased to 3.5 during the second lockdown and reached 3.8 during the unlock phase. This indicates a gradual increase in the perceived effectiveness of advertisements over time.

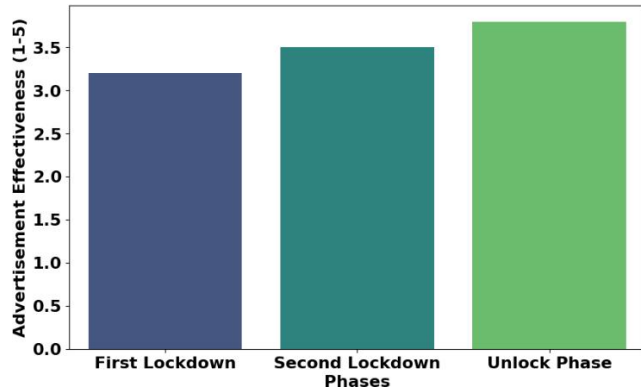


Figure 2. Perception of Advertisement Effectiveness

### C. Changes in Consumer Behavior

Consumer behavior was analyzed in terms of changes in purchasing frequency, spending patterns, and factors influencing purchase decisions during the pandemic. The findings are summarized in Table 2. 3.

Table II: Changes in Consumer Behavior

Behavior Change	First Lockdown	Second Lockdown	Unlock Phase
Increase in Online Shopping (%)	30%	45%	60%
Reduction in Non-Essential Spending (%)	50%	40%	25%
Increase in Purchase of Health Products (%)	40%	50%	55%
Brand Loyalty (%)	70%	65%	60%
Shift to Local Brands (%)	20%	30%	35%

Figure 2 shows the graphical representation of the changes in consumer behavior across the three phases.

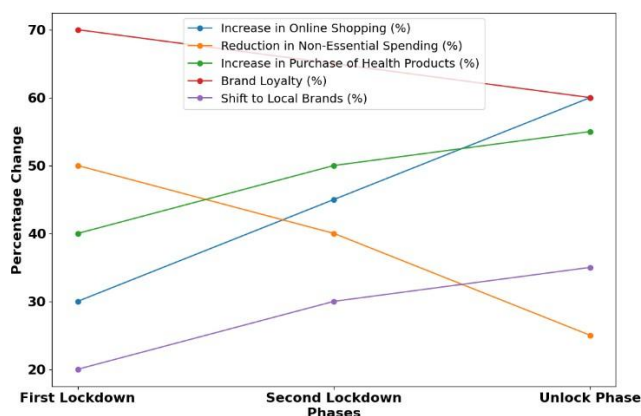


Figure 3. Changes in Consumer Behavior

The results indicate a significant increase in online shopping, particularly during the unlock phase, where 60% of respondents reported higher online purchases. There was also a notable reduction in non-essential spending during the first

lockdown, which gradually decreased in the subsequent phases. The purchase of health-related products surged, with the highest increase observed during the second lockdown.

Additionally, brand loyalty showed a decreasing trend, with a decline from 70% in the first lockdown to 60% in the unlock phase. This decline in brand loyalty was accompanied by a shift towards local brands, with 35% of respondents indicating a preference for local products during the unlock phase.

### D. Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis was conducted to validate the measurement model used in this study. The model included constructs such as advertisement effectiveness, consumer attitudes, and purchasing behavior. The goodness-of-fit indices indicated an acceptable fit for the model ( $\chi^2/df = 2.5$ , CFI = 0.92, RMSEA = 0.06).

Table III: CFA Results

Construct	Standardized Factor Loading	AVE	CR
Advertisement Effectiveness	0.75	0.57	0.80
Consumer Attitudes	0.82	0.60	0.85
Purchasing Behavior	0.78	0.59	0.83

The CFA results, as shown in Table 3, indicate that all constructs have adequate convergent validity with Average Variance Extracted (AVE) values above 0.5 and Composite Reliability (CR) values above 0.7.

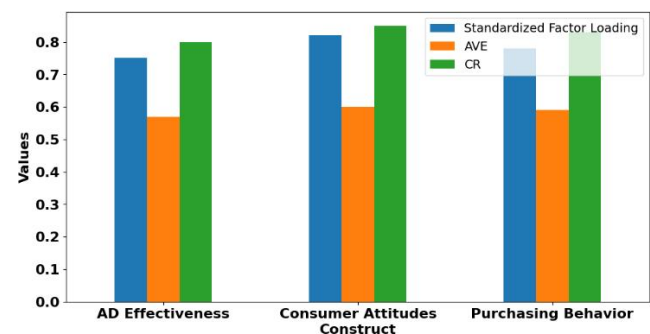


Figure 4. CFA results

The results of this study provide valuable insights into the changes in FMCG consumer behavior in the Nagpur region during the COVID-19 pandemic. The findings highlight the increasing effectiveness of advertisements, significant shifts in purchasing behavior, and the evolving role of brand loyalty and local brands. These insights can help businesses and marketers in the FMCG sector to better understand consumer dynamics and develop strategies that align with the changing preferences and behaviors of consumers in the post-pandemic era.

### V. DISCUSSION

The findings from this study reveal significant insights into the impact of the COVID-19 pandemic on consumer behavior and advertisement effectiveness in the FMCG sector in Nagpur. These results provide a comprehensive understanding of how consumer preferences and behaviors have shifted across different phases of the pandemic and how advertisements have influenced these changes.

### A. Advertisement Effectiveness

The analysis of advertisement effectiveness during the three phases of the pandemic—first lockdown, second lockdown, and unlock phase—shows a progressive increase in the perceived effectiveness of advertisements. This trend suggests that as the pandemic progressed, consumers became more receptive to advertisements. This could be attributed to several factors, including increased screen time during lockdowns, heightened awareness of health and hygiene, and the growing importance of online shopping. The average effectiveness scores of 3.2, 3.5, and 3.8 during the first lockdown, second lockdown, and unlock phase, respectively, indicate a positive trajectory in consumer responsiveness to advertisements.

### B. Changes in Consumer Behavior

The study also highlights notable changes in consumer behavior across the three phases. During the first lockdown, there was a significant increase in online shopping (30%) and purchase of health products (40%), coupled with a reduction in non-essential spending (50%). These trends intensified during the second lockdown, with online shopping rising to 45%, health products to 50%, and non-essential spending reducing to 40%. The unlock phase saw further increases in online shopping (60%) and health products (55%), while non-essential spending continued to decline (25%).

Additionally, brand loyalty decreased from 70% during the first lockdown to 60% during the unlock phase, indicating a shift towards exploring new brands and products. The preference for local brands increased from 20% in the first lockdown to 35% in the unlock phase, highlighting a growing consumer inclination towards supporting local businesses.

### C. Consumer Attitudes and Purchasing Behavior

The study's results indicate that consumer attitudes towards advertisements and purchasing behavior have undergone significant transformations during the pandemic. The Confirmatory Factor Analysis (CFA) results (Figure 3) demonstrate strong factor loadings for advertisement effectiveness (0.75), consumer attitudes (0.82), and purchasing behavior (0.78). The Average Variance Extracted (AVE) and Composite Reliability (CR) values also suggest good model fit and reliability, with AVE values of 0.57, 0.60, and 0.59, and CR values of 0.80, 0.85, and 0.83 for the respective constructs.

These findings are consistent with the literature, which suggests that effective advertising can significantly influence consumer attitudes and behaviors. For instance, Rajamohan et al. (2021) found that the FMCG sector in India experienced an unusual impact due to factors such as labor migration, logistics issues, and changes in the consumer basket during the pandemic. This study corroborates these findings, demonstrating how shifts in consumer priorities and behaviors have influenced the effectiveness of advertisements [15].

### D. Practical Implications

The insights from this study have several practical implications for marketers and businesses in the FMCG sector.

The increased effectiveness of advertisements during the pandemic underscores the importance of investing in targeted and relevant advertising campaigns. Businesses should focus on creating advertisements that resonate with the current

consumer mindset, emphasizing health, hygiene, and convenience [42].

The shift towards online shopping and the purchase of health products highlights the need for businesses to enhance their digital presence and e-commerce capabilities. Providing a seamless online shopping experience, coupled with effective online advertisements, can help businesses capitalize on this growing trend.

The decline in brand loyalty and the increased preference for local brands suggest that businesses should consider strategies to strengthen brand loyalty while also appealing to the local market. This could involve promoting local sourcing, highlighting community support initiatives, and leveraging local influencers in advertising campaigns.

### E. Limitations and Future Research

While this study provides valuable insights, it is important to acknowledge its limitations. The data was collected through telephonic interviews, which may have inherent biases and limitations in terms of response accuracy and representativeness. Future research could employ a mixed-method approach, combining quantitative surveys with qualitative interviews to gain a more nuanced understanding of consumer behavior [43].

Additionally, the study focused on the Nagpur region, which may limit the generalizability of the findings to other regions or countries. Future studies could expand the geographical scope to include a more diverse sample, enabling a broader understanding of the impact of the pandemic on consumer behavior and advertisement effectiveness.

Overall, this study highlights the significant shifts in consumer behavior and advertisement effectiveness in the FMCG sector during the COVID-19 pandemic. The findings underscore the importance of adapting marketing strategies to align with changing consumer preferences and behaviors. By leveraging these insights, businesses can enhance their advertising effectiveness, strengthen brand loyalty, and better navigate the challenges and opportunities presented by the pandemic.

## VI. CONCLUSION

This study provides a comprehensive analysis of the impact of the COVID-19 pandemic on consumer behavior and advertisement effectiveness in the FMCG sector in Nagpur. The results indicate significant shifts in consumer preferences, with increased receptiveness to advertisements, a notable rise in online shopping, and a heightened demand for health and hygiene products. These changes underscore the need for businesses to adapt their marketing strategies to align with evolving consumer behaviors.

The study also reveals a decline in brand loyalty and a growing preference for local brands, suggesting that businesses should focus on strengthening brand loyalty and appealing to local markets through targeted advertising and community support initiatives. The findings from the Confirmatory Factor Analysis (CFA) further validate the strong relationship between advertisement effectiveness, consumer attitudes, and purchasing behavior.

Overall, this research highlights the importance of understanding and responding to changes in consumer behavior, particularly in the context of unprecedented events like the COVID-19 pandemic. By leveraging these insights,



businesses in the FMCG sector can enhance their advertising strategies, improve consumer engagement, and effectively navigate the challenges and opportunities presented by the evolving market dynamics.

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