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Consumer behavior and socio-economic influences in e-grocery shopping of fruits and vegetables in Jaipur city, Rajasthan

Swati Sharma and Anjoo Chauhan

Abstract
This descriptive study provides an in-depth analysis of consumer behavior and socio-economic profiles related to the online purchase of fruits and vegetables in Jaipur, a prominent tier-2 city in Rajasthan. Utilizing a structured questionnaire, primary data were collected through personal interviews with 200 purposively selected respondents. The findings paint a clear picture of the modern online grocery shopper. The typical consumer is a married female employee, aged 28-38, with a postgraduate education and a middle-to-high household income. This demographic demonstrates mature purchasing habits, with a significant majority shopping 2-3 times per week and showing sustained trust in online platforms. Their high level of digital literacy is reflected in a strong preference for mobile applications and UPI payments, though a substantial segment still relies on Cash on Delivery. Retailers should note that social media and word-of-mouth are the key drivers of consumer awareness. For promotions, direct discounts and festive sales are the most effective strategies to influence purchasing decisions. Overall, the study confirms a high degree of consumer satisfaction and confidence in the security and quality of online grocery services, suggesting a well-established and expanding market ready for targeted growth initiatives.

Keywords: Consumer behavior, online shopping, fruits and vegetables, socio-economic characteristics

Introduction

The digital revolution has fundamentally reshaped consumer behavior, particularly within the retail sector. While e-commerce has long been a dominant force in metropolitan areas, its expansion into India's tier-2 cities marks a significant and ongoing shift in the national retail landscape. This phenomenon is largely driven by a combination of factors, including increasing internet penetration, widespread smartphone adoption, and a growing consumer demand for convenience (Gupta & Arora, 2022) [5]. Within this evolving marketplace, the online grocery segment especially for perishable items like fruits and vegetables—has emerged as a critical and fast-growing frontier. The current online retailing environment is highly competitive, characterized by innovative delivery solutions, a strong emphasis on cold-chain logistics, and a focused effort on building customer trust through quality assurance (Verma & Yadav, 2020) [38]. As consumers in cities like Jaipur increasingly rely on these digital platforms for their daily essentials, it becomes crucial to understand the driving forces behind this behavioral change. This study aims to contribute to this body of knowledge by investigating the socio-economic characteristics of consumers and examining their specific buying behaviors related to the online purchasing of fruits and vegetables in Jaipur City, Rajasthan. The objectives are as follows:

1. To analyze the socio-economic characteristics of consumers.
2. To examine consumer buying behavior towards online purchasing of fruits and vegetables.

Research Methodology

This study adopted a descriptive research design to investigate consumer behavior towards online purchasing of fruits and vegetables in Jaipur city, Rajasthan. To fulfill the research objectives, both primary and secondary data were employed. Primary data were gathered through a structured questionnaire, administered via personal interviews with 200 purposively selected respondents who actively engage in online shopping for fruits and vegetables. Secondary data were sourced from company websites, published research papers, previous project reports, books, and credible online databases. The purposive sampling method was used to specifically target respondents with relevant experience in online purchasing. Data analysis was conducted using basic descriptive statistical tools, including frequency and percentages. The findings were systematically presented in tabular format to facilitate clear interpretation and meaningful insights.

Results and Discussion

Table 1: Socio-Economic Profile of consumers

Gender of Respondents		
Gender	**Frequency**	**Percentage**
Male	90	45
Female	110	55
Total	200	100
Marital status of respondents		
Marital status	**Frequency**	**Percentage%**
Married	120	60
Unmarried	75	37.5
Divorce	5	2.5
Total	200	100
Age of Respondents (years)		
Age Group (in Years)	**Frequency**	**Percentage**
18-28	60	30
28-38	74	37
38-48	50	25
Above 48	16	8
Total	200	100
Education of Respondents		
Education Level	**Frequency**	**Percentage**
Undergraduate	40	20
Graduate	88	44
Post graduate	72	36
Total	200	100
Occupation of the respondents		
Occupation	**Frequency**	**Percentage**
Business	40	20
Employee	92	46
House wife	42	21
Student	26	13
Total	200	100
Monthly Income		
Monthly Income	**Frequency**	**Percentage**
Less than15000	5	2.5
15000-30000	55	27.5
30000-45000	90	45
More than 45000	50	25
Total	200	100
Monthly expenditure on online buying of fruits and vegetables		
Monthly expenditure	**Frequency**	**Percentage (%)**
500-1000	20	10
1000-1500	58	29
1500-2000	54	27
>2000	68	34
Total	200	100
Family size of consumers		
Family size	**Frequency**	**Percentage**
<3 member	44	22
3-5 member	86	43
>5 member	70	35
Total	200	100

Table 1 presents socio-economic profile of consumers is critical in analyzing their behavior towards online purchasing of fruits and vegetables. In this study, the respondents were categorized based on gender, marital status, age, education, occupation, income, expenditure, and family size. In this study, 55% of the 200 respondents were female, indicating greater female engagement in online grocery shopping, which aligns with Singh and Gera (2021), who highlighted women's inclination toward online platforms for convenience. A majority (60%) were married, a segment often responsible for household provisioning, echoing findings by Kaur and Joshi (2020). The largest age group was 28–38 years (37%), followed by 18–28 years (30%), reflecting the dominance of younger, tech-savvy consumers, as also observed by Gupta and Arora (2022). Educationally, 44% were graduates and 36% postgraduates, suggesting that higher education levels promote confidence in using digital platforms, consistent with Mitra and Bhatia (2019) [20]. Occupationally, most respondents were employees (46%), followed by housewives and business owners, pointing to time constraints and convenience as key drivers, as supported by Sharma and Sheth (2021) [30]. In terms of income, 45% earned between ₹30,000–₹45,000, with 25% earning above ₹45,000, indicating that middle and upper-income groups are more inclined to adopt online purchasing (Chatterjee, 2020). Regarding expenditure, 34% spent more than ₹2,000 monthly on online fruits and vegetables, reflecting strong purchasing power and trust in online services, corroborated by Jain and Singh (2022) [8]. Lastly, 43% of respondents had families of 3–5 members, followed by 35% with more than five, suggesting that larger households drive demand for convenient and bulk online purchases, a trend also noted by Bansal and Kapoor (2021) [1].

Table 2: Sources of Consumer Awareness for Online Shopping of Fruits and Vegetables

Source of information	Total Respondents	Percentage %
Word of Mouth (Friends/Family)	50	16
Social Media Platforms (Instagram, Facebook, WhatsApp)	58	33
Online Advertisements (Apps/Websites)	40	11
Influencer/YouTube Reviews	22	14
Print Media (Newspapers/Magazines)	20	23
Others (Email, SMS, etc.)	10	3
Total	200	100

In this study Table 2 depicts that the leading source of information was social media platforms such as Instagram, Facebook, and WhatsApp, accounting for 33% of respondents. This aligns with findings from Kaur and Arora (2020), who noted that social media plays a pivotal role in influencing food-related decisions among urban consumers due to its visual and interactive nature. Word of mouth from friends and family was the second most influential source, reported by 16% of consumers. This supports Kotler et al. (2017) [13], who emphasized interpersonal communication as one of the most trusted and persuasive forms of marketing, particularly for habitual purchases like groceries. Print media, such as newspapers and magazines, was cited by 23% of respondents, showing that traditional media still holds relevance among a certain consumer segment, especially in tier-2 cities. This is consistent with Goswami and Mathur (2019) [4], who found that print advertisements still retain influence in cities where digital penetration is growing but not yet dominant. Online advertisements, including in-app promotions and website banners, accounted for 11%, reflecting the role of targeted marketing, though less dominant than social media. Influencer content and YouTube reviews influenced 14% of respondents, consistent with Sundar and Bandyopadhyay (2021) [35], who identified digital influencers as important drivers of trust and product trial in food retail. Lastly, email, SMS, and other direct communication tools had minimal impact (3%), indicating low engagement with traditional digital outreach methods compared to interactive and social platforms.

Table 3: Duration Since Consumers Began Purchasing Fruits and Vegetables Online

Duration of Online Purchase	Total Respondents	Percentage (%)
Less than 3 Months	40	20
3–6 Months	46	23
6–12 Months	52	26
More than 12 Months	62	31
Total	200	100

Table 3 presents the duration of time consumers have been engaged in purchasing fruits and vegetables through online platforms. The results show that 31% of respondents have been shopping online for over 12 months, indicating a growing level of trust and sustained behavior in online grocery purchases. This reflects findings by Sharma and Sheth (2021) [30], who observed that consumer familiarity and platform reliability are key factors that encourage long-term digital purchasing behavior, especially in food retail. Additionally, 26% of respondents reported using online platforms for 6–12 months, and 23% for 3–6 months, suggesting a consistent upward trend in consumer adoption within the past year. This pattern supports Verma and Yadav (2020) [38], who found that the COVID-19 pandemic accelerated the digital transformation of grocery shopping habits, resulting in higher retention of new user's post-lockdown periods. Interestingly, 20% of respondents were relatively new users (less than 3 months), indicating continued market penetration and consumer trial. This aligns with Gupta and Arora (2022) [5], who argued that increased awareness, improved app interfaces, and aggressive marketing by e-grocery platforms are drawing in new users, particularly in tier-2 cities like Jaipur. The data suggests that while a substantial segment of consumers has established long-term online buying habits, a steady influx of new adopters points to an expanding and evolving online grocery market in India.

Table 4: Weekly Frequency of Ordering Fruits and Vegetables from Online Retailers in Jaipur City

Frequency of Orders per Week	Total Respondents	Percentage (%)
Once	60	30
2–3 Times	84	42
4–5 Times	36	18
Daily (6–7 Times)	12	6
Rarely / Occasional	8	4
Total	200	100

Table 4 provides insights into how frequently consumers in Jaipur city order fruits and vegetables from online platforms on a weekly basis. The highest proportion of respondents (42%) reported ordering 2–3 times per week, indicating that semi-frequent online purchasing is becoming a normalized pattern for many households. This finding is supported by Patel and Sharma (2020) [22], who noted that consumers prefer multiple small orders per week to maintain freshness and avoid wastage, particularly for perishable items like fruits and vegetables. Additionally, 30% of respondents reported ordering once per week, a habit reflective of planned weekly grocery shopping, consistent with the observations of Kumar and Kapoor (2021) [16], who highlighted that working professionals and nuclear families often prefer fixed weekly schedules for e-grocery purchases.

Interestingly, 18% of consumers reported ordering 4–5 times per week, and 6% ordered daily (6–7 times per week), showing that a segment of highly engaged users relies almost entirely on online platforms for their daily fresh produce needs. This trend aligns with Verma and Yadav (2020) [38], who found that increased app usability and faster delivery services have facilitated high-frequency shopping among tech-savvy users in tier-2 cities. Conversely, 4% of respondents ordered rarely or occasionally, indicating either lower dependence or trial usage of online channels. As per Gupta and Arora (2022) [5], such occasional users often face barriers such as lack of trust in quality, delivery delays, or preference for traditional offline markets.

Table 5: Different offers which motivate consumers to buy online Fruits & Vegetables

Type of Offer / Promotion	Total Respondents	Percentage%
Flat Discounts / Price Cuts	**52**	**26**
Festival or Special Day Sales	38	19
Cashback or Payback Offers	34	17
Digital Coupons / Vouchers	30	15
Seasonal / Clearance Sales	28	14
Offers Do Not Influence Purchase	18	9
Total	200	100

Table 5 outlines the types of promotional offers that encourage consumers in Jaipur city to purchase fruits and vegetables from online retailers. The most influential offer was flat discounts or price cuts, favored by 26% of respondents. This indicates that direct price reductions remain a primary motivator for online grocery shoppers, consistent with Chatterjee and Kumar (2020), who found that price-sensitive consumers are more likely to shift to online platforms when offered visible and instant savings. Festival or special day sales motivated 19% of respondents, reflecting the cultural influence on shopping behavior. According to Rajput and Gahfoor (2021) [24], consumers in India often wait for festive deals to make larger or more frequent purchases, even in categories like perishables. Cashback and payback offers attracted 17% of respondents, showing the impact of financial incentives linked to digital wallets and payment apps. As Kumar and Gupta (2019) [15] noted, cashback schemes increase purchase frequency, particularly among tech-savvy urban and semi-urban consumers. Similarly, digital coupons and vouchers motivated 15% of consumers, highlighting the importance of personalized and app-based promotions. Seasonal or clearance sales were chosen by 14%, indicating that timely and inventory-based pricing strategies can still draw attention in the perishable goods segment (Sharma & Bansal, 2022) [32]. Interestingly, 9% of respondents reported that offers do not influence their purchasing decisions, suggesting that factors like product quality, delivery reliability, or habit may override promotional benefits—a pattern also observed by Verma and Yadav (2020) [38] in their study on post-pandemic consumer behavior.

Table 6: Consumers most preferred food item to buy from online retailer

Preferred Category of Food Items	Total Respondents	Percentage (%)
Fresh Produce (Fruits & Vegetables)	110	55
Packaged Food & FMCG Products	36	18
Both Categories Equally Preferred	54	27
Total	200	100

Table 6 reveals consumer preferences regarding food categories purchased from online retailers in Jaipur city. The data indicate that 55% of respondents primarily prefer to purchase fresh produce (fruits and vegetables) online. This trend highlights the growing trust in the quality and reliability of online delivery services for perishable items. According to Ramanathan et al. (2021) [25], improvements in cold-chain logistics, faster delivery, and flexible return policies have significantly increased consumer confidence in buying fresh produce online, even in tier-2 cities. Packaged food and FMCG products were preferred by 18% of respondents. These products, being non-perishable and brand-assured, naturally lend themselves to online purchasing due to lower perceived risk. This is consistent with Mishra and Kotwaliwale (2020) [18], who noted that consumers prefer packaged items for bulk purchases and often rely on offers or subscription models for such categories. Interestingly, 27% of consumers stated that they equally prefer both categories when shopping online. This balanced preference suggests that a substantial segment of consumers has fully embraced online grocery platforms for their entire household food needs, not just selective purchases. Kumar and Kapoor (2022) [14] also found that Omni channel behavior and convenience are leading urban and semi-urban consumers to diversify their online baskets, moving beyond packaged goods into perishables.

Table 7: Level of Consumer Confidence in the Security of Online Purchases of Fruits and Vegetables

Level of Security Perception	Number of Respondents	Percentage (%)
Very Confident / Highly Secured	52	26
Generally Secured	122	61
Neutral / Average	18	9
Somewhat Risky	8	4
Very Risky / Not Trustworthy	0	0
Total	200	100

Table 7 illustrates the level of consumer confidence regarding the security of online purchases of fruits and vegetables. The majority of respondents (61%) indicated that they felt "generally secured" when shopping online, while 26% felt "very confident or highly secured." This demonstrates that a significant proportion of consumers in Jaipur city trust the digital infrastructure and payment systems of online retailers. Only a minor segment (4%) viewed online shopping as "somewhat risky," and none considered it "very risky or not trustworthy," indicating a relatively high level of digital trust among consumers. This trend aligns with findings from Singh and Dangmei (2022) [33], who observed that improved digital literacy, secure payment gateways, and user-friendly mobile apps have contributed to enhanced trust in online food retail platforms. Additionally, Mishra and Chauhan (2020) [19] noted that consumer confidence in online shopping is strongly influenced by the perceived reliability of delivery, data privacy, and previous positive experiences. Furthermore, Verma and Yadav (2021) [39] reported that consumers' security perceptions are positively impacted by visible cues such as SSL certifications, trusted brand reputations, and cash-on-delivery options, which are commonly available in Indian online grocery platforms. These factors collectively promote a sense of safety and reliability among users, especially in tier-2 cities like Jaipur.

Table 8: Preferred Mode of Payment for Online Purchase of Fruits and Vegetables in Jaipur City

Mode of Payment	Number of Respondents	Percentage (%)
UPI / Mobile Wallets / Net Banking	128	64
Debit / Credit Cards	24	12
Cash on Delivery (COD)	42	21
Buy Now, Pay Later / Others	6	3
Total	200	100

The data in Table 8 reveals that 64% of consumers in Jaipur city prefer digital payment modes such as UPI, mobile wallets, or net banking when buying fruits and vegetables online. This trend reflects the growing trust and reliance on digital financial systems in India, especially post-COVID-19, where contactless transactions have become the norm. Cash on Delivery (COD) still holds relevance for 21% of respondents, indicating that some consumers remain cautious about online payments or face issues related to digital infrastructure. Additionally, 12% use debit/credit cards, and a smaller 3%opt for "Buy Now, Pay Later" or other emerging methods, showing diversity in financial preferences. These findings align with the results of Saxena and Kumar (2021) [29], who found that digital wallets and UPI were the most preferred payment options in urban e-grocery settings due to speed and cashback incentives. Similarly, Reddy and Reddy (2020) observed that urban Indian consumers increasingly favor digital payment methods over traditional ones due to convenience, secure encryption, and integrated loyalty rewards. Moreover, Nanda and Banerjee (2022) highlighted that the government's push for a digital economy, increased smartphone penetration, and app-based grocery platforms have significantly influenced consumer behavior in adopting non-cash payments.

Table 9: Consumer Preference for Online Platforms Used to Purchase Fruits and Vegetables in Jaipur City

Preferred Platform	Number of Respondents	Percentage (%)
Mobile Application	124	62
Website	76	38
Total	200	100

Table 9 presents the consumer preference for online platforms used to purchase fruits and vegetables in Jaipur City. The findings reveal that 62% of respondents prefer using mobile applications, while 38% favor websites. This suggests a strong inclination toward mobile-based shopping, driven by the convenience, accessibility, and user-friendly interfaces of mobile apps. The dominance of mobile apps aligns with the study by Verma and Yadav (2021) [39], which found that mobile applications offer enhanced personalization and real-time notifications that influence consumer decisions positively in the context of grocery shopping. Similarly, Rani and Bhatnagar (2020) [26] reported that Indian consumers increasingly rely on smartphones for e-grocery purchases due to mobile-first internet access, especially in Tier-2 cities like Jaipur. Furthermore, Kapoor et al. (2022) [14] emphasized that mobile apps outperform websites in terms of ease of navigation, speed, and customer engagement, which contributes to higher usage frequency for routine grocery items like fruits and vegetables.

Table 10: Average Duration of Consumer Engagement on Online Platforms for Purchasing Fruits and Vegetables in Jaipur City

Time Spent on Web/App (per visit)	No. of Respondents	Percentage (%)
Less than 10 minutes	42	21
10–20 minutes	66	33
20–30 minutes	78	39
More than 30 minutes	14	7
Total	200	100

Table 10 reveals the average duration consumers spend on online platforms per visit while purchasing fruits and vegetables in Jaipur City. The largest segment, 39% of respondents, reported spending 20–30 minutes, followed by 33% spending 10–20 minutes. Only 7% spend more than 30 minutes, indicating that most consumers aim for quick and efficient shopping experiences. This trend reflects the findings of Saxena and Raj (2021) [29], who concluded that grocery shoppers using online platforms typically seek convenience and time-saving experiences. The time spent correlates with the need to compare prices, check for deals, and verify product freshness, especially for perishable items like fruits and vegetables. Moreover, Patel and Kumar (2020) [23] found that the average engagement time is longer when consumers shop for fresh produce, as buyers tend to evaluate product ratings, delivery times, and packaging before finalizing their orders. However, if the user interface is well-optimized (as in many mobile apps), decision-making becomes faster. Additionally, Sharma and Mehta (2022) [31] argue that increased time spent also reflects the growing trust and familiarity with online grocery platforms, where consumers feel comfortable browsing multiple items during a single visit.

Table 11: Consumers' Experience with Online Retailers for Purchasing Fruits and Vegetables in Jaipur City

Experience Level	No. of Respondents	Percentage (%)
Excellent	79	34
Good	117	50
Average	22	9
Poor	16	7
Total	200	100

Table 11 shows that a majority of consumers in Jaipur reported a positive experience when purchasing fruits and vegetables online, with 84% rating their experience as either "Good" (50%) or "Excellent" (34%). This high satisfaction is likely driven by factors such as timely delivery, freshness, ease of ordering, and competitive pricing. These results align with previous studies by Gupta and Yadav (2022) [6], Mehta and Sharma (2021) [17], and Kaur and Singh (2020), which highlight that convenience, trust, and service quality significantly influence consumer satisfaction in online grocery shopping, especially in tier-2 cities.

Suggestions

Based on the findings, online retailers can enhance their strategy by focusing on key areas. The following suggestions are provided to help businesses effectively target the local market and improve customer engagement and satisfaction.

1. **Focus on the Core Audience:** Tailor marketing to busy, married women aged 28-38. Offer family bundles and ensure a seamless mobile experience.
2. **Leverage Digital and Traditional Marketing:** Prioritize social media engagement and referral programs, but also use local print ads to reach a wider audience.
3. **Boost Sales with Smart Promotions:** Use direct discounts and festive sales to attract customers. Partner with digital wallets for cashback offers.
4. **Build Trust and Convenience:** Invest in a user-friendly mobile app, guarantee fresh produce, and offer flexible payment options like UPI and Cash on Delivery (COD).
5. **Expand Your Product Range:** Increase average order value by offering both fresh produce and packaged goods.

Conclusion

This study successfully analyzed the socio-economic characteristics and buying behavior of online fruit and vegetable consumers in Jaipur, Rajasthan, providing a clear profile of the target market. The findings show that online grocery shopping is a well-established and trusted practice, particularly among educated, middle-to-high-income, and tech-savvy consumers in the 28-38 age group. The dominance of female, married employees as the primary user group underscores the value of convenience and time-saving solutions in modern household management. Consumer behavior is strongly driven by digital engagement, with social media being the most influential source of information. This highlights the importance of a robust online presence and targeted digital marketing strategies. The purchasing habits are frequent and sustained, indicating a loyal customer base that values both product quality and a streamlined user experience. This loyalty is further reinforced by high confidence in online security and a clear preference for mobile apps and digital payments, though the continued demand for Cash on Delivery suggests that a flexible approach is necessary to serve all customer segments. In conclusion, the online market for fruits and vegetables in Jaipur is mature and growing, characterized by a satisfied consumer base that is responsive to direct discounts and strategically timed promotions. By focusing on a mobile-first approach, leveraging social media, and building on existing customer trust through guaranteed quality and flexible services, online retailers can effectively capitalize on the expanding opportunities in this market.

References

1. Bansal S, Kapoor H. Family demographics and their impact on online grocery shopping patterns in India. South Asian J Bus Manag Cases. 2021;10(3):289–298.
2. Chatterjee S. Income effect on digital grocery purchase behavior: Evidence from Indian metros. Int Rev Retail Distrib Consum Res. 2020;30(5):505–520.
3. Chatterjee S, Kumar R. Evaluating the effectiveness of price promotions in online grocery retailing. Int J Retail Distrib Manag. 2020;48(11):1205–1220.
4. Goswami P, Mathur S. Consumer response to traditional and digital advertising in India's emerging markets. South Asian J Mark Manag Res. 2019;9(4):1–10.
5. Gupta A, Arora S. The rise of e-grocery in tier-2 cities: A study of consumer adoption and challenges. J Retail Consum Serv. 2022;18(2):112–125.
6. Gupta R, Yadav A. Consumer satisfaction in online grocery shopping: A study of perishable goods in tier-II cities. J Internet Commer. 2022;21(3):245–262.
7. Gupta V, Arora N. Age and digital behavior: A study on Indian consumers' e-grocery adoption. Asian J Bus Res. 2022;12(1):34–48.
8. Jain R, Singh A. Consumer spending behavior in online grocery shopping: A case of tier-2 Indian cities. J Food Prod Mark. 2022;28(2):132–146.
9. Kapoor N, Mehra R, Sharma P. Mobile apps vs. websites: Understanding platform preference in online grocery shopping. J Retail Consum Serv. 2022;68:102932.
10. Kaur H, Joshi K. Online grocery shopping behavior: A study of married consumers. Int J Consum Stud. 2020;44(5):450–460.
11. Kaur M, Singh R. A study of customer satisfaction in online fruit and vegetable shopping during COVID-19 lockdown. Indian J Mark. 2020;50(10):24–32.
12. Kaur P, Arora S. Role of social media in influencing purchase behaviour for online grocery products. Int J Manag. 2020;11(10):1058–1070.
13. Kotler P, Keller KL, Koshy A, Jha M. Marketing Management: A South Asian Perspective. 15th ed. Noida (IN): Pearson Education India; 2017.
14. Kumar A, Kapoor H. Exploring the shift in consumer preference toward perishable and non-perishable food items in online grocery shopping. J Retail Consum Serv. 2022;65:102887.
15. Kumar R, Gupta V. Impact of digital payment-based cashback on consumer buying behavior in Indian e-retail. Indian J Mark. 2019;49(5):7–19.
16. Kumar V, Kapoor H. Understanding online grocery shopping behavior in India: Patterns and predictors. J Retail Consum Serv. 2021;59:102394.
17. Mehta S, Sharma P. Evaluating consumer perceptions and satisfaction towards online food and grocery platforms. Int J Retail Distrib Manag. 2021;49(9):1152–1169.
18. Mishra P, Kotwaliwale S. Online food retailing in India: Understanding consumer preference for FMCG and packaged goods. Int J Bus Insights Transform. 2020;13(1):56–64.
19. Mishra R, Chauhan V. Trust and security concerns in e-grocery shopping: A consumer perspective. J Retail Consum Stud. 2020;48(3):112–123.
20. Mitra D, Bhatia M. The impact of education on online consumer behavior: An empirical analysis. Indian J Mark. 2019;49(10):15–27.
21. Nanda A, Banerjee R. Determinants of digital payment adoption among Indian consumers: A study of online grocery platforms. J Retail Consum Serv. 2022;68:102963.
22. Patel M, Sharma P. Consumer preferences and buying frequency in online grocery shopping: A study of perishables. Int J Manag Stud. 2020;7(3):45–54.
23. Patel R, Kumar A. Understanding online consumer behavior for perishable goods in India: A study on fruits and vegetables. Int J E-Commerce Stud. 2020;12(2):123–137.
24. Rajput N, Gahfoor N. The role of festive sales in boosting online grocery purchases: An empirical analysis. J Retail Consum Serv. 2021;61:102567.
25. Ramanathan R, George M, Chinnasamy G, et al. Consumer confidence in online fresh food retail: An empirical study from India. Br Food J. 2021;123(2):765–783.
26. Rani S, Bhatnagar A. Smartphone usage and grocery shopping behavior among Indian consumers. Int J Consum Stud. 2020;44(3):345–356.
27. Reddy M, Reddy P. Consumer preferences towards digital payment systems in online retailing: An empirical study. Int J Bus Manag Invent. 2020;9(3):30–36.
28. Saxena A, Raj S. Online grocery shopping behavior in Tier-II Indian cities: A time-use perspective. J Retail Consum Serv. 2021;58:102334.
29. Saxena V, Kumar A. Changing payment preferences in e-commerce: A study of grocery buyers in India. South Asian J Mark Manag Res. 2021;11(4):45–53.
30. Sharma P, Sheth J. Online grocery shopping behavior: Role of time scarcity among working consumers. J Consum Behav. 2021;20(6):1425–1439.
31. Sharma R, Mehta K. Consumer engagement and decision-making in digital grocery platforms. Indian J Mark. 2022;52(1):14–24.
32. Sharma S, Bansal M. Effectiveness of seasonal sales and inventory-based pricing strategies in online food retail. J Foodserv Bus Res. 2022;25(2):123–137.
33. Singh M, Dangmei J. Consumer perception towards security and privacy in online grocery shopping in India. Int J E-Bus Res. 2022;18(1):45–60.
34. Singh S, Gera R. Exploring consumer behavior in online grocery shopping in India: Gender perspectives. J Retail Consum Serv. 2021;61:102516.
35. Sundar A, Bandyopadhyay S. The power of influencers: Exploring the impact of YouTube food vloggers on consumer behavior. J Internet Commer. 2021;20(4):351–369.
36. Verma M, Yadav V. Investigating the impact of mobile app features on e-grocery purchase intentions. Asian J Bus Res. 2021;11(1):45–60.
37. Verma R, Yadav K. The impact of digital transformation on India's grocery retail sector: A post-pandemic analysis. Int J E-Commerce Stud. 2020;15(4):301–318.
38. Verma S, Yadav N. The impact of COVID-19 on consumer buying behavior towards online grocery shopping in India. Int J Manag. 2020;11(12):1238–1246.
39. Verma S, Yadav N. Factors influencing online grocery purchase behavior in Indian cities: A structural equation modeling approach. Asian J Bus Res. 2021;11(2):87–101.