

Retail Adaptation and Consumer Behaviour During COVID-19: A Systematic Review

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ABSTRACT

Understanding the shift in consumer purchasing habits and the factors that contribute to it in a more dynamic and complex environment will help us determine how effective these shopping options are and how retailers can enhance their shopping services to accommodate customers during and after the pandemic. The COVID-19 pandemic had an impact on the economy, society, and environment as well as altering consumer attitudes, intentions, and purchase patterns. Consumer behaviour during the COVID-19 lockdown was affected by a variety of factors. This study intends to investigate the impact of COVID-19 on customers' purchase behaviour and the extent to which it occurs by modifying the systematic review methodology. 50 publications in all were located and examined in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) criteria. The study found that the COVID-19 pandemic altered consumer behaviour in most countries and led to several adjustments in behaviours related to purchasing intentions, including changes in purchasing habits, online shopping, perceived risk, trust, usage of social media, and ease of use. These observations allowed us to make the prediction that some of the most popular buying habits will be preserved in the post-COVID-19 future while others would regress. The assessment broadens the body of information on consumer purchasing intent and provides potential lines of inquiry for follow-up investigations.

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KEYWORDS: consumer; customer; COVID-19 lockdown; Purchase behaviour

INTRODUCTION

Both public health and most economies worldwide were seriously threatened by the global COVID-19 epidemic [1]. Nations' responses to this pandemic ranged from total isolation to sluggish management [2]. This scenario highlights the importance for both businesses and governments of understanding how the COVID-19 situation may affect consumer purchasing behaviour.

The research agrees that consumer purchasing behaviour (CPB) is a highly nuanced concept due to the mutual influence of consumers and their surroundings[3]. In a similar vein, some scholars have posited that variables such as age, gender, socioeconomic status, education level, family structure, cultural background, personality, attitude, and information processing all have a role in determining CPB [4].

Many scholars have since explored hedonic and utilitarian motivations in regard to the restaurant sector[5], purchases[6] or shopping value[7, 8]. [9].

It is not surprising that in a crisis like the one caused by COVID-19, basic essentials must be purchased before anything else. (Larson and Shin, 2018). Changes in consumer purchasing behavior in response to the COVID-19 epidemic, as well as their antecedents like trust, have gotten comparatively less attention than they deserve.

However, it may be important to understand the sources of change that affect customer behavior and product preferences for two key reasons. To begin, this kind of study can shed light on the causes of the extraordinary consumer behavior witnessed at COVID-19. Second, the findings could be useful in informing the creation of social network marketing components that are sensitive to the wants and feelings of genuine customers [10].

However, this knowledge might also be used to boost commerce for companies before, during, and after the COVID-19 epidemic [11]. Further, knowing about these facets of social network marketing could be crucial to improving the market's ability to react to future pandemics and other calamities.

It should be pointed out that shoppers' tastes aren't fixed but rather constantly evolving (BTS, 2021) As the epidemic worsens, people's buying patterns shift for a variety of reasons, including the introduction of preventative vaccines, the COVID-19 outbreak, and their financial circumstances. To accurately predict the future of our economy, it is crucial to have a firm grasp of these influencing elements, in particular the business models that retailers might employ to best meet customer wants. according to [12].

The current study aims to explore the influence of COVID-19 on shopping habits and its potential impact on consumer purchasing behavior (CPB). By conducting an extensive literature search, the following questions will be investigated: How does COVID-19 influence shopping habits? To what extent might COVID-19 affect CPB?

The objective of this study is to provide a comprehensive understanding of how the COVID-19 pandemic has shaped consumer spending habits. Through a meticulous analysis of existing literature, we aim to contribute to the scientific knowledge regarding the effects of this crisis on consumer behavior. Additionally, based on the latest findings in the field, we will suggest future research directions and trends.

Gaining insights into the relationship between COVID-19 and CPB will enable policymakers to make informed decisions and take appropriate measures to capitalize on the positive outcomes of COVID-19 on consumer purchase behavior while minimizing any negative consequences. This study seeks to offer valuable insights that can guide policymakers in preserving the advantageous benefits of the pandemic on consumer behavior..

Systematic review protocol

In the current study, the systematic review methodology is used to synthesize the literature on how COVID-19 influences consumer purchasing behaviors, and it provides direction for policymakers and future researchers. In order to minimize bias in article identification, selection, and synthesis of the literature, as well as in the reporting of results, systematic reviews are conducted using established search and eligibility criteria [13].

The systematic review was conducted and reported in accordance with the recommended reporting items for

meta-analyses and systematic reviews [14] standards [13]. The PRISMA protocol, which seeks to lessen source article bias, was followed because it is the most often used explicit recommendation for systematic reviews. Thus, using the systematic review, we are able to draw a firm conclusion about how the COVID-19 pandemic and consumer purchasing patterns are related [15].

Database and search terms

The publications published on the effects of the COVID-19 pandemic on consumer purchasing behaviours were extracted using SCOPUS. This database is considered to be one of the most comprehensive sources with more articles covered than other databases like Web of Science according to [16]; [17] which reported that SCOPUS contains 95% of multidisciplinary, peer-reviewed research articles.

The search terms were chosen after reviewing articles on the effect of COVID-19 on consumer purchasing patterns, such as [18]; [12]. The authors also looked at the search terms used in previous reviews of consumer purchase behaviour, such as [19] AND COVID-19 (COVID OR SARS-COV2 OR SARS-COV-2 OR 2019-nCoV OR CORONAVIRUS) AND Consumer behaviour (Customer behaviour * OR Consumer behaviour *) purchase (purchase *), to ensure that the appropriate search terms were chosen for this study. Search for articles including article titles, abstracts, and keywords in the Scopus database was carried out in August 2022.

Article inclusion and exclusion criteria

The following inclusion and exclusion criteria were applied in order to select the most pertinent articles: Articles published in English-language journal, articles on the effects of COVID-19 on the volume of purchases, articles explaining changes in consumer purchasing patterns, and articles exploring the variables behind changes in consumer purchasing patterns. We excluded book collections, book chapters, conference papers, data papers, notes, quick surveys, or editorials. The inclusion criteria allowed us to discover publications that matched the review's objectives. The article selection processes that were created in compliance with the PRISMA standard standards are shown in Fig. 1. (PRISMA, 2022).

Search results

In the SCOPUS database, we obtained 368 articles using the selected search terms. After limiting the search to papers, journals, and the English language, we found 190 papers that fit our purpose. A total of 120 articles were excluded by two of the three authors of the current review article based on the articles' titles and abstracts, and an additional 20 articles were excluded after reading the entire text. The remaining

50 articles that were deemed eligible were reviewed. Discussions among all authors who reviewed the articles were used to resolve any disagreements among them.

Findings

Descriptive analysis

In the descriptive analysis conducted, the focus was on examining the characteristics of the eligible publications without delving into a comprehensive literature review. The analysis revealed interesting findings regarding the geographical distribution of studies and the methods employed in measuring influencing factors on consumer purchasing behavior.

The geographical distribution of the eligible publications indicated that the majority of studies were conducted in Asia, North America, and Europe, as highlighted in Table 1. Notably, Italy emerged as the location where the effect of COVID-19 on consumer spending patterns received the most attention. Surprisingly, no research had been conducted in Oceania, indicating a potential gap in the existing literature.

Regarding the methodology employed in the eligible publications, quantitative methods were predominantly used for data collection, as shown in

Table 2. A smaller proportion of articles (13.2%) relied on qualitative techniques. However, it is important to note that some scholars have raised concerns about potential biases, such as recall and social desirability biases, that may influence the results obtained through surveys. To mitigate these biases, some researchers advocate for direct communication with customers and experts to gain a deeper understanding of the variables driving changes in consumer purchasing behavior and the likelihood of future changes [20].

Additionally, Table 3 provides insights into the methods of measurement, sample sizes, and dates of data collection utilized by the researchers in their analysis. These details contribute to understanding the diversity of approaches employed in studying consumer purchasing behavior.

Although the descriptive analysis does not involve an extensive literature review, it provides a valuable overview of the distribution of studies across different regions and the methodologies utilized in assessing influencing factors on consumer purchasing behavior. This information serves as a foundation for further exploration and discovery in future research.

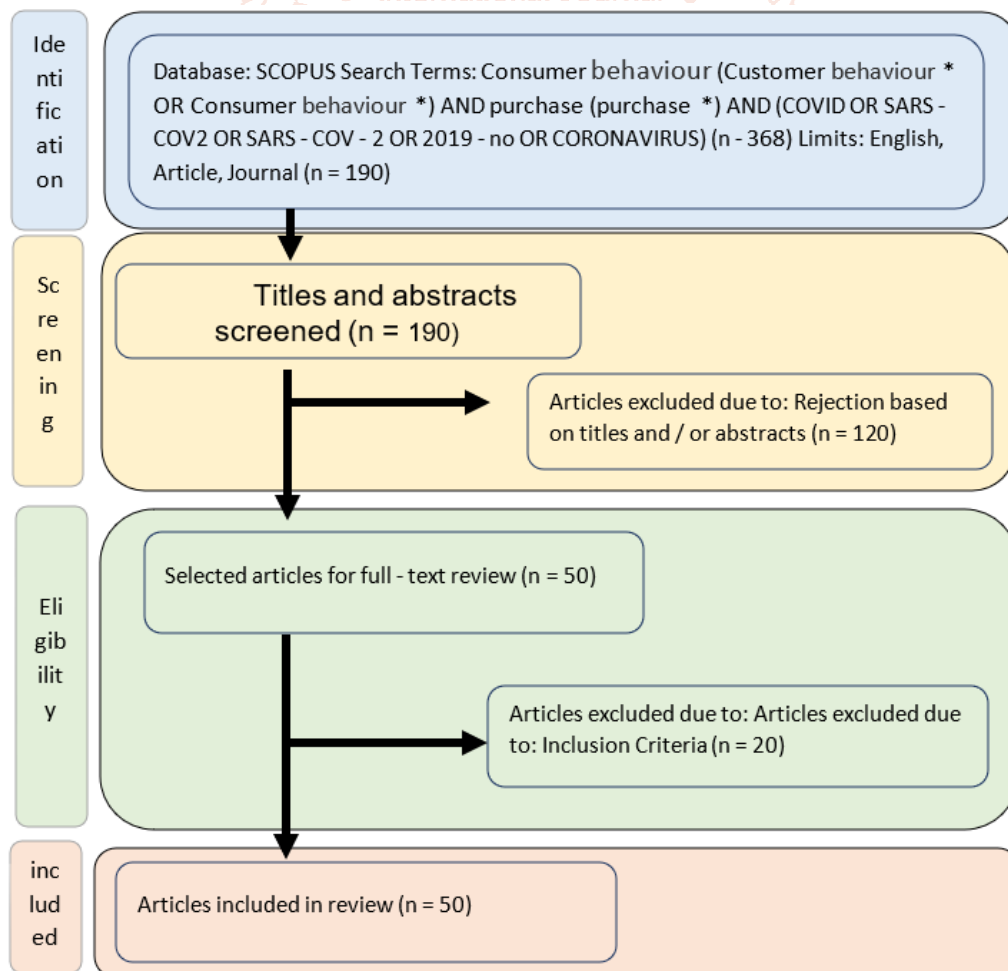


Fig. 1 Flow diagram of the article search and selection process

Table 1 Geographical location of data collection.

Continent	No. of Articles	Countries	No. of Articles
Asia	30	China	7
		South Korea	3
		Malaysia	2
		India	7
		Pakistan	2
		Thailand	1
		Vietnam	1
		Kuwait	1
		Bangladesh	1
		Jordan	2
		Indonesia	1
North America	10	USA	8
		Mexico	2
		Ecuador	1
Europe	8	Italy	1
		Spain	1
		UK	2
		Turkey	1
		Czech	1
		France	1
South America	1	Brazil	1
Australia	1		1

Note. Three studies were conducted across two countries[18, 21]

Table 2 Research design.

Research Design	No. of Articles (%)	Percentage (%)
Qualitative	2	4%
Quantitative	40	80%
Mixed-Method	2	4%
Others	6	12%

Note. seven studies were use Secondary Data

Table 3 Methodology of studies on COVID-19 and consumer purchase behaviours.

Study	Region	Measurement Methodology	Sample Size	Time of Data Collection
[18]	55 countries	Survey and Interviews	1,015 consumers	March 2020,
[12]	USA	survey	24,998 consumers	June 23 to July 5, 2021
[22]	Bangladesh	survey	154 consumers	September 2020
[23]	Jordan	survey	215 consumers	September 2020
[24]	Mexico	survey	400 consumers	Mar to Sep, 2020
[25]	Czech	survey	917 consumers	September 2020
[26]	Malaysia	survey	157 consumers	in light of the 2020
[21]	Bangladesh	survey	340 consumers	since December 2019.
[27]	South Korea	survey	1174 consumers	August 25 to August 28, 2020,
[28]	Mexico, Colombia, Ecuador	survey	2,062 consumers	Between May and June 2020,
[29]	China	survey	Not Applicable	2020.
[30]	China	Secondary Data	1006 consumers	2020.
[31]	Italy	survey	248 consumers	2020
[32]	Pakistan	survey	605 consumers.	2020
[33]	USA	survey	351 consumers	July 2021
[34]	Kuwait	survey	385 consumers	2020
[35]	India	survey	222 consumers	2020

[25, 36]	USA	survey	311 consumers	May 28th, to June 5th, 2020
[37]	USA	survey and Interviews	20,538 consumers	November 2020
[38]	China	Secondary Data	Not Applicable	January to March 2021
[39]	France	Interviews	single case study	January 2020 to July 2020
[19]	Mexico	survey	400 consumers	Mar to Sep, 2020
[40]	India	survey	1700 consumers	2020
[41]	USA	survey	889 consumers	In November 2020
[42]	54 countries	survey	18,600 consumers	January 1st to April 30th 2020
[43]	China	survey	456 consumers	2020
[44]	Turkey	survey	400 consumers	2020
[45]	China	Secondary Data	107 websites ¹	January 20, to February 20, 2020,
[46]	India	survey	730 consumers	2020
[47]	India	Survey and Secondary Data	225 consumers	2020
[48]	India	survey	Not Applicable	March to August 2020
[49]	Australia	survey	268 consumers	2020
[50]	Brazil.	survey	546 consumers	2020
[51]	Indonesia	survey	351 consumers	2020
[52]	US, India, China, and Pakistan	survey	1128 consumers	March and April in 2020
[53]	Germany	Secondary Data	Not Applicable	2020
[15]	USA	survey	518 consumers	July 2020
[54]	Malaysia	Secondary Data	Not Applicable	2020
[55]	China	Secondary Data	Not Applicable	2020
[56]	UK	survey	148,377 consumers	April 25, 2020.
[57]	South Korea,	survey	313 consumers	2021
[58]	USA	survey	910 consumers	2021
[59]	South Korea	survey	269 consumers	September of 2014
[60]	Australia	Interviews	Not Applicable	2019
[61]	USA	Secondary Data	Not Applicable	2020
[62]	India	survey	1316 consumers	2021
[63]	China	survey	601 consumers	2020
[64]	Vietnam	survey	246 consumers	2020
[65]	Thailand	survey	384 consumers	2020
[66]	Italy	survey	943 consumers	2021

Thematic analysis

Indeed, the focus on these specific factors was driven by their importance and frequency within the selected papers. The choice of factors was guided by a thorough review of the existing literature, which revealed that these factors consistently emerged as significant determinants of consumer behaviour during the COVID-19 pandemic.

By analysing a substantial number of relevant papers, it became apparent that these factors were widely discussed, examined, and acknowledged in the context of the pandemic's impact on consumer behavior. Their recurrent appearance and the substantial body of research dedicated to studying their effects justified their inclusion in the study.

It is important to note that while these factors were prioritized based on their prominence in the literature, other factors may still play a role in influencing consumer behavior during the pandemic. The chosen factors should be considered within the broader context of additional variables that could potentially contribute to the understanding of consumer decision-making processes.

By focusing on the factors that have been extensively studied and shown consistent relevance, the study aims to provide valuable insights and contribute to the existing body of knowledge surrounding consumer behavior during the COVID-19 pandemic.

The purchase intention behaviours of consumers during COVID-19 have received a lot of attention. Existing studies are listed in Table 1, along with their objectives, locations, a timeline of the data, and key conclusions. Numerous investigations have been made into the variables that affect consumers' decision-making during the pandemic. The studies were conducted in China, South Korea, Malaysia, India, Pakistan, Thailand, Vietnam, Kuwait, Bangladesh, Jordan, Indonesia, the United States, Mexico, Ecuador, Italy, Spain, the United Kingdom, Turkey, the Czech Republic, and France were all used. (e.g., Truong and Truong, 2022; Mejía-Trejo, 2021; Elkanova et al., 2022). However, one study was conducted in Thailand (Liu et al., 2021), four international studies in 55 countries

(Vázquez-Martínez et al., 2021), in 54 countries (Keane and Neal, 2021) in the US, India, China, and Pakistan (Islam et al., 2021), Mexico, Colombia, and Ecuador (Larios-Gómez et al., 2021). discovered various purchase motives. In those studies, some significant determinants of purchase intention behaviours were found to be 18 Online shopping, 18 Online shopping, and 18 Online shopping.(e.g.,Showrav et al., 2021;Faqih, 2022;Hasan et al., 2021;Alaimo et al., 2020).10 studies Social Media Usage(e.g., [24, 32];Chen et al., 2021;Unnava and Aravindakshan, 2021) , 8 studies Perceived Risk(e.g., [23, 26],8 studies Trust (e.g., [50, 65]Petcharat and Leelasantitham, 2021) , and 9 studies Ease of use(e.g., [22].

Factors	Causes and Effects	Sources
Severity of COVID-19	<ul style="list-style-type: none"> ➤ Panic purchasing behavior ➤ Consumer motivation ➤ Exigency motivation Coronavirus COVID-19 ➤ Fear appeal theory ➤ Fears for health ➤ fears for financial conditions ➤ Online consumer behavior ➤ Crisis perception ➤ Consumption pattern ➤ Demographic factors ➤ Analysing the revenge spending motivations of different emotional groups. ➤ Changes in consumption patterns during the COVID-19 pandemic. ➤ Online purchase intentions ➤ Customer participation behaviour ➤ Customer citizenship behaviour ➤ buying behaviour Consumers' perception 	[12, 18], [24], [25], [26], [21], [27], [28], [30], [32], [34], [35], [37], [38], [39], [19], (Goswami and Chouhan, 2021),[41], [42], (Chen et al., 2021),[44], [45], [46], [47], [48], [49], [51], [52], [53], [15], [55], [56], [57], [59], [62], [63], [64], (Petcharat and Leelasantitham, 2021),[66]
Online shopping	<ul style="list-style-type: none"> ➤ Convenience ➤ Easily accessible. ➤ Technological Supports ➤ online grocery shopping. ➤ satisfied for the food online shopping ➤ Online prices 	[22], [23], [21], [31], [34], [35], [37], [38], [44], [45], [48], [50], [58], (Petcharat and Leelasantitham, 2021)
Social Media Usage	<ul style="list-style-type: none"> ➤ Covid-19 ads ➤ Social media marketing 	[24], [32], (Unnava and Aravindakshan, 2021),[55], [56], [57], [66]
Perceived Risk	<ul style="list-style-type: none"> ➤ Internet shopping anxiety ➤ implementing novel mechanisms to secure online transactional payment systems ➤ perceptions of severity. ➤ perceptions of scarcity ➤ pandemic, morbidity risk, ➤ Safety signals ➤ risk perception ➤ COVID-19 risk perception 	[23], [26], [29], [33], [34], [44], [48]

Trust	➤ promote online consumer trust. ➤ Social trust	[23], [32], [34], [35], [50], (Petcharat and Leelasantitham, 2021)
Ease of use	➤ food online channels easy to use	[22], [31], [32], [34], (Chen et al., 2021), [44], [55], (Petcharat and Leelasantitham, 2021)

Severity of COVID-19

Lockdowns implemented by the government to control the spread of COVID-19 raise concerns regarding their effects on consumers' purchasing behavior. According to studies, panic buying is a common human reaction to stress and uncertainty [21]. Panic buying can lead to a shortage of supplies, price inflation, and major food loss because to overbuying and inefficient food storage. Non-perishable items like canned food, pasta, wheat, rice, and frozen food are typically stored in large quantities, while panic buying of produce like vegetables and fruit may lead to food waste. Other academics have recently divided these components of consumer motivations into the following categories: hedonic motivation, social motivation, utilitarian motivation, and Exigency motivation. Coronavirus COVID-19. We take a fresh look at consumer decisions, concentrating on how people change their buying patterns over time. Given that these shopping modes are not mutually exclusive, we assume that customers can select from a variety of modes at different times as they see fit.

The variations in their purchasing patterns in those categories over time throughout the pandemic show a shift in behaviour. We pay particular attention to three novel dependent variables: shifts in consumer expenditure on in-store purchases, curb side pickup, and online purchases over the course of the epidemic. The theory of fear appeal serves as the theoretical foundation for our selection of the contributing reasons for the shift in consumer shopping habits. According to the hypothesis, people would make decisions to discover a solution to deal with the risks as a result of their worries of impending dangers (Ahmed et al., 2020; Addo et al., 2020; Eger et al., 2021). Based on this approach, the independent variables in this study are split into two groups: anxieties for one's health and fears for one's financial condition. As these anxieties change, so will the shopping-related behaviors. Since those changes are not yet known, the study's objective is to ascertain their direction and size. Based on this approach, the independent variables in this study are split into two groups: anxieties for one's health and fears for one's financial condition. As these anxieties change, so will the shopping-related behaviors. Since those changes are not yet known, the study's objective is to ascertain their direction and size.

The variations in their purchasing patterns in those categories during the course of the epidemic show a change in behavior. Our attention is on three distinct dependent variables that demonstrate changes in consumer expenditure on in-store goods, curbside pickup, and online sales over the course of the epidemic. The theory of fear appeal conceptually supports our pick of the contributing causes for the shift in consumer purchase behaviour. People are supposed to decide to discover a strategy to manage the risks as a result of their worries about impending dangers (Ahmed et al., 2020; Addo et al., 2020; Eger et al., 2021). The study's independent variables were split into two groups based on this methodology: fears about one's health and worries about one's financial condition.

In the analysis, a variety of demographic parameters are also taken into account because research has shown that they have an impact on consumers' purchasing decisions [67]. If we could comprehend the changing in customer shopping behaviors and contributing factors in a more dynamic and complex environment, we would be better able to assess the effectiveness of those shopping modes and determine how retailers can improve their shopping services to cater to customers amid the pandemic. The results of this study can be used to forecast how our economy will change following COVID-19. The American market is the primary focus of this analysis; globalized trends and legislation are not taken into consideration. The findings of this study also provide important guidance on how to safeguard the course of our economy following COVID-19.

The primary goal of this study is to comprehend the American market; therefore, globalized trends and legislation are not taken into consideration. Customers are responding to brand activity differently as they deal with the pandemic problem on a global scale. According to the psychological contract idea, consumers have psychological contracts with the brands they select. Brands with a strong emphasis on social responsibility may come under special fire [68, 69].

Statistically significant health concerns were the primary factors affecting the choice to buy new products. Consumers have grown more attentive to their most basic demands during a pandemic catastrophe. These findings corroborate Accenture's (2020) findings, which show a fall in consumer interest in physical health. According to a Malaysian study, panic and anxiety purchases are influenced both directly and indirectly by

uncertainty, severity, and scarcity. The results confirm the positive correlation between anxiety, scarcity, and uncertainty. A study explains how subconscious psychological influences on consumers' spontaneous purchases. The results of the study should be viewed cautiously. The COVID-19 outbreak was followed by a global shopping panic.

Future research should focus on examining the correlations between these characteristics in various circumstances. Additional psychological elements, such as tension, anguish, and mood congruency, may play a significant role in motivating a customer to make a hurried purchase [26].

Online shopping

The COVID-19 has a big effect on global marketing as well as consumer behavior and attitude. In Bangladesh, the effects of the pandemic have drastically changed consumer behavior in terms of consumption, lifestyle, and shopping preferences. Nowadays, people choose to access alternate product sources through platforms like e-commerce rather than making in-store purchases. The three key elements that influenced consumers most were ease, technological support, and the advantages of internet buying [22].

There are few studies that look at preferences for shopping methods during the epidemic. According to Grashuis et al., the trend in COVID-19 affected consumers' preferences for food shopping (2020). The likelihood of people visiting a store decrease when COVID-19 is spreading. Online shoppers in Taiwan appeared to be more receptive to Taiwanese media coverage and appeared to purchase more grains, fresh fruit, vegetables, and frozen items.

In a different direction, [31] chose to examine customer satisfaction with online buying. They discovered that customer satisfaction with their purchases was significantly influenced by knowledge, usability, and the shopping experience. The preferences of people for purchasing techniques during the epidemic have also been the subject of a few studies.

Pentane et al. (2020) analysis highlights how consumers have re-examined their purchase habits while also becoming aware of the benefits of previously unheard-of services. For instance, as more consumers become aware of the benefits of home delivery, store pickups, and cashless transactions, some are switching to online shopping. These scholars also stated that unanticipated government rules that impose social alienation have a substantial impact on customers' previously preferred avenues for shopping today.

In order to prepare for lockdown, the government shut down public services such schools, restaurants, some stores, and public services, according to Laato et al. (2020). This may have caused people to get anxious about upcoming disruptions and to act in a certain way. The primary elements that impacted the general public's internet shopping during the pandemic were notably different from typical circumstances, according to an examination of the influencing factors. For instance, crucial elements like gender and education level, which have been demonstrated to have a significant impact on online shopping in contexts with normal backgrounds, are not significant in contexts with atypical backgrounds.

Additionally, although the impact on contactless online purchasing services under unusual conditions was little, it has now become a significant factor impacting online shopping as a result of the impact of this pandemic. It should be highlighted that as conditions gradually improve, these factors will lose their impact and be replaced by the primary elements that influence online shopping under typical circumstances. The frictionless service capabilities of online buying (X4) and the closing of physical shopping channels (X8) are the pandemic's unique selling strengths among all the major impact aspects. These two factors' influence seems to have lessened as the pandemic situation has improved. However, even after the epidemic has passed, those who choose to shop online do so for the convenience and other benefits it offers. this may still have an impact. As a result, while e-commerce businesses benefit from the pandemic for the sector, they should focus more on encouraging customer retention after the epidemic[43].

It is challenging to totally eradicate issues associated to anxiousness due to the nature of the internet buying phenomena. The Web environment requires electronic developers to create workable solutions to offset the harmful effects of online trust. The promotion of trust and confidence in the online environment is a goal that researchers, practitioners, developers, and e-retailers/e-sellers are actively pursuing [23].

The Covid-19 epidemic has given Indian customers new internet shopping options. It was a time when it was imperative to avoid contact, wear masks, keep a safe distance from others, and disinfect. This finding implies that modifications in marketing strategies were a result of shifting risk perceptions during the pandemic[48].

Social Media Usage

Our current paper investigates how influencers and their audiences affect customer co-creative behavior, boosting expected brand equity and buy intent, in light of the rise of influencer marketing on social media. [58]

In order to boost customer involvement, brand visibility, web traffic, and possibly sales, brands use a variety of social media platforms. According to Kupper et al. (2018), the use and involvement of social media by partner companies has the potential to boost sales. Social media posts made by a brand have a direct impact on engagement, consumer perception, deals, and corporate worth. Several researchers (Voorveld, van Noort, Muntinga, and Bonner (2018) and Shahbaz Nezhad et al. (2021)) found that context influences how effective social media material is at generating user engagement [54].

It is our aim to create a theory that will help us understand how social media affects consumer stockpiling in the UK. There isn't enough evidence to demonstrate how worldwide hazards, such as a lethal virus, could prompt a customer to make a panic purchase because of social media platforms. Research demonstrates that the effects of social proof and the influence of close relationships can increase consumer panic buying behavior. For instance, a friend might distribute the tissue paper crisis viral UK video. It is found that Covid-19 has raised the amount of psychological and physical health issues (Yuen et al., 2020).

The main idea of Kelman's social influence theory is "Social Influence," which is defined as the idea that people's attitudes, subsequent behaviors, and actions are influenced by other people.

This study [56]. examined the customer's panic stockpiling behavior during the COVID-19 pandemic crisis by using social proof components such as likeness, uncertainty, number, and expertise.

Social media platforms are a crucial component of brand development, especially when it comes to generating interest in and awareness of the brand. Every company's marketing plan should include a social media strategy that works. Given that COVID-19 seems to be encouraging customers to engage in more online consumer behavior activities, social media usage will probably rise globally [66].

Perceived Risk

Residents of the countries where the COVID-19 virus has spread are extremely frightened and uneasy. Lack of knowledge about the ailment has made this worry and concern worse. Terror may be increased by strict enforcement of isolation, social disengagement, and mask use [70].

Perceived risk is defined as a consumer's assessments of the possible drawbacks of purchasing a good or service. The relationship between trust and risk factors is still not fully understood. Risk comes first because trust becomes irrelevant if there is no risk associated with a particular behavior. Consumer acceptance and adoption of online shopping may be hampered when their behavioral intentions are reduced by perceived risk, particularly in developing nations. Similar to the relationship between perceived risk and trust, numerous empirical studies have found that perceived risk is a potent deterrent to the development of trust[23].

Instead of concentrating on the value and simplicity of utilizing such services, a study in Kuwait focused on the role of risk factors that caused consumers to experience anxiety and panic when using or not using specific technical services (such as online shopping). This study's distinctive addition to understanding consumer attitudes and behaviors during an emergency is the combination of theories from the information, public health, and political disciplines. To better understand Kuwaiti customers' purchasing attitudes and behaviors about online shopping during the COVID-19 epidemic, a conceptual model was created. The model considered two main aspects: (a) the real behavior of consumers; and (b) risk (financial risk, product risk, non-delivery risk, convenience and susceptibility risk, and formal penalties).

Trust

Halk defined the trust as an "essential method of decreasing uncertainty to an acceptable level and simplifying decisions," [71]. Restaurant visits have been proven to be influenced by social trust factors, demonstrating the influence of governmental policies and health monitoring organizations on consumer choices. The government must be a trustworthy source of information, regardless of its ideological leanings (such as left- or right-wing), to reduce the pandemic's harmful effects on health and the economy. The disease denial has been favourably impacted by trusting the government, and the intention to eat out has been moderated [50].

In comparison to traditional buying, trust is more important when making an online purchase. The lack of trust is a significant barrier to the uptake of web-based technology. Lack of trust would undoubtedly make potential customers more uncertain, make them feel more uneasy, and cause them to perceive risks as being higher [23].

There is currently no research on the variables impacting people's choices to continue purchasing online during the COVID-19 outbreak, particularly in India. A study suggests a model that combines the task-technology fit (TTF) model, the trust factor, and the expectation-confirmation model (ECM) [35].

Ease of use

Consumers believe using a specific technology or system is simpler and more convenient. The degree to which consumers prefer to employ a specific IT service to accomplish a goal is reflected in its perceived usefulness. Perceived usefulness and simplicity of usage are the major considerations [72]. Therefore, businesses who offer user-friendly websites and suitable advertising on the usability of their products will draw more online customers. However, external circumstances have an impact on how simple it is to use online shopping platforms. The capacity to use technology and the availability of a proper infrastructure that facilitates Internet use are two factors that come into play here. Scholars also take into account alternative hypotheses to account for these additional elements[34].

Theoretical and practical implications

This systematic review adds to the body of knowledge on consumer purchasing behavior by combining the results of research on the effects of COVID-19 on purchasing behavior,. The study provided an overview of what is known regarding the modifications in consumer purchasing habits during the COVID-19 epidemic and the variables that led to these modifications.

We paid special attention to three novel dependent variables: shifts in consumer expenditure on in-store, curbside, and online purchases over the course of the pandemic. We theoretically based our decision on the idea of fear appeal in order to choose contributing variables for the shift in shopping habits.

If we could comprehend the changing in customer shopping behaviors and contributing factors in a more dynamic and complex environment, we would be better able to assess the effectiveness of those shopping modes and determine how retailers can improve their shopping services to cater to customers in the midst of the pandemic. Critics may target brands with a high social responsibility positioning even though switching to these brands showed statistical significance among the primary factors affecting the taken decision [68, 69]

It should be highlighted that when things gradually get better, these factors' effects will lessen and the crucial elements that influence online buying in regular circumstances will take control and exercise their correct effects. Additionally, the pandemic's effects made the frictionless service features of online shopping—a consideration that under normal circumstances has little bearing on online shopping—a big influencing element.

The two distinguishing features of this pandemic among all the important contributing elements are the contactless service qualities of internet buying (X4) and the closing of offline shopping channels (X8). However, even after the epidemic, the convenience and other advantages of internet shopping may still have an impact on the general public's choice. Even after the pandemic has passed, the general public's decision to shop online may still be influenced by the convenience and other benefits it offers. Utilizing the benefits the pandemic provided to the industry, this is what happened. After the pandemic, e-commerce businesses should focus more on increasing consumer loyalty [73].

In light of the rise of influencer marketing on social media, which raises expected brand value and buy intention, the study by Bu and co-authors looks at how influencers and their audiences affect consumer value co-creation behavior (Bu et al., 2022). Multiple social media platforms are used by brands to engage consumers, build brand awareness, boost web traffic, and possibly boost revenue.

The research of Naeem et al. tries to construct a theory to comprehend the societal influence that consumers in the UK worry social media would have on their stockpiling. Lack of data exists regarding how worldwide threats (such as life-threatening viruses) can result in a situation where panic buying occurs among consumers because of social media platforms. This study examined the panic hoarding behavior of the customer during pandemics by using social proof components, such as likeness, uncertainty, number, and expertise. Crisis of COVID-19 [56].

Particularly when it comes to stoking interest in and raising awareness of the brand, social media platforms are an essential marketing tool for building businesses. The convenience and other advantages of internet buying, however, might still have an impact on the general public's desire to shop online even after the pandemic has gone.

The work of Chen et al. examines how the relationship between influencers and their audiences influences customer value co-creation behavior, leading to a rise in predicted brand value and buy intention. This is relevant given the growth of influencer marketing on social media. After the pandemic, e-commerce companies should concentrate more on fostering client loyalty while utilizing the advantages the pandemic brought to the market [43]. Brands employ a number of social media platforms to stimulate consumer participation in order to increase brand awareness, enhance internet traffic, and possibly increase sales.

Research gaps and directions for future research

In this review article, we identified gaps in the literature and suggested a direction for future investigations by reviewing the earlier research on the effects of COVID-19 on consumer purchase behaviors. To fill in the following gaps, additional research is needed.

First, prior research has focused on the impact COVID-19 has on consumers' purchasing patterns. The findings demonstrated that the outbreak increased online shopping and reinforced favorable customer purchasing attitudes and behaviors. The greatest difficulty, however, lies in maintaining beneficial improvements over time and in studying each affecting component separately.

Second, several countries have removed their lockdowns, opening their borders, places of business, and educational institutions. More research must be done on consumer purchasing behaviors during the post-lockdown phase in order to better understand customers' intentions to sustain successful purchase behaviors after the pandemic.

Third, the majority of earlier research (88%) was quantitative. It may be possible to gain first-hand knowledge of how the COVID-19 pandemic has altered consumers' purchasing behaviors and what will occur in the post-pandemic environment by conducting qualitative and mixed-method studies, as well as interviewing experts and customers.

Fourth, the majority of the research that were evaluated gathered data from Asia, Europe, and North America. In Africa, only one study was carried out. More research is needed to determine the relationship between the COVID-19 epidemic and consumers' purchasing behaviors in African nations because the infrastructure (such as online shopping) and lives of the people there may differ. [18].

Arens and Hamilton (2018) claim that some patterns and inclinations that develop during crises endure across time. Therefore, it would be intriguing to look for and research this effect in the COVID-19 crisis. If such a study was carried out, its findings might be compared with those of Arens and Hamilton to assess the accuracy of consumers' memories of their actual behavior during the COVID-19 crisis.

Investigating additional facets of consumer behavior connected to the COVID-19 dilemma, such as satisfaction, customer value, and brand loyalty, to name just three, would also be of interest. Additionally, the proliferation of neuromarketing and the use of technology tools to record and quantify the consumers' brain activity and emotional states while making their purchasing decisions under various circumstances (González-Morales et al., 2020) may also be an interesting area of study. Therefore, investigating and researching this effect in the specific context of the COVID-19 situation would be intriguing. In such case, the determination of how consumers' memories interrelate with the actual behavior during the COVID would be possible.

The relationship between homophily and the co-creation of customer value, as well as its effects, were examined by [58]. Future research may study the impact of altered elements like influencer type and information disclosure on value co-creation sessions in order to reveal a greater knowledge of the function of influencers on their audiences' behavioural intentions.

Topics	Avenues for Future Research
Long-Term Impact of COVID-19 on Purchasing Patterns:	While prior research has highlighted the immediate impact of COVID-19 on consumers' purchasing patterns, there is a need for longitudinal studies to assess the sustainability of the observed changes over time. Understanding how consumers' behaviors evolve in the post-pandemic era is crucial for businesses aiming to adapt to long-term shifts.
Post-Lockdown Phase Exploration:	With the lifting of lockdowns in various countries, it becomes imperative to investigate consumer purchasing behaviors during the post-lockdown phase. Research in this area can shed light on customers' intentions to maintain newly acquired purchasing habits and preferences post-pandemic.

Qualitative and Mixed-Methods Approaches:	The majority of existing research on the topic has been quantitative. To gain a more nuanced understanding, future studies could employ qualitative and mixed-methods approaches. In-depth interviews with experts and customers can provide valuable insights into the qualitative aspects of consumer behavior during and after the COVID-19 pandemic.
Global Perspective, Particularly in African Nations:	Much of the existing research has focused on Asia, Europe, and North America, with limited representation from African nations. There is a need for comprehensive studies to understand the relationship between the COVID-19 epidemic and consumer purchasing behaviors in African countries, considering potential differences in infrastructure and lifestyle.
Influencers and Value Co-Creation:	Given the rise of influencer marketing, future research can explore the impact of altered elements, such as influencer type and information disclosure, on value co-creation sessions. Understanding the role of influencers in shaping audiences' behavioral intentions can provide valuable insights into the dynamics of consumer-brand relationships in the post-COVID era.

In summary, these proposed avenues for future research aim to address the identified gaps, contribute to a more comprehensive understanding of consumer behavior in the context of the COVID-19 pandemic, and provide practical implications for businesses and policymakers. Researchers are encouraged to explore these areas to enrich the literature and guide strategic decision-making in a rapidly evolving market landscape.

Limitations

The objective of the current study was to pinpoint the variables that influenced and contributed to the effects of the COVID19 pandemic on consumers' purchasing behaviors. Although the study's objectives were met, some limitations should be taken into account. First, we only considered papers that were published in publications that Scopus has indexed because it is the largest database.

Second, we ensured that only top-notch publications were assessed by limiting the review to peer-reviewed articles and excluding book chapters and conference papers. Thirdly, despite the fact that two authors reviewed the retrieved articles to identify the relevant research, their subjective judgments may have had an impact on the selection process. Not to mention, the majority of the studies we analyzed gathered their data during lockdowns. The absence of study on post-lockdown behavior limits our ability to provide a clear judgment.

Conclusion

In conclusion, this study offers fascinating takeaways for academics, business, and retailers. First, because there are less opportunities to shop in-store as they once did, customers have changed their shopping habits. The severity of COVID-19 sparked panic buying, health and financial concerns, and perceptions among consumers. Consumers change their purchase behaviors by taking into account the risk-management or risk-elimination options available to them.

Second, the COVID-19 epidemic has boosted the need for online buying and encouraged conveniently accessible technological support. The COVID-19

epidemic has made it possible to purchase for groceries online in innovative ways. By conducting a systematic review, this study also looked into the factors impacting purchases made during the epidemic. Use of social media, perceived risk, trust, and usability

Thirdly, we can make use of these findings to develop sensible plans for shopping channel networks to assist clients during the pandemic. More specifically, researchers should focus on these elements to track changes in customer purchase behavior and examine each component to determine which is most, because some customers still choose shopping in stores

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