

DOI: <https://doi.org/10.51359/2526-7884.2024.256663>

ISSN:  
Editor: Prof. Dr. Marconi Freitas da Costa  
E-mail: [cbr@ufpe.br](mailto:cbr@ufpe.br)

Evaluation: Double blind review  
Received: November 14, 2022  
Approved: April 24, 2024

# PANDEMIC, FEAR AND CONSUMPTION: VULNERABILITY AT THE BASE OF THE PYRAMID

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## Abstract

This paper analyzed how the Covid-19 pandemic affected the consumer relations of individuals at the base of the pyramid in the interior of Piauí by observing their accounts of experience. Twenty-one consumers were interviewed in the year 2021, of both genders, ten men and eleven women. The findings of this study suggest that consumer behavior suffered a strong impact from the restrictive measures imposed because of the pandemic, causing fear and panic, because the limitations caused financial and psychological damage that persist after the reduction of cases and deaths. However, one finding stands out; respondents state that the same restrictions caused there to be a greater focus on education and household resource management. Such a finding reinforces the originality of

the study, along with the context and the subjects interviewed.

**Keywords:** consumer vulnerability; covid19 pandemic; bottom of the pyramid consumption.

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## INTRODUCTION

A customary practice in marketing is to group consumer segments into target market categories to better target the supply of goods and services. One of the most used categories is segmentation by income or class, where traits are assigned to certain groups based on the characteristics that define them. By this definition, a class is made up of individuals from the same income bracket, and these individuals even share a defined history where personality, behavior and consumption patterns are influenced by this history (ABEP, 2020; Cox; Ganong; Noel; Vavra; Wong; Farrell & Deadman, 2020).

This social classification criterion can be influenced by external events that occur in the economic scenario, mainly; however, it is also impacted by social and cultural changes that every society goes through. The most common of these events concerns the income, employment and personality characteristics of each generation, variables that are related to each other, in differences perceived in studies on Baby Boomers (born 1943-1960), Generation X (1961-1981), Generation Y (born 1982-1991), and Generation Z (born after 1992). (Johnston, 2013; Mason, Narcum & Mason, 2020; Zwanka & Buff, 2021).

Some lack of clarity can be attributed to the debate over whether such a criterion is the best method to use in this classification or whether it is a more effective method. Economic classes can focus on income, while cohorts focus on events that produce a change in society's value structure. These events, such as a change in consumption patterns, a change in the mortality table and even a pandemic like Covid-19, create a change in society that brings a new set of values to those who reach working age during these events.

While personalized marketing may introduce new focal strategies, having large market segments with common characteristics enables an approach that directs efforts towards distinguishing and likening features among groups of individuals. Age, for instance, is a commonly utilized segmentation variable, as observed in the attention paid to the inherent similarities among Baby Boomers or Millennials. Currently, Millennials represent the generational cohort succeeding Generation X, encompassing those born from 1981 onwards. (Pew Research Center, 2010).

In the context of natural disasters or crises, however, consumers are typically observed engaging in the behavior of stockpiling consumer goods to a degree that significantly exceeds levels noted during normal times. Throughout the Covid-19 pandemic, the IRI (2020) documented a marked increase in shopping expenses for basic basket items and surges in stock levels across several European countries and the United States as the crisis intensified. According to this survey, expenditures on paper products (including toilet paper) experienced a year-over-year increase in Italy, France, Germany, the United Kingdom, Spain, and the USA. These countries also recorded sharp increases in the sales of basic food basket components, such as pasta, rice, and flour, as well as fresh fruits and vegetables.

There are psychological and economic explanations for such behavior of goods accumulation during a crisis. A common psychological explanation is that stockpiling provides consumers with a sense of control over the risk situation created by the crisis (Ishida, Maruyama & Kurihara, 2013; Grohol, 2020). However, Chen, Jing, Yang, & Cong (2020) observed that the behavior of stockpiling consumer goods during a catastrophe can be rational or panic-reducing. Such behavior was also noted during the Covid-19 pandemic, resulting in shortages of myriad items on the shelves of supermarkets and pharmacies, including medications to combat parasites, hand sanitizers, and toilet paper, respectively.

This purchasing behavior resulted in a scarcity that led consumers to devote more time and effort to shopping, diverting time from well-being-enhancing activities such as work, leisure, and

sleep, thereby incurring psychological costs of anxiety and stress. This situation was exacerbated by the price increases of many goods and services during the pandemic (Chen et al., 2020). However, larger retailers avoided price hikes during the crisis, both due to legal constraints and concerns over long-term reputation. Such behavior may lead consumers to speculative buying and the emergence of illegal markets. Furthermore, the consumer rush to the shelves can promote increased virus transmission.

The primary objective of this study is to understand how fear manifests in the consumption behavior of individuals residing in the interior of the Brazilian Northeast in response to events of scarcity of goods and services caused by the Covid-19 pandemic. Regardless of its cause, the phenomenon of crisis state purchasing, such as during a pandemic, is socially costly for distinct reasons. A crisis-induced leap in consumer demand above expected historical levels can often lead to short-term stockouts at small retail stores, in particular. This is especially true in the case of just-in-time supply chains, where there are limited inventories available to oversee surges in demand. During the pandemic, severe stockout situations for consumer products like toilet paper, rice, and pasta have emerged in many countries (Grohol, 2020). Stockouts are costly to consumers in general and particularly burdensome for vulnerable groups such as the elderly and disabled, and in the case of this study, the social pyramid's base for whom shopping may become a challenge.

## LITERATURE REVIEW

There exists a robust array of adverse events studied by science and their impacts on individuals and organizations, subsequently affecting their consumption actions. While some studies address life events in general (Mathur, Moschis & Lee, 2003; Koschate-Fischer, Hoyer, Stokburger-Sauer & Engling, 2018), others explore the impacts of economic events such as recessions (Cooper, 2013; Debevec, Schewe, Madden & Diamond, 2013; Ng, Slining & Popkin, 2014), hurricanes (Sneath, Lacey & Kennett-Hensel, 2009; Kennett-Hensel, Sneath & Lacey, 2012), terrorism (Moore, Cunradi & Ames, 2004), and natural disasters (Larson & Shin, 2018). Some themes explored within this research vein are broad in scope, including impacts on consumer behavior—the focus of this study—while others pertain to social issues and reflections on generational cohorts as examples of the spectra reached by research in this direction.

Using economic recessions as an example, there are pivotal studies were conducted in the wake of the Covid-19 pandemic. In this regard, there are numerous studies on issues such as the role of media in pandemic coverage (Liu, Chen & Bao, 2021), domestic violence (Kourti, Stavridou, Panagouli, Psaltopoulou, Spiliopoulou, Tsolia & Tsitsika, 2021), mental health (Hossain, Tasnim, Sultana, Faizah, Mazumder, Zou & Ma, 2020), and consumer behavior (Petrescu-Mag, Vermeir, Petrescu & Banatean-Dunea, 2020; Madnani, Fernandes & Madnani, 2020).

Many stressful life events result in the initiation, intensification, or changes in consumption habits in an effort to cope with adverse events caused by an uncontrollable external environmental fact (Mathur, Moschis & Lee, 2003; Mainardes, Espanhol & Cruz, 2021). Thus, risk-averse consumer behavior has been observed following large-scale events such as terrorism (September 11, 2001) and its impact on the airline industry and tourism around the world; tsunamis in Thailand, Indonesia and, more recently, Japan; earthquakes in Haiti, Japan and New Zealand; major floods and devastation in New Orleans and Queensland; pandemics such as SARS, the H1N1 virus; forest fires in California and Victoria (Fortin & Tios, 2011).

Natural disasters, including those events expected every year (for example, hurricanes, tornadoes, fires, and floods), result in a decline in economic activity and changes in utilitarianism and hedonic purchasing motives during and after such events (Fortin & Tios, 2011; Larson & Shin 2018). In this sense, what conditions consumption is often associated with the need to restock, replace items damaged by catastrophic events, while hedonic reasons include the search for freedom, overcoming boredom, celebrating the end of the traumatic event with family and friends (Larson & Shin, 2018).

A study conducted after Hurricane Katrina in the United States in 2005 suggests that consumer behavior changed during the transition that the population affected by the disaster went through after the storm and years later (Kennett-Hensel, Sneath & Lacey 2012). The results suggest that the increase

in acquisition and purchase demonstrated immediately after the event was followed by a reduction in consumption in the long term; the participants in this study indicated that they were no longer willing to over-consume, pointing to the fact that they are likely to spend less and adopt a more minimalist level of consumption by being more careful in their choices.

Economic downturns result in behavioral choices and attitude changes. Expenditure is reduced, causing a reconfiguration of priorities. In a study on household food consumption in the United States and England carried out after major recessions, Griffith, O'Connell & Smith (2016) report that household pantries responded to worsening economic conditions in two aspects of consumption; people chose to shift their consumption towards cheaper food in real terms without losing the nutritional quality of the food, i.e. price and quality, and essentially consumers increased their purchasing and consumption effort by adjusting and changing the nature of the shopping basket.

A longitudinal study on the consumption traits of Dutch consumers showed that these traits were more stable, but this did not prevent changes from occurring (Steenkamp & Maydeu-Olivares, 2015). Thus, considering that society is susceptible to changes, whether predictable or not, it is possible to see that consumer prices tend to change depending on the characteristics of the external environment, so it would be expected that consumers would show greater sensitivity to post-Covid-19 prices, which puts them in a situation of consumer vulnerability (Hill & Sharma, 2020).

## METHOD

The abrupt shift prompted by the Covid-19 pandemic significantly impacted the realm of academic research, particularly in conducting face-to-face interactions with subjects, necessitating the adoption of alternative approaches to ensure data collection was as safe and dependable as possible. Consequently, traditional in-person data collection methods were replaced with remote methodologies supported by communication technologies, meeting resistance from some individuals, which was overcome through direct contact via instant messaging platforms such as WhatsApp and Telegram.

As a result, 21 individuals were contacted, of whom 19 responded to the entire research questionnaire by returning their answers in audio format, while the remainder did not return their responses in a timely manner. However, WhatsApp was not the sole platform for conducting interviews, as Telegram served as the second choice, as indicated in Table 1, which provides further detail about the research subjects and their participation in the study.

**Table 1**

Description of the research subjects

Genre	Age	Professional activity (Last or current)	Situation	Collection platform
Male	32	Barber	Freelancer	Telegram
Female	26	Teacher (Tutoring)	Freelancer	Telegram
Female	31	Manicurist	Freelancer	Whatsapp
Male	31	Cashier	Officially employed	Whatsapp
Female	41	Attendant	Officially employed	Whatsapp
Female	48	Cook	Officially employed	Whatsapp
Male	32	Salesman	Unemployed	Whatsapp
Female	24	Stock clerk	Officially employed	Telegram
Female	38	Market vendor	Freelancer	Whatsapp
Male	48	Driver	Unemployed	Whatsapp
Male	40	Security guard	Unemployed	Whatsapp
Female	42	Door-to-door saleswoman	Freelancer	Whatsapp
Female	26	Saleswoman	Business entity	Whatsapp
Male	28	Timekeeper	Unemployed	Whatsapp
Male	33	App based driver	Freelancer	Telegram
Female	27	Waitress	Officially employed	Whatsapp
Female	27	Nursing technician	Government employee	Telegram

Female	43	Pantry maid	Officially employed	Whatsapp
Male	51	Security guard	Officially employed	Whatsapp

Source: Own elaboration (2023)

Here, contact was set up through the researchers' network of friends and via the virtual snowball technique, as suggested by Costa (2018). This study involved the personal experience of vulnerability (Baker, Gentry & Rittenburg, 2005), as perceived by the participants belonging to classes D and E according to the 2020 Brazil Economic Classification Criterion (ABEP, 2020), during the Covid-19 pandemic from July to October 2021, the period during which interviews were conducted, collecting accounts through audio recordings, subsequently transcribed into a word processing document. These interviews generated a total of 12 hours and 21 minutes of recordings (with the audio format being the sole source of account used by participants), during which time includes audios sent via WhatsApp and Telegram.

The research was conducted in an inland city in northeastern Brazil, identified as a major road junction with considerable traffic and a large commuting population. This is due to its proximity to several smaller cities within a 100 km radius, thus acting as a Regional Command City, a term coined by Lima and Silveira (2018) as a center of spatial interactions shaped by capital investment, integration processes, and regional development.

### **Procedures for the choice and participation of subjects**

The subjects who participated in the study were recruited through an initial brief contact via the researchers' network of friends, wherein the purpose of the contact and the objectives of the research were explained, an invitation to participate was extended, and the participation rules were presented, including the informed consent form sent via link for the participant to read and either confirm or decline their participation.

The participants were given the opportunity to reflect on their involvement, providing space and time for them to return their response to the researchers based on their availability and interest in taking part. Once participation was confirmed, a negotiation about the date and time for the researchers to contact the participant was conducted to avoid intruding on their daily activities. As the interview started, researchers inquired if the participants wished to receive the complete research questionnaire at once or preferred to answer one question at a time, with only four opting to receive the entire questionnaire upfront. It is noteworthy that conducting the interview one question at a time allowed for greater interaction between the researcher and the subject, easing a more effective information gathering and the discovery of insights about the phenomenon that were not anticipated by the researchers.

### **Analysis and discussion of results**

This paper proposes an analytical protocol about the discourses aimed at an interpretative discussion of the statements made by interviewed consumers, herein referred to by the acronym CONSX, with the letter X corresponding to the number assigned to the subject according to the chronological order of their participation in the study. Initially, it became clear in their statements that remnants of fear-related feelings were frequently mentioned, especially when interviewees recalled memories of past events at the onset of the pandemic, a consequence of uncertainties and the lack of precise information.

The feelings indicate that consumers in most major economies experienced fear in response to the Covid-19 pandemic, and within the context of this study, the discourses articulated similar situations. Most of the accounts in this study highlight a vivid recollection of fear sentiments predominantly occurring around mid-March to May 2020, aligning with data from IRI (2020) which documented marked increases in retail sales, a phenomenon consistent across nearly all economies. Thus, a similarity in consumer behavior at the time and in the severity of the consumers' fear across various countries became clear, a finding that was also confirmed in the interior of Northeast Brazil.



## Purchasing behavior and Covid-19

In the phenomena of consumer behavior, purchasing is its direct outcome, and the production that underpins this is generated by the selection of goods, services, and their points of purchase, diversified to a greater extent as a consequence of Covid-19, with digital having the most significant impact in this regard. During the pandemic, consumption behaviors aimed at coping were central to consumers' strategies to ensure their own well-being and mitigate their vulnerability, given that they faced unprecedented and unforeseen restrictions, a consequence of the environment of uncertainty. The following consumer statements refer to the experiences lived in the face of such restrictions:

"When I saw myself, I was facing the kitchen cupboard with nothing to cook, I mean, I barely had any salt, did I have any rice? Yes. Was there beans and meat in the fridge? There was, it was there, but I don't know why I noticed the salt running out, I panicked. My God, the salt was running out, what I had in the account I saw was enough and I went to the supermarket, I bought twice as much so I wouldn't run out, I got home and wrote everything down, that time I went to the market I started keeping all the notes and comparing the prices, I always bought the same things, almost always, but I compared note for note and I knew when it went up and when it went down, but I had stock, something I've never done in my life, I ran out of money but I didn't run out of food at home" (CONS5)

"Everything you can buy is bought from home, even a manicurist, a barber, if he can come, he comes here. People from the street arrange a day for the manicurist to come, he does everyone's, gives a discount and everyone leaves happy. That was the pandemic, it started there, today it's there, it's become a habit, then it was the barber to count the children's hair, cut it three, four, five at a time, children, I say! But there's always an adult there too. And there's a discount!" (CONS9)

Not only the imposition of restrictions by public authorities but also the scarcity of consumer items caused by the market dynamics altered by the pandemic, led to an increase in the purchase of food, beverages, hygiene products, and medications, inducing frequent stockpiling. This was another consumption phenomenon present among the lower class, even with financial limitations mentioned in the narratives. This behavior occurred before and during the legal lockdown measures and was widely confirmed at a global level (Antonides & van Leeuwen, 2020; Prentice, Chen & Stantic, 2020; Seiler, 2020).

Following the cessation and transition to social distancing, a moderate stockpiling of certain items was seen, as already evidenced by Anastasiadou et al. (2020). However, the consumption of goods and services in industries such as entertainment, travel, and tourism also decreased in the context studied in this research, a fact corroborated by the studies of Antonides and Van Leeuwen (2020), Ellison, McFadden, Rickard, & Wilson. (2021), and Seiler (2020). Although not frequent among the subjects of this research, these consumption items were the first to be suspended, as well as quickly resumed when the restrictive measures were mitigated.

"Look, I didn't see my parents for almost a year. It was longing, it was anguish, it was fear. As I live here because of work and university, every weekend I would go home to be with my parents, not to mention the fact that this is my city, my friends and where I have fun. But I didn't go there for a whole year, two thousand and twenty, without going out for anything, just from home to work and my luck was that I never caught the virus during that time, I almost went crazy" (CONS1)

"When they started to loosen things up, the first thing I did was think about a trip, I can't afford an expensive trip, but this time I outdid myself, as I'm a barber I didn't miss work, I went to houses, apartments, the barbershop I work at opened on a restricted basis at the time, so I ended up making more money from the pandemic.

Then I had a good trip, I got to know a place I didn't know, and now I've got it into my head that I'm going to travel every year, you never know, right?" (CONS10)

"Cinema, that's what I missed the most, we didn't have one here, then a franchise came along, and shortly afterwards the pandemic hit. We couldn't afford to go to the capital to watch a movie, to eat popcorn watching the big screen. When the cinema came here, it was wonderful because it was one more thing for us to feel like people. When the pandemic stopped, when the cinema came back, I went almost every weekend, until it ended, I hope never." (CONS19)

"Suddenly there were dozens of parties, every weekend there were parties in all the towns around here, there were bands like this, singers like that, town birthdays were celebrated late because they couldn't celebrate during the pandemic, patron saint celebrations were the same... and everything was packed. The people seemed to be tied up (laughs), but the talk was that it boosted the economy of these towns, everyone was at home, stuck, no parties, so it was released, and everyone went out to spend." (CONS7)

The statement from CONS7 warrants particular attention given its context. The city where very participants live is surrounded by various smaller towns within a 100-kilometer radius, each with its own social and cultural characteristics that are reflected in political and religious festivals, such as emancipation anniversaries and celebrations dedicated to patron saints of these towns. These events feature a variety of artistic attractions and draw residents from the entire region, including surrounding villages and towns. This phenomenon gained momentum with the easing of the pandemic, the lifting of restrictions on gatherings, the relaxation of mask mandates, and the intensification of vaccination efforts.

In the context of vulnerability, limitations related to consumption in the entertainment sector were overcome to reclaim what had been lost, marking the end of the fear sensation, and easing reunions among friends and family. Religious festivals became a ritual of return to normal life, grounded in faith and tradition, a fact underscored in the statement of CONS17. Here, faith appears as a mechanism to combat the vulnerability imposed in the consumption context brought forth by the pandemic.

"When I saw the saint coming back, it was as if my life had resumed and that it would give me another sense of life, I was still afraid, but it was no longer a feeling of panic. Two years without the patron saint's feast shakes things up too much, not our faith, which comes back stronger, but it is as if something is missing. It is like seeing your friends again, everyone comes back to town for the festival and meets up again, the family gets together and it's that thing, isn't it? Everyone wearing new clothes, new hair, thinner people (laughs) everyone wants to show off something new" (CONS17).

"The best thing that happened was when they allowed masses and services. You go through a situation like this, people dying, layoffs, companies closing, and you can't even pray, it's hard, you know? I even prayed at home, but I didn't feel any better. When I was able to go to the church and hear the word, I felt protected, the fear was too much." (CONS8).

Another essential aspect for understanding the phenomenon of vulnerability in this study context relates to the choices of buying and payment methods. Various purchasing and payment methods were implemented by numerous business models to reduce the risk of infection, for example, and to hasten the logistical processes inherent in transactions. Among these, consumers received help from online purchases while making changes in their choice regarding the point of sale, transitioning to digital platforms.

The restrictions associated with lockdowns, and subsequently, social distancing, have spurred many consumers to swiftly adopt technology-mediated purchasing behaviors, such as shopping

through delivery apps or instant messaging applications, that is, in a digital environment (Butu, Brumă, Tanasă, Rodino, Dinu Vasiliu, Doboş & Butu, 2020). Herein, a form of learning among consumers was set up, wherein through digital channels, closer relationships were fostered with sellers who previously lacked a significant virtual presence, such as micro and small business owners. These entrepreneurs found themselves compelled to implement a culture of digital transformation, albeit paradoxically rudimentary at times, often based on trust about the handling of data such as credit/debit card numbers. Consequently, online purchases of food, beverages, and hygiene and cleaning supplies have seen an increase (Antonides & van Leeuwen, 2020; Ellison et al., 2020; Ben Hassen, El Bilali & Allahyari, 2020; Marinković & Lazarević, 2021).

However, there has also been a surge in the use of technology for entertainment purposes. For example, interviewees' statements highlight an uptick in the adoption of streaming services for both audio and video, such as Netflix and Spotify (Madnani, Fernandes & Madnani, 2020). In this vein, an emerging trend was the adoption of subscription services on educational platforms, indicating a pursuit of professional qualification. The demand here is for services that are affordable in terms of price, with costs not exceeding R\$ 50.00 per installment, in all cases eased through credit card transactions, a fact affirmed in all interviews where the event was mentioned.

"As we spent all day at home, we had to find a way to occupy ourselves, pass the time, as I like series and movies, I only had a Netflix subscription, I subscribed to another one, so... there was no shortage of options, but even so there were days when I couldn't stand it, I wanted to get out of the house. In the middle of the pandemic I was made redundant, and that's when I wanted to learn new things and was referred to a course website, which I still pay for and take one course a week, it was with what I learned there that I got the job I have now, I canceled almost all my video and music subscriptions, and today I invest in educational ones" (CONS15).

"[...] Until one day I lost control of my bills because I was ordering so much delivery, everything, food, clothes and so on, but I don't think that was it, I started buying a lot of things online, without an app, that's when the bank increased my limit and shortly afterwards I lost control, sometimes I felt good about buying because it made up for the loneliness, the fact that I couldn't go out, even the supermarket I bought online, but I had to pay, right?" (CONS12).

"The best thing I did was sign up for an online course. I shared the password with someone else, and that's when we started a business with what we'd learned. Everything was closed, the courses weren't having face-to-face classes, even the universities weren't having face-to-face classes, so we bought the one we're in now, we bought others, but we've already canceled them, we kept this one because it helps the business, it was money well spent" (CONS16).

At the point of sale, there was another change in the purchasing habits of customers: the number of physical transactions was replaced by digital ones. This shift occurred as consumers aimed to reduce the number of trips to brick-and-mortar stores, either by personal choice or due to legal restrictions, thereby affecting the frequency of purchases at physical retail points and further encouraging purchases through digital means, even WhatsApp became a transactional medium (Laguna, Fiszman, Puerta, Chaya & Tárrega, 2020; Principato, Secondi, Cicatiello & Mattia, 2020). In certain locations, consumers ceased buying from large retailers given that these points of sale could be crowded and imposing various access restrictions such as a limited number of people allowed inside, limitations on the volume of purchases, and the quantity of items to be bought. As a result, these consumers preferred to shop at local small retailers instead (Li, Hallsworth & Coca-Stefaniak, 2020).

"We arrived at ASSAÍ and there was that huge queue to get in, it took ages to get in and when you did, there were things you couldn't buy as much as you wanted, not to mention that at the height of the pandemic there was a shortage of alcohol, masks...



even toilet paper. In these big pharmacies, there was a shortage of medicine, vitamins, I won't even say the name, but there was a shortage, wow! When I got to Pague Menos and there was no azithromycin, I saw the despair coming, I just thought the worst, you know? It reminded me of those apocalypse movies[...] we go to the neighborhood pharmacy, there's everything, they even sell it without a prescription... why not go to the grocery store nearby? You find everything and you're treated well, you pay more for little things, but it's worth it" (CONS2).

"The market I used to buy was right here in the neighborhood, I'd ask for it by whatsapp, I'd send a list, I'd get there and it'd already be sorted or they'd come to drop it off, much more practical, it was difficult at first because some things came wrong, but then everything was right, but if it hadn't been for that, I think we'd have even gone hungry" (CONS1).

Thus, there was a consolidation of technology to support consumption, and the reinforcement and effort of local small retailers contributed to the strengthening of a consumer behavior that turned towards addressing the restrictions imposed by the pandemic on governments and society. This was instrumental in reducing the vulnerability of these consumers in the face of another catastrophe. Confronting the fear and uncertainties brought about by consumption limitations, technology served as a foundation for consumer empowerment (Wathieu, Brenner, Carmon, Chattopadhyay, Wertenbroch, Drolet & Wu, 2002; Füller, Mühlbacher, Matzler & Jawecki, 2009; Balderjahn, Lee, Seegebarth & Peyer, 2020).

In conclusion, the findings presented here indicate that the announcement of consumption restrictions led to considerable consumer panic in the short term, primarily due to a context enveloped by uncertainty and a lack of reliable information, both by the government on how to handle the virus and by businesses, which were dependent on legal restriction measures and passed the effects directly onto the consumer. However, as information became more consolidated, the impact of fear partially diminished within society, and after a period of adaptation, there appeared a movement that is in sync between consumer and market. In this regard, the condition of vulnerability seemed transient, even with severe consequences.

## **FINAL CONSIDERATIONS**

The purchase of storable consumer goods is a common phenomenon during natural disasters and human-caused crises. However, the fear experienced by consumers has been understudied from the perspective of vulnerability induced by catastrophic conditions, especially during a pandemic. This is due to the challenges in obtaining adequate data and the variability in the determinants of vulnerability, as it is a dynamic dimension tailored to the consumption context that provokes it. Fear and panic are typical, acute phenomena where consumers in a specific location react to news of crises, such as an approaching hurricane, leading to hoarding behavior (Baker, Hunter & Rittenburg, 2007; Baker, 2009; Baker & LaBarge, 2015).

The nature of these emotions complicates study through conventional quantitative methods, as it hinders the collection of relevant data on consumer response due to the sudden occurrence of the event. Moreover, events that trigger fear and panic, such as the COVID-19 pandemic, affected not just a particular group of consumers in a specific location as would happen with disasters like hurricanes, earthquakes, and tsunamis, but was a global event. Therefore, initially, it becomes more complex to find variations in the variables that lead to feelings of fear, especially when they condition consumption vulnerability.

The COVID-19 pandemic offered a unique opportunity to study consumer panic for two reasons: how it affects societies and their cultures, albeit at separate times and degrees. Thus, there is a wide variation among locations in the timing and severity of the fear-inducing event. Additionally, it was possible to study how governments responded to the pandemic with a variety of different policies implemented at separate times and with varying degrees of strictness, creating variations in feelings of fear and panic. Another key behavior is disposal, with outcomes that proved curious.

During lockdown, there was less food waste, a fact more likely due to future supply than ecological reasons. However, extreme sanitary precautions increased the use of disposable protective items, and more digital commercial transactions increased waste from packaging materials. Therefore, from a social and environmental perspective, the pandemic's effects on product waste are diversified, as stated by Vanapalli, Sharma, Ranjan, Samal, Bhattacharya, Dubey & Goel (2021). Future studies could turn to examining the disposal of products and new phases of the COVID-19 pandemic. Additionally, consumer satisfaction with changes brought about by the digital transformation imposed by the pandemic deserves greater attention in the literature.

It is also possible to predict consumer behaviors, given the ongoing and dynamic development of the pandemic. Consequently, the crisis has so far induced intense consumer learning, particularly in the use of technologies (personal and psychological factors). Moreover, although technologies can satisfy both hedonic and utilitarian needs, some consumer needs still are unmet, particularly social needs (Sheth, 2020; Cruz-Cárdenas, Zabelina, Guadalupe-Lanas, Palacio-Fierro & Ramos-Galarza, 2021; Li, Wang, Abbas, Hassan & Mubeen, 2021).

However, public vaccination campaigns and their protective effects on the population may reduce people's fear and prevent behaviors related to certain products and services, as consumers have more consumption options and more security in the decision-making process, given the reduction of their fear, the relaxation of mobility restrictions, and the re-approach of people. Nevertheless, the trajectory of the COVID-19 pandemic does not appear as a linear process, given the emergence of new waves of infections, so the adaptive process based on better information circulation brings more security and less fear. Therefore, the new consumer behavior, compared to production and its outcomes, will not result in a return to the conditions existing before the pandemic. Instead, consumer learning about technologies, the mitigated avoidance and coping behavior, and unmet needs mark consumption practices that tend to combine pre-COVID-19 behaviors (some intensified by the level of unmet needs) with new technology-based behaviors (e.g., app usage, e-learning, e-commerce, and more intense social communication). However, this combination of old and new consumption behaviors is already dynamic and creative, as consumers go through new phases of the pandemic marked by uncertainty more often.

This article contributes to the construction of a dynamic view of consumption that can respond to consumer fear with the change in sanitary security policies and virus transmission across territories, including internationally. It is important to note that the perception here is based on the effect of national policies in dependency on the international context, and this was evidenced in this study; the participating subjects, as consumers, felt this interaction between the world and their place of residence, i.e., domestic events incorporate the international context.

It is crucial for governments and businesses to better understand how to minimize consumer fear in an environment like the current pandemic. For example, in the first stages of a pandemic, when internal restrictions are being implemented, retailers, for example, should have extra stock support of consumer goods and/or be prepared to implement purchase quantity restrictions, however, without causing shortages or stockouts. Given that the fear induced by internal restrictions is sudden but short-lived, having extra stock to deal with a first surge in demand, or containing the initial surge through purchase quantity restrictions, can prevent shortages and, consequently, prevent consumer panic from setting in at the start.

Lessons must be learned from the various events caused by the COVID-19 pandemic, given that future epidemics or even pandemics are inevitable, whether in the short term through a new strain of the virus or in the long term as new forms of viruses appear. This article tries to understand consumer vulnerability conditions in this context, highlighting that consumer panic and fear in a pandemic environment had a strong presence when feelings related to consumption experiences during this period emerge, providing a significant margin for this phenomenon to be an area of active investigation in the future.

Thus, it is useful to consider how governmental policies can contribute to consumer feelings of fear and panic. The political response to COVID-19 has focused on having virus transmission and efforts to support the economy, encouraging businesses and jobs. Therefore, public power has been based on three pillars of governmental policy during the pandemic, namely: a) internal restrictions,

regarding freedom of movement and gathering, travel restrictions that limit or prevent people from moving within and outside countries, and publicity encouraging behaviors inherent to the pandemic context, and these provoked sensations related to fear and panic, leading consumers to another spectrum of vulnerability, albeit transient.

### **Research ethic statement**

The authors declare that this study no submitted for evaluation in another journal simultaneously with the CBR or previously published in another journal.

### **Author contribution statement**

The authors contributed equally to the paper.

### **Funding**

The authors declare that no financial support was received for the research, authorship, and/or publication of this article.

### **Disclosure statement**

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

### **Acknowledgements**

The authors would like to thank the journalists and companies that participated in this study.

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