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Some Have Other Crisis Concerns: Antecedents of Anxiety while Grocery Shopping

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Abstract: This study relates consumer behaviour with social disruption theory by identifying the antecedents of anxiety related to grocery shopping. Our research design integrates cognitive, behavioural, self-identity, emotional components in disruptive situations. This study presents a conceptual framework focusing on the cognitive and behavioural antecedents of anxiety relating to grocery shopping in disruptive situations. The conceptual model was validated by fitting a SEM with the FIMIX-PLS algorithm to 228 responses obtained an online questionnaire in Brazil and Germany. Two distinct segments of consumers—concerned and scared consumers—differing by their perceived vulnerability are identified. Concerned consumers are characterized by a strong relation of personal concerns to anxiety. The empirical contribution roots in the identification of two types of customers with respect to concerns and anxiety: (i) the concerned because of their situational awareness and (ii) those with more pressing problems. Thus, our study contributes to consumer behaviour and social disruption theory by clarifying and quantifying the impact of the antecedents of anxiety related to grocery shopping in crises. The resulting data from survey responses are cross-sectional, which means it cannot provide evidence of temporal sequence. Retailers benefit from actively shaping consumers' emotional experiences through measures. The perceived consumers' need for coping strategies to reduce their anxiety (e.g., shopping in less frequented stores) can thereby be eliminated.

Keywords: buying behaviour; anxiety; antecedents of anxiety; disruptive situations; health crisis.

Introduction

In all stages of the customer journey, cognitive, behavioural, and emotional reactions influence the overall experience. Previous research in retailing has largely focused on the cognitive and behavioural reactions of consumers, which are satisfaction (Lucia-Palacios et al., 2021), word of mouth (Duan et al., 2008; Mukerjee, 2020), loyalty (Herhausen et al., 2019), and purchase intentions (Kazancoglu & Demir, 2021; Sahi et al., 2016). However, it also has been shown as relevant for retailers to consider consumers' emotional reactions (Grewal & Roggeveen, 2020). In this vein, the research's aim is to understand how anxiety alters the perceived retailing experience. Given the substantial role that feelings and emotions play in retailing, this calls for a more systematic integration to enable the design of improved shopping experiences. For both scholars and retailers, identifying the relevant antecedents of feelings and emotions in varying scenarios and among varying customer segments will enhance their insights into and understanding of consumers' emotional experiences (Pham & Sun, 2020). The study contributes to closing this research gap by clarifying and quantifying the impact of the antecedents of anxiety related to grocery shopping in crises.

The COVID-19 pandemic is a situation that touches all stages of the customer journey and leaves no hideaways in daily lives (Aboelenien et al., 2021; Bratianu, 2020; Darma & Darma, 2020; Halan, 2021; Zulauf et al., 2021; Zulauf & Wagner, 2021). As viewed by social disruption theory (England & Albrecht, 1984), it is a generalized crisis and a loss of traditional routines and attitudes. Frightening news, restrictions, and new routines suddenly become daily companions. Complementarily, a lack of orientation and leadership in politics and administration as well as among public opinion leaders unsettles individuals, families, and communities. The natural reaction to such a scenario is fear and anxiety (Naja & Hamadeh, 2020). McIntyre and Roggenbuck (1998) define anxiety as a subjective

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feeling that occurs with potential or actual risks. Specifically, it is an emotion characterized by feeling uncomfortable, worried, and tense. Various studies have analysed the role of anxiety in the context of online shopping (Vakulenko et al., 2019; Wilson-Nash et al., 2020) in terms of the risks of digital-enabled transactions.

According to the common-sense model (Leventhal et al., 1992), decision makers seek to regulate their emotional response to the health threat (Chapman & Coups, 2006). Anxiety activates different types of coping mechanisms, e.g., avoidance behaviour, and/or allows for an escape from anxiety (Darrat et al., 2016).

Notably, the in-store atmosphere, its perception, and its relevance to store choice (Elmashhara & Soares, 2020; Zulauf et al., 2021) changed with the COVID-19 outbreak. The COVID-19 pandemic induced new risks to both consumers and retailers' service employees. The arising vulnerability triggers anxieties ranged from concerns about scarcity to worries about product shortages and the likelihood of infection and eventual death. The changes in buying behaviour have various facets, including product changes (Kwon et al., 2020), unusual purchases (Laato et al., 2020), compensatory consumption with impulse buying (Naeem, 2021b; Pomerance et al., 2020), and alterations in shopping frequency (Zulauf et al., 2021). Notably, stockpiling is one manifestation of emotional self-regulation that has an impact on anxiety. According to Rindfleisch et al. (2009) and Arndt et al. (2008), the underlying assumption is that buyers can calm themselves down through both the shopping experience and materialism.

Consolidating these elements, the research question of this study addresses anxiety related to the shopping experience during the COVID-19 pandemic. The focus of this study explicitly pursues the question of how anxiety experienced at the thought of grocery shopping is influenced by cognition and behaviour during the COVID-19 pandemic. The research's aim is to understand how anxiety alters the perceived retailing experience. It embeds this research question in the empirical context of different national settings (Brazil and Germany) that varied substantially in their response to the crisis. The German government attempted to face the threat and created high awareness among the population whereas the Brazilian government attempted to maintain business as usual and as far as possible (Zulauf et al., 2021). This study quantified the divergent impacts on feelings of anxiety related to grocery shopping. The choice of these two countries is justified by the extremes of the governmental responses and public perceptions.

The scholarly contribution is the identification and contextualization of anxiety and its antecedents in shaping consumers' emotional experiences in the course of grocery shopping. Novelty of this study arises from considering the anxiety in an offline grocery shopping setting in disruptive situations, rather than in regular online retailing. Using the FIMIX procedure, two latent cross-national segments of consumers—concerned and scared consumers—are identified. They show different level of perceived vulnerability and therefore apply different coping strategies.

Pham and Sun (2020, p. 125) state that the "literature on emotion and consumer behaviour has grown considerably in the past 30 years; we know much more about the effects of emotions on consumer behaviour than we do about the phenomenology of consumer emotions and how such emotions arise in the marketplace." Our study is an empirical contribution to theory building that covers negative consumer emotions. From this perspective, the analyses and findings reported in this article are mostly conceptual in nature and largely exploratory. Empirical evidence was obtained through an online survey in Brazil and Germany. We asked the participants to answer questions about their self-identity, their behaviour, their cognition, and their emotions.

The remainder of this paper is structured as follows: first, we present the related research and derive our conceptual model. Then, we outline the methodology and present our results. We close our article with implications for retailers and research, while drawing an insightful conclusion.

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Related research and conceptual model

Most research on emotions focuses on their consequences, but retailers need to understand their antecedents to shape consumers' experiences. Pham and Sun (2020) stress the need to identify and understand the antecedents of feelings and emotions in the marketplace to enable retailers to leverage such insights to shape consumers' emotional experiences.

Disruptive situations—such as tsunamis, earthquakes, terrorism, armed conflicts, and pandemics such as SARS—are reflected in marketers' concerns and discussions (Ontrup et al., 2009). Such disrupting events often lead to risk avoidance or specific preparations, particularly in consumption and buying behaviour (Fortin & Uncles, 2011). Experiencing anxiety and concerns rather than fun, entertainment, and excitement in stationary retail (Roggeveen & Sethuraman, 2020) triggers a reduction in store visits and lessens the time spent in shops.

Grocery shopping is a habitual behaviour that usually involves little mental effort. Some consumers prepare a written or digital shopping list while others do it mentally or even make no preparation (Thomas & Garland, 2004). Putrevu and Ratchford (1997) have formulated an efficiency measurement for the planning and organization of purchases. Preparing a list, pre-sorting coupons, having a memorized list, and reviewing special offers are the individual components of efficiency. Shopping frequency traditionally relates to socio-demographics (Bawa & Ghosh, 1999) and situational factors, such as store environment (Spence et al., 2014; Lucia-Palacios et al., 2021) and the time available for shopping (Herrington & Capella, 1995). Especially in times of uncertainty and anxiety, consumers show risk-averse shopping behaviour (Fortin & Uncles, 2011), which may be reflected in changes in shopping frequency, avoiding quick shopping, and more planning (Zulauf et al., 2021).

A subjective sense of safety is essential for the shopping experience (Puccinelli et al., 2009). Analogous to services that promise relaxation as a value proposition—for instance, spas, yoga studios, and cruises—it is central to establishing a general sense of security (Pham & Sun, 2020). Uncertainty surrounding the COVID-19 pandemic triggered panic buying (Islam et al., 2020; Berube, 2021) and was further enhanced by the social media (Naeem, 2021a), which caused additional worry about limited food supplies, thus increased demand (Black & Glaser-Sedura. 2020; Idris, 2020; Nicola et al., 2020) Notably, behaviour in the situation of panic buying is frequently influenced by social peers. Consumers often feel pressure to stockpile due to the long queues in front of markets and because of buying news in the media and on the internet (Zheng et al., 2020; Zulauf & Wagner, 2021).

Anxiety and personal concerns

Anxiety

Anxiety is a central part of negative emotional experiences. Potentially harmful events or disturbing triggers provoke anxiety that is natural and, notably, essential for the survival of individuals. Gudykunst and Hammer (1988) describe anxiety as an affective element that refers to the fear of negative consequences. Complementarily, McIntyre and Roggenbuck (1998) define anxiety as a subjective feeling directly related to the consequences of being exposed to potential or actual risk. In the context of purchases, anxiety is associated with the fear of unknown consequences (Aboelenien et al., 2021).

Previous studies confirm a relationship between fear and consumer behaviour (Arndt et al., 2008; Herzenstein et al., 2015). The theoretical grounding of these articles is terror management theory, which deals with typical reaction patterns that people develop in dealing with the fear of death and the awareness of their mortality.–Former shopping routines, e.g., asking questions of service

employees, trusting well-known brands, assigning quality to the price, and seeking information from social peers, do not help customers with their anxiety (Mocanu, 2020). Even worse, a coping mechanism using personal social interactions increases the probability of infection. Thus, customers may feel scared in the marketplace. The in-store atmosphere, its perception, and its relevance to store choice (Elmashhara & Soares, 2020) changed with the COVID-19 outbreak.

Personal concerns

Personal concerns in the domain of consumer behaviour and retailing are often discussed in the context of privacy concerns and data protection (Aiolfi et al., 2021; Inman & Nikolova, 2017; Kokolakis, 2017; Okazaki et al., 2020) and in the context of environmentally sustainable considerations (van Riper et al., 2020; Yazdanpanah & Forouzani, 2015). In light of the COVID-19 pandemic, the topic frequently appears in medical publications (Coulthard, 2020). To draw an understanding of the personal concerns in society during the COVID-19 pandemic, a snapshot monitor was developed that addresses knowledge, risk perceptions, preventive behaviours, and public trust in the current coronavirus outbreak in Germany (Betsch, 2020). Based on the results of Zulauf et al. (2021), we argue that people with high personal concerns also feel scared in the aisles while shopping.

Therefore, we propose H1: Personal concerns directly affect shopping-related anxiety.

Shopping frequency

Reducing shopping frequency is a coping strategy to avoid infection with COVID-19 (Zulauf et al., 2021). In times of uncertainty and anxiety, many consumers show risk-averse shopping behaviour (Fortin & Uncles, 2011), which is reflected in changes in shopping frequency, a decline in quick shopping, and increased planning. Notably, initiation, intensification, and changes in consumption habits are often efforts to handle stress (Mathur et al., 2003). Chen et al. (2016) found that a perceived loss of control leads consumers to restore control through product acquisition. In particular, when they lose control over their environment, consumers buy utilitarian products to reinstate their sense of control. The retail therapy approach is comparable to that of handling stress.

Both lines of research show that buyers can calm themselves down through the shopping experience and materialism (Arndt et al., 2008; Rindfleisch et al., 2009). This indicates that a high shopping frequency leads to lower anxiety and fewer personal concerns. Considering also the findings of coping theory (Raghunathan et al., 2006; Zulauf et al., 2021) and escape theory (Darrat et al., 2016), we expect a negative relationship between shopping frequency and anxiety, as well as personal concerns.

Therefore, we propose:
H2: High shopping frequency negatively affects shopping-related anxiety.
H3: High shopping frequency negatively affects personal concerns.

Sustainable orientation

Sustainable considerations for purchasing have become relevant to customers (Jaiswal & Kant, 2018; Johnstone & Tan, 2015) and companies (Yook et al., 2018) in the past years. From the customer perspective, research has revealed the mixed impacts of motives, beliefs, and values on attitudes, purchase intentions, willingness to pay, and the frequency of buying sustainable products (Cheung & To, 2019; Padel & Foster, 2005; Sreen et al., 2018; Wei et al., 2018).

Little research focuses on the relationship between sustainable purchasing and anxiety. In the context of terror management theory, Rahimah et al. (2018) and Rahimah et al. (2020) analyse the relations of consumers' anxiety regarding death and consumers' green purchase attitudes. Their

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results suggest that a consumer's anxiety about death could act as a determinant of green consumption. We, therefore, assume that there is a positive impact of sustainable purchasing on anxiety.

H4: Sustainable purchasing has a positive impact on shopping-related anxiety.

Situational awareness

Across all stages of the customer journey, consumers have cognitive reactions that influence the overall customer experience (Roggeveen & Sethuraman, 2020). A common feature of disrupting situations is that those affected in business and society face an unexpected situation. Organizations and people are not used to, and are generally not prepared for such situations (Bapuji et al., 2020). Those who feel affected by a threat change their behaviour more often than those who take a threat less seriously and do not feel affected (Zulauf et al., 2021). In general, the awareness of and reflections upon risks are important for customers' decision-making. Scholars working on preventive health care behaviour, which also becomes relevant for retailing during the pandemic, frequently address the interactions of cognition and emotion. Several theories of preventive health behaviour posit a central role for emotions (Chapman & Coups, 2006), such as the decision affect theory (Mellers & McGraw, 2001; Mellers et al., 1999), and the affect heuristic (Slovic et al., 2002).

Situational awareness refers to the conscious dynamic reflection on a specific situation by an individual. The dynamic reflection contains logical-conceptual, imaginative, conscious, and unconscious components that enable individuals to develop their mental models of external events (Bedny & Meister, 1999).

Therefore, we propose:
H5: Situational awareness positively affects shopping-related anxiety.
H6: Situational awareness positively affects personal concerns.

Our research design integrates cognitive, behavioural, self-identity, emotions, and disruptive theories. As such, the constructs are based on a rich theoretical foundation and subsequent empirical validation. Briefly, our model suggests that elements of self-control, behaviour, and cognition serve as antecedents of anxiety in disruptive situations (Figure 1). It helps in understanding the diverse coping strategies of consumers and enables retailers to shape consumers' experiences.

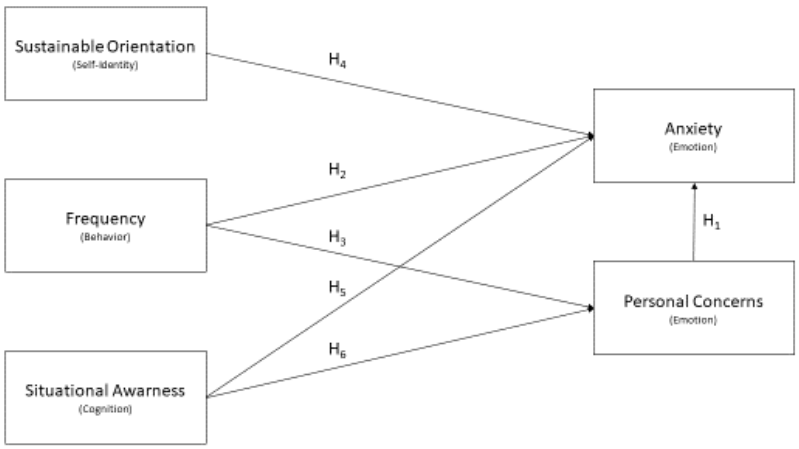


Figure 1. Conceptual model: behaviour, cognition, and self-identity as antecedents of anxiety in disruptive situations

Methodology

Questionnaire development

To obtain field data on anxiety in the aisles and personal concerns during the COVID-19 pandemic, we conducted an online survey. We questioned consumers regarding their anxiety and personal concerns as well as their shopping behaviour and degree of situational awareness. In the survey, we used a five-point Likert scale (anchored with "not at all" to "extreme" and the frequency: max. once a month, fortnightly, once a week, 2-3 per week, every day). The scales with their verbatim items are depicted in Table 1 Subsequent to an expert evaluation by two scholars working in the domain of quantitative marketing research, the questionnaire was translated into German and Portuguese and back-translated by independent German and Brazilian native speakers, respectively, following the procedure of Dolnicar and Grün (2007). The questionnaire was pre-tested with 28 respondents and slightly updated according to the responses and suggestions.

Sampling and data description

For a sound contextualization of the answers of the respondents, it is important to clarify the situation in the considered countries at the moment of data collection. The consumers reacted differently depending on their cultural framing. Brazilians went to less crowded shops (Zulauf et al., 2021), while Germans responded by stocking up on toilet paper.

We chose Germany and Brazil to collect our data from mid-April through the end of June 2020 because the countries dealt differently with the pandemic (Zulauf et al., 2021). In Brazil, the national government, the federal states, and the population did not reach a consensus regarding the management of the pandemic. The federal government, from the beginning, stressed its concern for the economy, suggesting that vertical isolation should be adopted: only people in the risk groups should be isolated from others to prevent infections. The German states, in turn, were more restrictive, establishing broader social isolation measures (Zulauf et al., 2021).

Due to Germany's federal structure, most of the responsibility for containing the coronavirus pandemic laid with the federal states while the financing of activities often laid with the federal government. For this reason, the state governments, together with the federal government, chose a procedure to contain the pandemic. The activities were thus similar in Germany, with only minor deviations in the first weeks of the pandemic.

Contact restrictions were introduced in Germany on 03/22/2020 that were gradually relaxed in mid-April. Contact with other people outside the members of one's household was to be reduced to the necessary minimum. Stays in public places were permitted only alone, with one other person not living in one's household, or with members of one's household. A minimum distance of 1.5 meters had to be maintained when meeting other people. The wearing of a mouth-nose cover in public spaces was introduced in mid-April and continued to the end of the lockdown. During the first lockdown in Germany, the health system was not overtaxed as in many other European countries (e.g., Italy and Spain). The infection rate decreased throughout the duration of our survey (European Centre for Disease Prevention & Control, 2020).

Brazil adopted similar measures regarding distance and public events. Despite the efforts of state governments to enforce social distancing, the president of Brazil, on 03/24/2020, called for the entire country's return to "normality." Notably, Manaus, the largest city in the Amazon region, reached the collapse of the health system on 04/14, lacking intensive care spaces in hospitals for patients with COVID-19. The infection rate increased throughout the duration of our survey (European Centre for Disease Prevention & Control, 2020).

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In our survey, implemented in the ScoSciSurvey platform (https://www.soscisurvey.de), we recruited 228 respondents mainly in Brazil (108 respondents) and Germany (83 respondents) in a purposive snowball sampling procedure (Tongco, 2007). Further respondents came from other countries (18 respondents) or did not answer the question (19 respondents). The data sampling has been stopped, when for both genders all age groups were covered sufficiently by means of allowing for testing for gender and age differences (Valerio et al., 2016). The average age of the respondents was 37 years, with a range of 14–70 years. The data set consisted of 79 male respondents and 121 female respondents; 28 did not answer the questions.

Statistical analysis

We used partial least squares (PLS) modelling to test the model. PLS is appropriate when research is primarily concerned with the variance explained in the dependent variable and when assumptions about multivariate normality and interval-scaled data cannot necessarily be made (Hair Jr. et al., 2017). Furthermore, PLS provides results (path estimates, factor loadings, and path differences) that are comparable to other studies. Following Sarstedt et al. (2009), the systematic application of PLS and finite mixture analysis (FIMIX)-PLS modelling is shown in Figure 2.

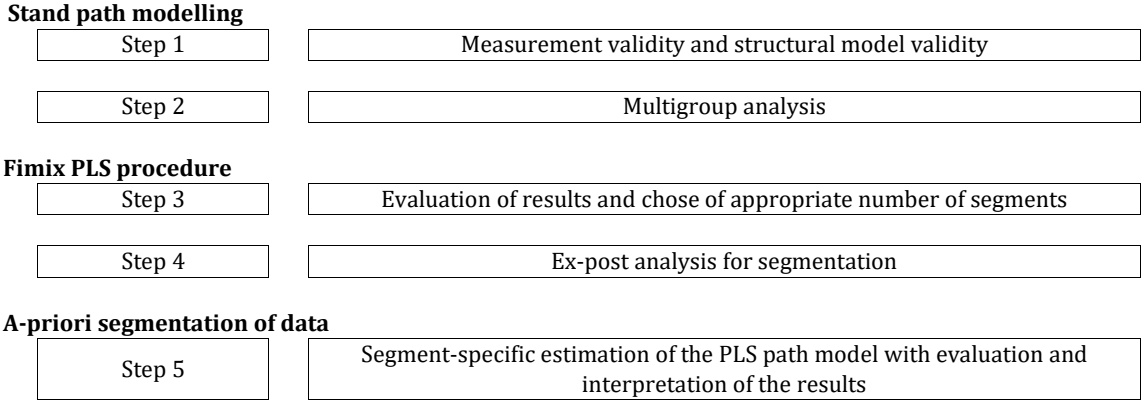


Figure 2. Systematic application of PLS and FIMIX-PLS

In the first step, the reliability and validity of the indicators used to operationalize the underlying constructs were established (measurement validity). Subsequently, the resulting model coefficients were assessed to establish structural validity. In step 2, the multi-group analysis was used to test for differences in the answers of the respondents from Brazil and Germany. In step 3, cross-cultural segments were identified using FIMIX to answer our main questions in step 4. In step 5, we evaluated and interpreted the segment-specific PLS results in a multi-group analysis.

Measurement model validity

All the latent constructs were modelled as reflective indicators. We focused on the reliability of items measured by their loadings and significance level, their internal consistency (Cronbach's α), rho_A, the average variance extracted (AVE), and their composite reliability (CR). As shown in Table 1, the Cronbach's α, rho_A, AVE, and CR values exceeded the thresholds of 0.70, 0.70, 0.50, and 0.80, respectively, for all the constructs (Hair Jr. et al., 2017).

Table 1. Measurement model validity

	Outer Loading	Cronbach's Alpha	rho_A	CR	AVE
Anxiety (own elaboration)		0.929	0.934	0.949	0.824
When I think about shopping for groceries, I get tense.	0.893				
The thought of grocery shopping makes me feel uncomfortable.	0.927				
The thought of grocery shopping fills me with anxiety.	0.918				
I worry a lot when grocery shopping.	0.893				
Personal Concerns (Betsch, 2020)		0.845	0.858	0.895	0.682
I lose someone I love.	0.801				
I get into financial difficulties due to loss of income.	0.882				
There is limited access to food.	0.865				
I lose my job.	0.748				
Frequency (Iyer, Blut, Xiao, and Grewal, 2020)		0.725	0.789	0.876	0.779
How often did you go grocery shopping before the crisis?	0.839				
How often do you go shopping during the crisis?	0.925				
Situational Awareness (Betsch, 2020)		0.819	0.832	0.893	0.736
For me the new Coronavirus is…					
Something I keep thinking about / something I almost never think of (-).	0.792				
Scary / not scary (-).	0.907				
Worrying / not worrying (-).	0.870				
Sustainable Orientation (Dittmar and Bond, 2010)		0.718	0.727	0.876	0.779
I take care of environmental issues.	0.900				
I deal with social issues.	0.865				

(-) reverse coding

As shown in Table 2 the discriminant validity of the constructs was assessed using the recommended heterotrait-monotrait (HTMT) inference ratio method (Henseler et al., 2016). All values undercut the 0.85 level, thereby establishing acceptable levels of the discriminant validity of the constructs.

Table 2. HTMT

	Anxiety	Frequency	Personal Concerns	Situational Awareness	Sustainable Orientation
Anxiety					
Frequency	0.421				
Personal concerns	0.452	0.451			
Situational awareness	0.552	0.224	0.565		
Sustainable orientation	0.114	0.257	0.217	0.060	

Structural model validity

To assess the nomological validity of our model, we examined the overall data set with observations from Brazil and Germany. The fitted consistent model has a Standardised Root Mean Residual (SRMR) of 0.072 and explains an acceptable proportion of variance ($R^2_{Anxiety}$ = 0.358; $R^2_{Personal\ Concerns}$ = 0.306) using the PLS algorithm.

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Results

Anxiety at the thought of grocery shopping in Brazil and Germany – a multi-group analysis

To get closer to the answer to the research question, we analysed differences in group-specific model paths (see Table 3 with its interpretation in Table 5).

Table 3. Multi-group analysis of Brazil and Germany

	Path Coefficients-differences (Brazil - German)	**p-Value original 1-tailed (Brazil - German)**	**p-Value new (Brazil - German)**
Frequency → anxiety	-0.317	0.983	0.034
Frequency → personal concerns	0.092	0.283	0.567
Personal concerns → anxiety	-0.235	0.926	0.147
Situational awareness → anxiety	0.023	0.443	0.887
Situational awareness → personal concerns	0.175	0.160	0.321
Sustainable orientation → anxiety	0.370	0.004	0.008

To test for the measurement invariances of composite models (MICOM), the procedure suggested by Henseler et al., (2016) was applied, and the criteria were met. Notably, only for the relationships of frequency to anxiety and sustainable orientation to anxiety do the results show significant differences between Brazil and Germany.

Two types of coping with anxiety – a finite mixture analysis

A FIMIX of the sample suggested two segments in the data. Segment one consists of 150 cases and segment two of 78 cases. We tested for differences in gender, age, country, size of household, number of children, and whether the people knew someone already infected as well as the items of the constructs. The people in segment two reported significantly more often the fact of not knowing anyone already infected with COVID-19 (see Table 5). They showed a greater tendency to be scared by the COVID-19 virus, and, for them, it was something they continually considered.

We also tested for changes in shopping frequency. In general, we see a tendency to reduce shopping frequency. Of the participants, 52.19% reduced their shopping frequency, 42.11% did not change their frequency, and just 5.7% increased it (Table 4). Therefore, we conclude that, if consumers changed their shopping frequency during the COVID-19 pandemic, they tended to reduce their frequency.

Table 4. Shopping frequency before and during the COVID-19 pandemic

		Shopping frequency during the pandemic					**Total**
		Monthly	**Fortnightly**	**Weekly**	**2–3 times per week**	**Daily**	
Shopping frequency before the pandemic	Monthly	14	1	3	3	0	21
	Fortnightly	18	15	1	0	0	34
	Weekly	11	19	33	5	0	68
	2-3 times per week	5	10	53	33	0	101
	Daily	0	1	1	1	1	4
Total		48	46	91	42	1	228

Notably, there is no significant difference in this behaviour between segments one and two. The segment specific PLS models are visualized in Figure 3.

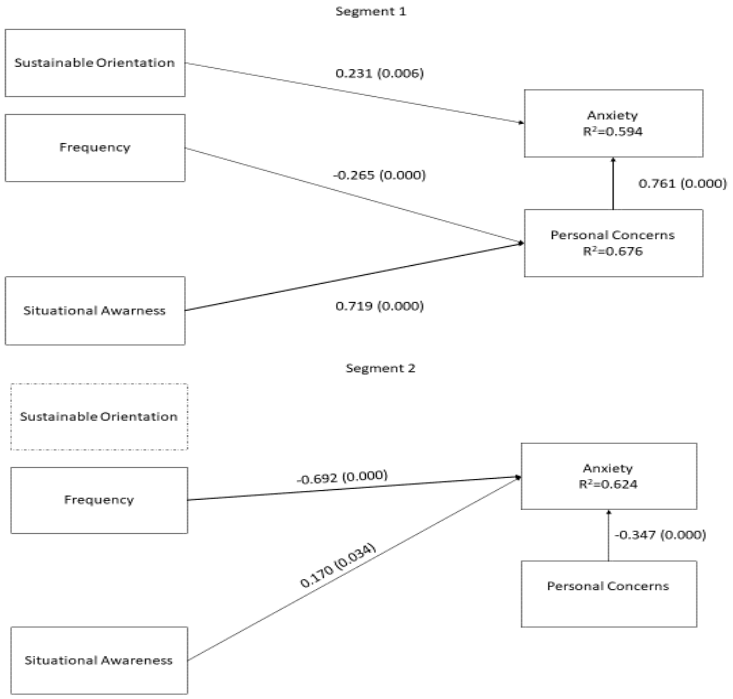


Figure 3. Segment specific PLS model

As evidence from Figure 3, the two segments differ by the antecedents explaining the consumers' anxiety. Table 5 provides an overview of the segment-specific antecedents of anxiety.

Table 5. Segment specific antecedents of anxiety

	Segment 1	Segment 2	Hypothesis
Personal Concerns	There is a strong positive influence of personal concerns on anxiety.	Personal concerns have a negative influence on anxiety; it seems that the people have other (more dominating) problems. The greater their personal concerns are, the less the thought of grocery shopping leads to related anxiety.	H1: Personal concerns directly affect shopping-related anxiety (supported).
Situational Awareness	Situational awareness has a substantial influence on personal concerns, but not on anxiety. This indicates that personal concerns are determined by the pandemic situation. However, the anxiety related to grocery shopping is not directly determined by situational awareness.	Customers in this segment do not exhibit an impact of situational awareness on personal concerns; this indicates that their concerns are rooted in other causes rather than the pandemic. Situational awareness has an impact on anxiety, which means that, although other topics drive personal concerns, the people are scared and feel anxiety due to the pandemic in the concrete situation of grocery shopping.	H5: Situational awareness positively affects shopping-related anxiety (supported for segment 2). H6: Situational awareness positively affects personal concerns (supported for segment 1).

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Frequency	A coping strategy as a response to disruptive situations is a reduction of grocery shopping frequency, which shows a risk-averse behaviour. People who reduce their shopping frequency have greater personal concerns.	Interestingly, the frequency is negatively related to anxiety, which means that the more often people go shopping, the less anxiety they feel in doing so.	H2: High shopping frequency negatively affects shopping-related anxiety (supported for segment 2). H3: High shopping frequency negatively affects personal concerns (supported for segment 1).
Sustainable Purchasing	In line with the terror management theory, those making sustainable purchases show greater anxiety in this segment.	For this segment, sustainable purchasing behaviour does not influence anxiety.	H4: Sustainable purchasing has a positive impact on shopping-related anxiety (supported for segment 1).

Segment 1 - The concerned

Segment 1 is characterized by a substantial influence of personal concerns on anxiety. According to the measurement model, these respondents fear losing someone beloved or their job; they fear financial difficulties and limited access to food due to the pandemic. This fear leads to a significant and substantial impact of situational awareness on personal concerns. A coping strategy for those people is a reduction in grocery shopping frequency. Consumers who reduce their shopping frequency have greater personal concerns, and they feel less anxiety when they reduce the frequency. These people tend to show risk-averse behaviour in extreme situations, meeting the explanation of Fortin and Uncles (2011). In line with results derived from the terror management theory (Rahimah et al., 2018), those making sustainable purchases show greater anxiety in this segment. The more general personal concerns are linked to the pandemic among this type. Situational awareness has a strong influence on personal concerns. Those who value sustainability (Self-identity: I take care of environmental issues; Self-identity: I deal with social issues) also show greater anxiety when shopping.

Segment 2 – The scared

This type of customer is more scared by the Coronavirus and, for them it is something they constantly consider. This is not surprising as they significantly more often know a person who has already been infected with the virus.

This type is characterized by a negative correlation of frequency to anxiety when anticipating shopping. This means that the more often the people go shopping, the less anxiety they feel in doing so. According to Arndt et al. (2008), Rindfleisch et al. (2009), and Zulauf et al. (2021), this holds for people who feel prepared by shopping in the disrupting situation: those who go shopping to increase their well-being. Also, habituation effects may explain this finding. People were getting used to the safety measurements and the new situation and, therefore, showed lower anxiety.

Personal concerns were not affected by the COVID-19 pandemic. This can indicate either a safe, relatively carefree life or a worried life (in the sense of people having other problems). This thesis is also supported by the negative influence of personal concerns on anxiety when shopping. If personal concerns are substantial, shopping-related anxiety is not important. By contrast, if people had low personal concerns, they had a higher shopping-related anxiety, which is linked to COVID-19 through situational awareness. The idea of sustainability does not play a role in this type.

Managerial implications

Beyond the changes in product category choice, in-store experiences during a health crisis situation are characterized on both sides (sales staff and consumers) by anxiety and concerns rather than by the experiential components of entertainment and excitement (Roggeveen & Sethuraman, 2020, Zulauf et al., 2021). Therefore, to encourage consumers during the COVID-19 pandemic to purchase in local stores rather than online, it is important to identify the mechanisms working in the background.

Store managers can take advantage of this study's results. First, they will benefit from actively shaping consumers' emotional experiences through adapting communication and store design. In a concrete disruptive situation, such as the COVID-19 pandemic, retailers took measures to mitigate the negative effects, enabling them to substantially control the risk, and its perception through safeguards. For consumers, the need for coping strategies to calm down their anxiety (e.g., shopping in less frequented stores) can then become obsolete. For this reason, shaping consumers' emotional experiences is of great importance as a control mechanism for retailers. Second, judging from the negative influence from shopping frequency on anxiety or personal concerns, the direct implication is that people need to go shopping more often in order to reduce their anxiety or personal concerns. Habituation and familiarization effects support this interpretation. From a store managers perspective, two mechanisms for increasing the customers visiting frequency can be distinguished. Restricting the maximum units of rare goods per customer (e.g., max. three packages of toilet paper or yeast in the beginning of the pandemic) directly increases the shopping frequency. However, not all customers will recognize this as an advantage and contribution in calming down their fears. Therefore, the second option of increasing the customers' frequency by offering complementing services (test-facilities, vaccination offers, or free masks) are more suited.

Going beyond the naïve interpretation, the results of our study indicate that people have different coping strategies in such disruptive situations, which is reflected in different antecedents of anxiety. While both segments reduce shopping frequency, people in segment one show greater personal concerns related to the COVID-19 pandemic. The anxiety of people in segment two is driven only by situational awareness and frequency. The strong negative relation from frequency to anxiety shows that those who reduce frequency feel more anxious when they think about shopping, but, at the same time, those who increase shopping frequency calm down by doing so. Therefore, store managers are well advised to invite concerned customers for an on-site experience of the shopping situation. Doing so, consumers will learn about safety measures and about a new defined atmosphere between the shelves (Zulauf et al., 2021), combating their concerns of out of stock situations.

Interestingly, there were no significant differences with regards to country and age in the segments. This means that the different target groups are not obvious. This, of course, makes it more difficult for retailers to address them. Nevertheless, from the retailers' perspective, these two different types of consumers should also be treated differently. In line with Zulauf et al. (2021), anxious customers in segment one will feel better with obvious safety measures, so additional services, such as shopping services, booking time slots for "lonely" shopping, and contactless shopping, could be offered. Hybrid shopping formats (e.g., order in the web and pick up in the store) supports store managers to avoid losing their customers to online retailers completely.

Those who feel less anxious with frequent shopping (retail therapy and materialism) can be more easily reached with, e.g., special offers or an exemplary shopping list that gives them the feeling of being well prepared. Store managers should train their employees to leverage customers' positive emotional experience. This might result in additional sales as well. In line with Chen et al. (2016), securing purchase opportunities is reassuring in times of uncertainty.

The findings of this study can also be transferred to other purchase situations (e.g., DIY markets), having in mind that the conditions are similar there as well. At the time of the study, other stores

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were partially closed, so they did not lend themselves to being the subject of the study. Online retailers can also use the results in a reverse way to highlight the attractiveness of their services in comparison to stationary retailing in order to generate and exploit their competitive advantage.

Limitations

This study is subject of a limitation arising from the data. The resulting data from survey responses is cross-sectional. However, such disruptive situations are hardly investigated in a longitudinal research design, which means they cannot provide evidence of temporal sequence. Furthermore, this study is limited to provide evidence of the consumer perception of the retailing service. Customers and service employees interactively create the service experience. Therefore, the perception of the service employees, their fears and anxiety need to be challenged as well.

Scholarly implications and directions for future research

Our study contributes to theory building by explaining behaviour in disruptive situations. Novelty arises from explaining antecedents with its contradiction of shopping frequency and situational awareness on personal concerns and anxiety. For a detailed understanding, further research should consider the different consumer types and their risk perceptions, especially to help explain why some current buying behaviours conflict with theories and predictions. In this line, focusing on a specific emotion helps to explain concrete reactions. This is essential to the ability of shaping consumers' emotions.

An interesting research question arising from the results presented herein is the impact of anxiety on post-purchase dissonances. Customers who reduced their frequency as a reaction to a disruptive situation might not perceive a post-purchase dissonance because common antecedents are not effective in disruptive situations. Those who feel prepared for the difficult situation by shopping frequently will probably also feel less post-purchase dissonance at first.

Furthermore, a promising question for further research is the relevance of social interactions to emotional self-regulation. As the customers reduced their social interactions substantially, it must be clarified to what extent digital solutions can compensate for that, and whether customers will become increasingly eager to re-establish their habits of emotional self-regulation through on-site social interactions. Future research should clarify the importance of the social aspects of shopping by comparing contactless and service-employee driven shopping stores. Most significantly, future research should address to which extent the results obtained in the retailing context and the model can be generalized to other service industries such as tourism, or beauty services.

Conclusion

In disruptive situations, when society faces new risks and previous coping strategies to deal with them do not apply, retailers need to adjust their design of shaping consumers' emotional experiences. To do so, they need to understand the antecedents explaining the consumers' anxiety.

Purpose of this study was to reveal what consumers are concerned about and fear when they go for grocery shopping during a health care pandemic crisis. Applying the methodology of SEM, the conceptual model was validated by fitting an SEM with the FIMIX-PLS algorithm to 228 responses to a quantitative survey in Brazil and Germany. The main findings are two types of customers: (i) the concerned because of their situational awareness and (ii) those with other (more pressing) problems.

This study identifies antecedents of anxiety at the thought of grocery shopping. Thus, our study contributes to consumer behaviour theory as well as social disruption theory by quantifying the

impact of the antecedents of anxiety related on grocery shopping in crises. Novelty arises from explaining anxiety in brick-and mortar grocery shopping settings in disruptive situations, rather than in regular online retailing.

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