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The Coronavirus Shopping Anxiety Scale: initial validation and development

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Abstract

Purpose – The purpose of this study is to develop a scale to measure coronavirus shopping anxiety. Numerous studies have developed a scale for measuring coronavirus anxiety and fear, notably absent is a concerted effort to review and assess the impact of coronavirus on the shopping anxiety of consumers. This scale fulfills this gap.

Design/methodology/approach – The steps taken for checking the various psychometrics of the scale include item generation, followed by exploratory factor analysis (EFA) through SPSS and confirmatory factor analysis through AMOS. The data were collected from over 208 respondents.

Findings – This study resulted in the development of a nine-item scale with robust psychometric properties. The scale resulted in highlighting two factors related to anxiety: in-store shopping anxiety and online shopping anxiety.

Research limitations/implications – The scale developed has the desirable reliable and valid properties that could be used by aspiring researchers.

Practical implications – The scale developed highlighted that the restrictions in shopping impact the mental health and psychology of consumers. The scale resulted in analyzing the factors related to shopping anxiety, which could give top management a perspective and vision to look into the minds of the consumer's shopping anxiety behaviors.

Social implications – Companies, firms, health professionals and marketers could use this scale to investigate the various shopping anxiety perceptions among consumers in society.

Originality/value – This research fills the gap by developing a first nine-item scale based on the qualitative research and quantitative assessment for measuring shopping anxiety caused due to the pandemic.

Keywords Anxiety, Scale development, Coronavirus, Pandemic, Coronavirus shopping anxiety, Shopping anxiety

Paper type Research paper

Introduction

The pandemic has extraordinarily impacted the consumer's psychology and shopping behavior. The literature on changes in the consumer's shopping behavior during the pandemic has been widely discussed in the literature. Recent studies have explored and highlighted the emergence of online shopping (Artanti *et al.*, 2021; Fihartini *et al.*, 2021; Koch *et al.*, 2020; Moon *et al.*, 2021; Pham *et al.*, 2020; Sanaullah *et al.*, 2020), the emergence of trust on social media (Artanti *et al.*, 2021; Taha *et al.*, 2021) and changes in the purchasing and shopping habits of consumers (Ogundijo *et al.*, 2021; Lehberger *et al.*, 2021; Palmer *et al.*, 2021) caused due to the pandemic. However, with this growth of new changes in the shopping behavior arise new challenges and problems compared to the traditional way of shopping.

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These new changes in shopping behavior are impacting the mental health and psychology of the consumer. The world is still surrounded by the threat of new variants, and the challenge aroused today is of the consumer's shopping anxiety caused due to this pandemic. Anxiety arises in such situations where a consumer is uncertain about potentially harmful outcomes of a future event, lacks self-efficacy in altering the course of events and, thus, perceives a high threat (Chiou and Wan, 2006). Hence, anxiety is impacting the consumer's shopping behavior, and researchers must have a reliable measurement of anxiety related to a consumer's shopping behavior.

There are numerous studies, conceptual frameworks and scales well documented in the literature for measuring the coronavirus anxiety level of an individual and analyzing its impact on the individual mental health and psychology. The current situation of coronavirus pandemic across the world and the new variants surging has increased the importance of studying the shopping anxiety among the consumers and public at large. The restrictions in shopping impact the mental health and psychology of consumers. No published research has investigated, in a comprehensive manner, the anxiety level related to consumer shopping. This research aims to fulfill this gap by developing a scale related to coronavirus shopping anxiety. So, the objective of this study is to develop and purify a scale to measure coronavirus shopping anxiety. This research contributes by developing a scale for measuring consumer coronavirus shopping anxiety through a series of steps of scale refinement and purification process. This research will contribute by depicting how the companies should design more innovative ways for protecting the consumers from the virus, and the ways could be depicted by the items of the scale constructed in this study. This will also contribute to understanding why consumers experience and feel anxiety during shopping after experiencing a pandemic. This research will further enlighten marketers and researchers to understand consumers' mental stress and complexity in an unexpected situation. This has prepared the marketers to handle the consumer anxiety related to online and in-person shopping and equipped with the contingency plan for satisfying and delighting their customers. This research will also highlight that people at all levels in the organization have to work together to implement their marketing strategy in an unprecedented situation. The paper reports findings from a two-stage study that (1) began with exploratory intent, guided by the research question: "what was the impact of the pandemic on consumer's shopping?" which led to the development and construction of new items of the Coronavirus Shopping Anxiety Scale. (2) The psychometrics of the scale was tested by collecting data from a nationwide sample of consumers that supported the exploratory study derived findings. The research resulted in developing a two-factor scale for measuring consumer shopping anxiety. The scale highlights the inclusion of both in-store and online shopping anxiety among the consumers impacted by the pandemic.

Literature review

Consumer anxiety has been studied in a variety of contexts since its inception. Anxiety is perhaps most commonly used to denote a complex emotional reaction or state that varies in intensity and fluctuates over time as a function of the intrapsychic or situational stresses that impinge upon an individual (Spielberger, 1966). Additionally, anxiety is considered an unpleasant emotional state, characterized by tension, apprehension and worry, and occurs in response as a threat to a self-preservation goal (Arkin and Ruck, 2007). The term "anxiety" is also used to refer to individual differences in anxiety-proneness as a personality trait (Locander and Hermann, 1979). The evidence further indicates that the conditions that lead to dissonance arousal may also lead to an emotional state of anxiety (Oshikawa, 1972) as anxiety is considered to be an outcome of temporary circumstances (Hawkins, 1972), which subsequently impacts the consumer purchase behavior. Anxiety-related to COVID-19

characterizes stress, worry, intolerance of uncertainty and higher levels of threat perception (Micalizzi *et al.*, 2021; Mertens *et al.*, 2020). Research highlights that symptoms such as anxiety, depression, fear, stress and sleep problems are seen more frequently during the COVID-19 pandemic (Torales *et al.*, 2020). Research further states that this lifestyle transformation and threat of being infected causes depression and anxiety disorders (Chen *et al.*, 2020). Authors further add that anxiety related to COVID-19 influences consumers' shopping behavior. Shopping anxiety is related to a negative emotion that is lower in pleasure and has a negative relationship with satisfaction (Jones *et al.*, 2020). Shopping anxiety is further linked to the stress caused by customers' complexity and information overload and increases their time to navigate the service process (Gong and Choi, 2016). The service interface led to customers' frustration, anxiety and stress during the pandemic, irrespective of whether a service is high or low (Shell and Buell, 2019). A consumer encounters shopping anxiety when a consumer has situational stress, filled with apprehension, worry and uneasiness that results in buying or impulses to buy that are senseless and irresistible as the consumer has limited options. A consumer today is surrounded by these emotions, and the buying behavior of consumers at this stage is marked with hopelessness, grief, risk, distress and fear that consequently results in shopping anxiety.

Emotions play a key role in consumer behavior, and mixed emotions mediate the impact of certain product-related, market-related and personal factors on consumers' intention to purchase (Penz and Hogg, 2011). In the framework of the component process model, emotion is defined as an episode of interrelated, synchronized changes in the states of all or most of the five organismic subsystems in response to the evaluation of an external or internal stimulus event as relevant to major concerns of the organism (Scherer, 1987, 2001). At the heart of emotion, mood and any other emotionally charged event are states experienced as simply feeling good or bad, energized or enervated (Russell, 2003). Emotions are also considered to impact explaining consumers' behavior significantly. Research has identified three types of emotional stimuli affecting consumers: emotions produced by the item being purchased, feelings related to various aspects of the evaluation process and emotions stemming from factors unrelated to the purchase itself (Pelegrín-Borondo *et al.*, 2015). Another study highlights three components that have long-standing status as modalities of emotion – expression, bodily symptoms and arousal, and subjective experience (Scherer, 2005). Anxiety is considered a basic emotion and measured as a dimension of pleasure and arousal (Russell, 1980). The author elaborates that people are not typically aware of all the pieces of information that they rely on in analyzing their own emotional state. Anxiety is a primary emotion of expression that is subjective and impacts the consumer's behavior during the pandemic.

A consumer today is surrounded by an emotionally charged alien situation of threat and fear, that is causing anxiety while evaluating the stimulus around of pandemic. Thus, anxiety is also considered a form of emotion that is highly impacted by the situation around.

There are many scales constructed in the literature for measuring coronavirus anxiety. A five-item Coronavirus Anxiety Scale (CAS) was developed for measuring the mental health concerns of people impacted by the coronavirus pandemic (Lee, 2020). This CAS developed is a screening tool designed to identify quickly and accurately those suffering from dysfunctional anxiety of the coronavirus. The various anxiety symptoms reported in the scale were dizziness, sleep disturbances, tonic immobility, appetite loss and abdominal distress. This version of the five-item CAS developed by Lee (2020) to measure the mental health of an individual impacted by pandemic was validated and adapted across different countries, like India (Singh, 2021), Bangladesh (Ahmed *et al.*, 2020), Korea (Choi *et al.*, 2020), Cuba (Broche-Pérez *et al.*, 2020), Colombia (Vinaccia *et al.*, 2021), Brazil (Padovan-Neto *et al.*, 2021) Turkey (Evren *et al.*, 2020),

Peru (Franco-Jimenez, 2020), Mexico (Mora-Maganã *et al.*, 2020) and Arbia (Sayed *et al.*, 2020). Further, an 11-item Coronavirus Pandemic Anxiety Scale (CPAS-11) was developed to measure the symptoms of anxiety related to the COVID-19 pandemic to help identify individuals who might need mental health services (Bernardo *et al.*, 2020). Authors developed the Fear of COVID-19 Scale (FCV-19S) to identify the fear associated among the individuals related to COVID-19 (Ahorsu *et al.*, 2020).

Various studies have also used a combination of Lee (2020) five-item CAS and Ahorsu *et al.* (2020) FCV-19S for measuring the anxiety level of the individuals caused due to coronavirus. The coronavirus anxiety level among the Turkish population was analyzed with a combination of CAS and FCV-19S scales (Evren *et al.*, 2020). This combination was also validated for the Portuguese population and correlations with issues related to travel, tourism and hospitality were established (Magano *et al.*, 2021). This combination was also administered in order to assess the levels of anxiety and fear associated with COVID-19 among the Italian population (Orrù *et al.*, 2021).

However, there is a greater need to develop a CAS related to the consumer's shopping anxiety behavior and pattern. No published research has investigated, in a comprehensive manner, the anxiety level related to consumer shopping. This study aims to construct an anxiety scale based on the consumer's shopping behavior impacted by the coronavirus. So, the objective of this study is to develop and purify a scale to measure coronavirus shopping anxiety.

Methods

Many authors (Churchill, 1979; Forsythe *et al.*, 2006; El-Deeb and Hamed, 2019) state that a multi-item scale should be evaluated for accuracy and applicability, and emphasis should be on developing measures, which have desirable, reliable and valid properties. The procedure involved by Churchill (1979) suggests eight steps for scale development and validation process. The steps include – specify domain of construct (Step 1), generate a sample of items (Step 2), collect data (Step 3), purify measure (Step 4), collect data (Step 5), assess reliability (Steps 6), assess validity (Step 7) and develop norms (Step 8). According to the author, the list of some calculations that should be performed in developing better measures of the construct includes experience survey, insight stimulating examples, critical incidents, focus groups, coefficient alpha, factor analysis, reliability, validity, average, and other statistics summarizing the distribution of score. An 11-step process for the scale development and validation process is suggested by Forsythe *et al.* (2006). The steps include – conceptualization of constructs (Step 1), qualitative inquiry (Step 2), item generation (Step 3), scale purification (Step 4 and 5), scale stability (Step 6), scale validity (Steps 7–10) and practical utility (Step 11). A three-step process for the scale refinement as suggested by El-Deeb and Hamed (2019) includes item generation, factor analysis and finally the confirmatory analysis for the purification stage. The procedure followed in this study for scale refinement and development is based on the well-accepted paradigm followed by the authors stated above.

The first subsection explains how the various items of the scale are generated, and second, the data collection process and the sample characteristics are described, followed by scale refinement and purification process.

Generate sample of items for the scale used in the study

After an extensive review of literature on coronavirus anxiety, the items were generated from the related articles and existing scales. In this study, the *shopping anxiety scale* is measured through items adapted from works of various researchers (Spielberger *et al.*, 1971;

Menasco and Hawkins, 1978; Antony *et al.*, 1998; Chandu *et al.*, 2020). Anxiety is considered to consist of two principal components: state and trait anxiety (Spielberger *et al.*, 1971). State anxiety (a-state) is considered a transitory emotional state due to specific situations, and trait anxiety (a-trait) is conceptualized as a predisposition for which a wide range of situations are perceived as threatening, physically or psychologically. For this research, the items from state anxiety were adapted and edited as state anxiety is temporary, induced by situational circumstances. State anxiety is also examined as a measure of the magnitude of post-purchase dissonance (Menasco and Hawkins, 1978). The items were adapted and edited from this scale as the pandemic has impacted the shopping behavior of the consumers, and the post-purchase dissonance was found to have a predicted effect on a validated measure of state anxiety. The Depression Anxiety Stress Scales (DASS) and the 21-item short form of these measures (DASS-21) were examined for the nonclinical volunteers and patients with panic disorder (Anthony *et al.*, 1998). This study replicates previous findings indicating that the DASS distinguishes well between features of depression, physical arousal and psychological tension and agitation and extends these observations to the DASS-21. The items for this study were extracted from the DASS anxiety and DASS-21 anxiety scales. The CAS was constructed and demonstrated a two-component structure identified as "fear of social interaction;" "illness anxiety" (Chandu *et al.*, 2020). The items for this study were adapted from the illness anxiety component as they reflected the present study of coronavirus shopping anxiety.

Thus, a total of 20 items were generated at this stage. After reading various related articles, the content validity of the items was assessed by two focus groups. These items were administered to two focus groups comprising of three marketing faculty and an undergraduate class for the review. The items were modified, dropped and added based on the analysis of the focus groups, which highlighted a great impact of a pandemic on the shopping anxiety of consumers. The groups helped in screening and identifying the duplicate and irrelevant items. Based on the feedback of the focus groups, nine items were dropped, and three items were edited that appeared to fit the present construct in the light of the pandemic. In this study, an 11-item scale was generated for the shopping anxiety encountered by consumers during the pandemic. A five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used to measure the items on the shopping anxiety scale. As a result, an 11-item scale is generated for measuring the Coronavirus Shopping Anxiety Scale.

Data collection and sample characteristics

The questionnaire was prepared in English on Qualtrics. It was a structured questionnaire based on a five-point Likert scale for evaluating the 11 items of the Coronavirus Shopping Anxiety Scale used in the study. A five-point Likert scale is used because it is easy and simple to understand. The respondents specified their level of agreement based on five points: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree and (5) Strongly agree. As the data collection was done online, an ordered self-explanatory scale was used in the research. The data were collected using Amazon's Mechanical Turk panel among the US population. The USA was one of the most hit countries by COVID-19. The respondents of this country could truly highlight the shopping anxiety caused by the pandemic. The questionnaire was sent to the entire panel. The participants in the Amazon's Mechanical Turk panel were self-registered adults above 18 years of age, and the participation was voluntary. The US participants had volunteered and registered into Amazon's Mechanical Turk panel.

A total of 208 MTurk participants took the survey. Participants were given a brief overview of the study and were asked for their consent. Once participants agreed to the terms, they were then given instructions regarding the survey. Data were collected in July 2021.

A total of 208 completed questionnaires were used for the data analysis. A profile of sample can be seen in Table 1.

Scale refinement and purification

The scale refinement and purification included series of steps as suggested by many authors (Malhotra, 2005; Churchill, 1979; Gerbing and Anderson,1988; Hair *et al.*, 1998; Garg *et al.*, 2014; Liu and Keh, 2015; Peter, 1981; Netemeyer *et al.*, 1991; Forsythe *et al.*, 2006; El- Deeb and Hamed, 2019; Sachdeva, 2015). The authors state that a multi-item scale should be evaluated for accuracy and applicability and emphasis should be on developing measures, which have desirable, reliable and valid properties. At this stage to purify the measure and scale

	Frequency	%
Gender		
Male	110	52.9
Female	95	45.7
Prefer not to say	3	1.4
Total	*208*	*100.0*
Age (In years)		
18–24	30	14.4
25–34	93	44.7
35–44	42	20.2
45–54	23	11.1
55–64	14	6.7
65–74	4	1.9
75–84	1	0.5
85 - older	1	0.5
Total	*208*	*100.0*
Education		
Less than high school degree	2	1.0
High school graduate (high school diploma or equivalent including GED)	9	4.3
Some college but no degree	24	11.5
Associate degree in college (2 year)	18	8.7
Bachelor's degree in college (4 year)	109	52.4
Master's degree	39	18.8
Doctoral degree	4	1.9
Professional degree	3	1.4
Total	*208*	*100.0*
Household income		
Less than $10,000	16	7.7
$10,000–$19,999	11	5.3
$20,000–$29,999	29	13.9
$30,000–$39,999	21	10.1
$40,000–$49,999	17	8.2
$50,000–$59,999	25	12.0
$60,000–$69,999	13	6.3
$70,000–$79,999	16	7.7
$80,000–$89,999	27	13.0
$90,000–$99,999	19	9.1
$100,000–$109,999	13	6.3
$1500,000 or more	1	0.5
Total	*208*	*100.0*

Table 1.
Profile of the total sample for the study

development, various analytical tools like Cronbach's alpha, item to total correlation and factor analysis were used. The steps included detail item, exploratory factor analysis (EFA) and finally the confirmatory factor analysis (CFA) for analyzing the initial assessment of the reliability, unidimensionality and convergent and discriminant validity. The fit of the model was estimated using AMOS 26.0. and was assessed through the indices of CMIN, comparative fit index (CFI), Tucker–Lewis index (TLI), normed fit index (NFI), Akaike information criterion (AIC), parsimony normed fit index (PNFI) and root mean square error of approximation (RMSEA). The procedure followed in this study for scale refinement and development is based on the well-accepted paradigm followed by the various authors stated above.

In line with the various researchers stated above multiple criteria were used for checking the various psychometrics of the scale. For Cronbach's alpha, a value of less than 0.6 indicated unsatisfactory internal consistency reliability, and all correlations above 0.6 were considered desirable. For exploratory factor analysis (EFA), Kaiser–Meyer–Olkin (KMO) value was determined which is a measure of sampling adequacy and is an index used to examine the appropriateness of factor analysis. High values between 0.5 and 1.0 were considered as indicative for the factor analysis to be an appropriate analysis technique. Items with low factor loadings of 0.60 or low communalities of 0.30 were considered items for deletion. The maximum acceptable p value for Bartlett's test was taken as 0.05. Based on the above stated criteria, the psychometrics of the scale used in this study was examined.

Results

Table 2 titled "Cronbach alpha and item to total correlation for scale on coronavirus shopping anxiety" contains the results obtained on testing the psychometrics of the scales on all the 11 items comprising the Coronavirus Shopping Anxiety Scale. As seen in Table 2, the results obtained in the present study are very satisfactory, Cronbach alpha is 0.925 and all the item to total correlations are significant and range between 0.651 and 0.843.

Table 3 titled "Results of exploratory factor analysis (EFA) and confirmatory factor loadings (CFA) for scale on coronavirus shopping anxiety" contains various measures of EFA and confirmatory factor loadings for all the items of the scale.

The EFA is conducted using principal component analysis as an extraction method and varimax as the rotation method. EFA for the Coronavirus Shopping Anxiety Scale revealed two factors (a and b). The factor "a" is named "Coronavirus in-store shopping anxiety" and contains six items. The factor "b" is named as "Coronavirus online shopping anxiety" and contains five items. Coronavirus in-store shopping anxiety factors include items related to the anxiety of getting a virus from in stores, anxiety related to the stores not following the hygiene protocols, the anxiety of catching the virus by touching any items in the public place and mail packets, the anxiety of loved ones getting the virus and anxiety resulting into buying the products in bulk. Coronavirus online shopping anxiety factor includes items related to the online anxiety regarding the durability and quality of the products, wasting money on online shopping, anxiety related to buying expensive products online, being overwhelmed by the number of products available online and anxiety related to the authenticity of the content present on the social media.

As depicted in Table 3, all the results are well within acceptable limits. KMO value is 0.920, Bartlett test of sphericity is significant and the percentage of variance explained is 68.41%. Majority of the factor loadings for all the items are high except for SA6 stating " I always bought in bulk while shopping because of the anxiety of the shortage of products in the market" from factor a (Coronavirus in-store shopping anxiety) and SA11 stating " I had a fear about the authenticity of the content present on the social media of a product which impacted my shopping" from factor b (Coronavirus online shopping anxiety), which had factor

Item code	Scale items	Cronbach alpha – if item is deleted	Item to total co-relation
Cronbach alpha = 0.925			
SA1	I felt a great deal of anxiety of going to shops, because I fear I might catch virus	0.915	0.802
SA2	I had a great deal of anxiety that the hygiene protocols recommended by the CDC was not followed by the public and stores at large	0.920	0.712
SA3	I felt a great deal of anxiety that if I touched something in a public space, I would catch the virus	0.914	0.825
SA4	I felt a great deal of anxiety that by touching any packet in the mail, I would catch virus	0.913	0.843
SA5	I had a great deal of anxiety that if my loved ones catch the virus, I will not be able to protect them	0.923	0.651
SA6	I always bought in bulk while shopping because of the anxiety of the shortage of products in the market	0.918	0.750
SA7	I was stressed during online shopping for the durability and quality of the product	0.918	0.763
SA8	I was overwhelmed with the number of brands, substitutes available in online shopping	0.917	0.777
SA9	I had a great fear while buying an expensive product online	0.918	0.759
SA10	I had an intense fear of wasting my money while shopping online	0.921	0.702
SA11	I had a fear about the authenticity of the content present on the social media of a product which impacted my shopping	0.920	0.719

Table 2.
Cronbach alpha and item to total correlation results for scale on coronavirus shopping anxiety

loadings less than 0.60, as this was considered the minimum threshold for the deletion. All the communalities are above the minimum acceptable level. Thus, two items were deleted and an 11-item scale was reduced to a 9-item scale at this stage.

After conducting EFA, CFA was conducted to further purify the items of the scale. Table 3 highlights the CFA factor loadings. All the CFA loadings are high than 0.6 and are well within the acceptable limits and no deletion is required at this stage. Further, the nine-item confirmatory model of coronavirus shopping anxiety was estimated using AMOS 26.0. The fit of the model was assessed through the following indices: goodness of fit index (GFI), adjusted goodness of fit (AGFI), CFI, NFI and RMSEA. The minimum cut-off criteria for deletion of items was based on the research done by various authors (Byrne, 2001; Hair *et al.*, 1998; Forsythe *et al.*, 2006; Guarino *et al.*, 2001). Specific cutoffs were set for CFI (>0.90) and RMSEA (<0.06). The confirmatory factor analysis indicated that the nine-item scale had a good model fit: x2 = 108.72, df = 43; NFI = 0.946; CFI = 0.966 and RMSEA = 0.06. No further modification was needed for this scale. The detail results of the CFA are shown in Table 4.

Validity and reliability tests

The final step for the scale development and purification is by checking the reliability and validity of the various constructs. Two types of criterion related validity were assessed for the perceived risk and benefits scale, namely convergent validity and discriminant validity. Construct validity shows whether the scale at hand measures the construct under study. It is composed of convergent and discriminant validity. A measure is said to possess convergent validity if independent measures of the same construct are highly correlated in other words this validity means that the scale at hand correlates positively with other scales measuring the same construct. Discriminant validity shows that the scale for a specific construct does

Item code	Scale items	EFA analysis results Eigenvalues >1 KMO = 0.920 Sig. Of Barlett's test of sphericity = 0.000 Total % of variance explained = 68.41% Communalities	EFA factor loadings a	b	Confirmatory factor analysis CFA factor loadings a	b
SA1	I felt a great deal of anxiety of going to shops, because I fear I might catch virus	0.566	0.857		0.87	
SA2	I had a great deal of anxiety that the hygiene protocols recommended by the CDC was not followed by the public at large	0.669	0.800		0.71	
SA3	I felt a great deal of anxiety that if I touched something in a public space, I would catch the virus	0.729	0.778		0.88	
SA4	I felt a great deal of anxiety that by touching any packet in the mail, I would catch virus	0.763	0.764		0.90	
SA5	I had a great deal of anxiety that if my loved ones catch the virus, I will not be able to protect them	0.713	0.717		0.82	
SA6	I always bought in bulk while shopping because of the anxiety of the shortage of products in the market	0.809	0.574*		–	
SA7	I was stressed during online shopping for the durability and quality of the product	0.757		0.838		0.85
SA8	I was overwhelmed with the number of brands, substitutes available in online shopping	0.767		0.794		0.74
SA9	I had a great fear while buying an expensive product online	0.527		0.794		0.79
SA10	I had an intense fear of wasting my money while shopping online	0.678		0.792		0.83
SA11	I had a fear about the authenticity of the content present on the social media of a product which impacted my shopping	0.548		0.575*		-

Note(s): *items dropped from subsequent analysis

Table 3. Results of exploratory factor analysis (EFA) and confirmatory factor analysis loadings (CFAs) for scale on coronavirus shopping anxiety

Psychometric testing	Value
CMIN	2.59
Comparative fit index (CFI)	0.966
Tucker–Lewis index (TLI)	0.953
Normed fit index (NFI)	0.946
Akaike information criterion (AIC)	123.334
Parsimony normed fit index (PNFI)	0.683
Root mean square error of approximation (RMSEA)	0.06
Average variance extracted (AVE)	0.638
Square root of AVE	0.798
Composite reliability (CR)	0.940

Table 4. Confirmatory factor analysis results for scale on coronavirus shopping anxiety

not correlate with other constructs (Malhotra, 2005); in other words, this validity requires that a measure does not correlate too highly with measures from which it is supposed to differ. The average variance extracted (AVE) is used to test construct validity. Values for AVE that are higher than 0.5 are required to show a good convergent validity and show trust in the results. The square root of AVE is used to test for discriminant validity (Fornell and Larcker, 1981). Table 4 shows that all the results of the scale are within the expectable limit and justifies the validity as the AVE extracted for the scale is 0.638, and the square root of AVE is 0.798.

The internal-consistency reliability of the survey is calculated using Cronbach alpha as well as composite reliability (CR) scores. Cronbach alpha is reported to be sensitive to increasing items per latent variable. Therefore, CR is used to support the reliability scores obtained from Cronbach alpha (Raykov, 1997). Table 4 shows that the CR result of the scale is 0.940, which is high and highlights a high internal-consistency reliability.

Discussion and implications

A large number of researchers have studied and developed a scale for the anxiety and fear related to the coronavirus pandemic. Numerous studies and conceptual frameworks well documented in the literature have also studied the change in the shopping behavior of a consumer during a pandemic. Notably absent is a concerted effort to review and assess the impact of coronavirus shopping anxiety on consumers. This research offers important theoretical and practical implications for the researchers, companies and marketing professionals. Anxiety is considered an unpleasant emotional state, characterized by tension, apprehension and worry, and occurs in response as a threat to a self-preservation goal (Arkin and Ruck, 2007), which can impact the mental health and well-being of a consumer. Shopping motives have been identified as important determinants of decision-making (Forsythe *et al.*, 2006). Decision-making is a conscious and deliberate process (Sachdeva, 2020), and the richness and diversity of information available today, regarding coronavirus, pose a great challenge for consumers. This research integrated the elements from the previous traditional anxiety construct and decision-making frameworks in light of the pandemic. This resulted in the development of a new nine-item scale for studying the coronavirus shopping anxiety behavior of consumers.

The items of the scale developed in this research portray a wide variety of reasons to explain the anxiety in the shopping behaviors of the consumers impacted by the coronavirus, which subsequently affect the mental state of the consumers. The scale resulted in highlighting two factors related to anxiety: in-store shopping anxiety and online shopping anxiety. In-store shopping anxiety highlighted the fears of catching the virus while shopping in person. Individuals are generally motivated to minimize their experiences of arousal generated via such tensions, inconsistencies or mixed emotions (Penz and Hogg, 2011), and this resulted in shopping online during the pandemic. The focus group also highlighted the anxiety related to online shopping. The youth of the focus group narrated examples of the older generation being hesitant about online shopping in their family. The pandemic reflected a sense of insecurity, inconvenience and lack of confidence among online shoppers. These attributes are reflected in the scale development. While online shopping, anxiety was caused due to the number of alternatives available online that triggered the levels of difficulty for decision-making among the consumers as consumers were forced to go for online shopping because of the lockdown and protecting themselves from catching the virus. Technology anxiety also has an impact on consumers' skepticism while shopping, and consumers' experiences of feeling stimulated or overwhelmed by websites when shopping online (Fiore *et al.*, 2005) also added to the anxiety. The comparison between the products and brands available online increased the magnitude of consumer online shopping anxiety as they were

not used to shopping online and were forced to do so during the pandemic. Subsequently, consumers experience greater difficulty in making a purchase decision. This development of the scale highlights the inclusion of both in-store and online shopping anxiety among the consumers impacted by the pandemic.

This research explored the association between coronavirus and shopping behavior. The analysis indicated a two-factor scale for coronavirus shopping anxiety. For the factor – in-store shopping, the anxiety was primarily related to catching the virus from in-store. In contrast, the anxiety related to online shopping was primarily associated with confusion and lack of confidence in buying a product online. Second, these two factors revealed by this research can provide valuable inputs for the marketers to design their marketing strategies, which results in a practical value proposition for the company. Subsequently, managers have an essential role in educating the consumers about the safety protocols implemented in their stores to protect the consumers from a pandemic. Social media should also be leveraged as a medium for developing confidence among the consumers about the protection measures adopted by the companies and should share factually correct information. The scale items would benefit the managers for assessing the COVID-19 fear, not only as an outcome measure but also for understanding the consumers psychologically related to shopping. This ability might assist managers and decision-makers in screening those who are more prone to fear during the COVID-19 pandemic and foster different strategies while targeting the relevant groups. There is limited research on the impact of the pandemic on the shopping anxiety of consumers. This research will help the business to design their strategies in a way to gain the confidence of the consumers by highlighting the measures that they should adopt for protecting the consumers against the virus while shopping in-store and online. Businesses should also focus and highlight the technological advancements and innovative strategies incorporated in the stores for protecting the consumers from the virus while shopping. Effective strategies developed in this direction will result in the reduction of shopping anxiety which will subsequently enhance customer satisfaction, retention, loyalty and repeat purchases. Finally, this research gave businesses, companies and firms a perspective and vision to look into the minds of the consumer's shopping anxiety behaviors. Companies, firms and marketers could use this scale to investigate the various shopping anxiety perceptions among consumers in society. In addition, firms and health professionals could motivate and gain the trust in society by sharing the success stories of the shopping experience of other consumers impacted by the coronavirus.

Conclusion

The present study resulted in the development of a scale for measuring coronavirus shopping anxiety through a series of steps of scale refinement and purification process. The scale development is supported by qualitative research and quantitative analysis. The results from the samples related to shopping anxiety are supported in terms of nomological validity, construct validity and discriminant validity. The internal consistency reliability was assessed through Cronbach alpha as well as CR scores. Further, item analysis, EFA and CFA supported the development of the scale. In conclusion, this study resulted in the development of a nine-item scale with robust psychometric properties that could be used by aspiring researchers.

The scale demonstrated two factors for the shopping anxiety of the consumers. The scale developed captures a wide variety of reasons why consumers have coronavirus shopping anxiety. In this regard, two issues are worth noting. First, items related to anxiety caused by visiting stores, touching the items or doubt about the hygiene protocols followed, load on one factor "in-store shopping anxiety". Moreover, items related to trust in quality, durability, authenticity, risk about buying expensive products online load on another factor "online-shopping anxiety".

The results of the current study provide further support for the validity and reliability of the consumer's shopping anxiety. This scale demonstrated robust properties among the US population. Although past analysis of the CAS pointed to a unidimensional model (Ahorsu *et al.*, 2020; Lee, 2020; Broche-Pérez *et al.*, 2020; Evren *et al.*, 2020) only these research findings provide support for the two-factor structure model for the shopping anxiety, in particular, separating coronavirus in-store shopping anxiety from coronavirus online-shopping anxiety. Together, these two factors explain the coronavirus shopping anxiety among the consumers during this time.

Finally, the anxiety related to shopping has resulted in the emergence of many technology-dependent businesses. The consumer after experiencing pandemic has realized that modern life is depending upon science and technology. The emergence of many businesses, like online car selling and buying, home delivery of products and work from home has given consumers a sense of ease, comfort, convenience and satisfaction. To a great extent, the pandemic has made consumers dependent upon technology, and it reflects in the everyday shopping behavior of a consumer.

Limitations

Some limitations exist in this study. The study sample is relatively small and restricted to one country. Further, the concentration of the sample is among the age group of 25–44 years. This accounts for 60% of the total sample and acts as a limitation of the study. A more equal age distribution sample should be considered for the scale development process. Cross-country evaluation of the Coronavirus Shopping Anxiety Scale with relatively a larger sample will validate the scale more. Further, there is not any specific product category for which the shopping anxiety is measured. Future researchers could ascertain the shopping anxiety caused due to the coronavirus on essential and non-essential product categories. Additionally, the respondents of the study are well educated and conversant with Internet as the data were collected through an online survey. A more diverse group could be studied for future research with less educated people and with those who are beyond the scope of the Internet. As the usage of the five-point Likert scale is too small to be treated quantitatively (the possible dispersion is small and therefore creates problems). Future researchers should plan to use a seven-point or a ten-point Likert scale to avoid such discrepancies. Finally, the researcher suggests replicating this research in different services sector with different analytical techniques, like structural equation modeling.

References

Ahmed, O., Faisal, R.A., Sharker, T., Lee, S.A. and Jobe, M.C. (2020), "Adaptation of the Bangla version of the COVID-19 anxiety scale", *International Journal of Mental Health and Addiction*. doi: 10.1007/s11469-020-00357-2.

Ahorsu, D.K., Lin, C.-Y., Imani, V., Safari, M., Griffiths, M.D. and Pakpour, A.H. (2020), "The fear of COVID-19 scale: development and initial validation", *International Journal of Mental Health and Addiction*. doi: 10.1007/s11469-020-00270-8.

Antony, M.M., Bieling, P.J., Cox, B.J., Enns, M.W. and Swinson, R.P. (1998), "Psychometric properties of the 42-item and 21-item versions of the depression anxiety stress scales in clinical groups and a community sample", *Psychological Assessment*, Vol. 10 No. 2, pp. 176-181.

Arkin, R., M. and Ruck, L. (2007), "Anxiety", in Baumeister, Roy F. and Vohs, Kathleen D. (Eds), *Encyclopedia of Social Psychology*, Sage, Thousand Oaks, CA, pp. 42-43.

Artanti, Y., Widyastuti, W., Tiarawati, M. and Frianto, A. (2021), "Online knowledge sharing behavior through social media as a driver for online shopping behavior during the COVID-19 pandemic", *Business Excellence and Management*, Vol. 11 No. 2, pp. 19-35.

Bernardo, A.B.I., Mendoza, N.B., Simon, P.D., Cunanan, A.L.P., Dizon, J.I.W.T., Tarroja, M.C.H., Balajadia-Alcala, A.M. and Saplala, J.E.G. (2020), "Coronavirus pandemic anxiety scale (CPAS-11): development and initial validation", *Current Psychology*. doi: 10.1007/s12144-020-01193-2.

Broche-Pérez, Y., Fernández-Castillo, E., Fernández-Fleites, Z., Jiménez-Puig, E., Vizcaíno-Escobar, A., Ferrer-Lozano, D., Martínez-Rodríguez, L. and Martín-González, R. (2020), "Adaptation of the Cuban version of the coronavirus anxiety scale", *Death Studies*, pp. 1-5, doi: 10.1080/07481187.2020.1855610.

Byrne, B.M. (2001), *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*, Lawrence Erlbaum Associates, Mahwah. NJ.

Chandu, V.C., Pachava, S., Vadapalli, V. and Marella, Y. (2020), "Development and initial validation of the COVID-19 anxiety scale", *Indian Journal of Public Health*, [serial online] 2020 [cited 2021 Jan 23];64, Suppl S2:201-4, available at: https://www.ijph.in/text.asp?2020/64/6/201/285612.

Chen, F., Zheng, D., Liu, J., Gong, Y., Guan, Z. and Lou, D. (2020), "Depression and anxiety among adolescents during COVID-19: a cross-sectional study", *Brain Behavior Immunity*, Vol. 88, pp. 36-38, doi: 10.1016/j.bbi.2020.05.061.

Chiou, W.-B. and Wan, C.-S. (2006), "The effects of anxiety and sadness on travelers' decisions and perceived risk: mood management as an active process of affect-adjustment", in Margaret Craig, L., Teresa, D. and Gary, G. (Eds), *AP - Asia-Pacific Advances in Consumer Research*, Association for Consumer Research, Sydney, Australia, Vol. 7, pp. 385-392.

Choi, E., Lee, J. and Lee, S.A. (2020), "Validation of the Korean version of the obsession with COVID-19 scale and the coronavirus anxiety scale", *Death Studies*. doi: 10.1080/07481187.2020.1833383.

Churchill, G.A. (1979), "A paradigm for developing better measures of marketing constructs", *Journal of Marketing Research*, Vol. 16, pp. 64-73.

El-Deeb, S. and Hamed, S. (2019), "Refining scales on risks and motives of online buying", *E-service Journal*, Vol. 11 No. 1, pp. 31-55, doi: 10.2979/eservicej.11.1.02.

Evren, C., Evren, B., Dalbudak, E., Topcu, M. and Kutlu, N. (2020), "Measuring anxiety related to COVID-19: a Turkish validation study of the coronavirus anxiety scale", *Death Studies*, Vol. 46 No. 5, pp. 1052-1058, doi: 10.1080/07481187.2020.1774969.

Fihartini, Y., Helmi, A., Hassan, M. and Oesman, Y.M. (2021), "Perceived health risk, online retail ethics, and consumer behavior within online shopping during the COVID-19 pandemic", *Innovative Marketing*, Vol. 17 No. 3, pp. 17-29, doi: 10.21511/im.17(3).2021.02.

Fiore, A.M., Jin, H.-J. and Kim, J. (2005), "For fun and profit: hedonic value from image interactivity and responses toward an online store", *Psychology and Marketing*, Vol. 22 No. 8, pp. 669-694.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.

Forsythe, S., Liu, C., Shannon, D. and Gardner, D.L. (2006), "Development of a scale to measure the perceived benefits and risks of online shopping", *Journal of Interactive Marketing*, Vol. 20 No. 2, pp. 55-75.

Franco-Jimenez, R.A. (2020), "Translation and psychometrical properties of coronavirus anxiety scale (CAS) in Peruvian young people and adults", *Interacciones Revista de Avances En Psicología*, Vol. 6 No. 2, e 159, doi: 10.24016/2020.v6n2.159.

Garg, R., Rahman, Z. and Qureshi, M.N. (2014), "Measuring customer experience in banks: scale development and validation", *Journal of Modelling in Management*, Vol. 9 No. 1, pp. 87-117.

Gerbing, D.W. and Anderson, J.C. (1988), "An updated paradigm for scale development incorporating unidimensionality and its assessment", *Journal of Marketing Research*, Vol. 25, pp. 186-192.

Gong, T. and Choi, J.N. (2016), "Effects of task complexity on creative customer behavior", *European Journal of Marketing*, Vol. 50 Nos 5/6, pp. 1003-1022.

Guarino, A.J., Shannon, D.M. and Ross, M. (2001), "Making sense of fit indices in structural equation modeling (SEM)", *Journal of Research in Education*, Vol. 11 No. 1, pp. 130-134.

Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis*, 5th ed., Prentice-Hall, Englewood Cliffs, NJ.

Hawkins, D.I. (1972), "Reported cognitive dissonance and anxiety: some additional findings", *Journal of Marketing*, Vol. 36, pp. 63-66.

Jones, C.L.E., Jennifer, L.S., Stephanie, M.N. and Michael, J.B. (2020), "Panic attack: how illegitimate invasions of privacy cause consumer anxiety and dissatisfaction", *Journal of Public Policy and Marketing*, Vol. 39 No. 3, pp. 334-335.

Koch, J., Frommeyer, B. and Schewe, G. (2020), "Online shopping motives during the COVID-19 pandemic—lessons from the Crisis", *Sustainability*, Vol. 12, pp. 1-20, doi: 10.3390/su122410247.

Lee, S.A. (2020), "Coronavirus anxiety scale: a brief mental health screener for COVID-19 related anxiety", *Death Studies*, Vol. 44 No. 7, pp. 393-401, doi: 10.1080/07481187.2020.1748481.

Lehberger, M., Kleih, A. and Sparke, K. (2021), "Panic buying in times of coronavirus (COVID-19): extending the theory of planned behavior to understand the stockpiling of nonperishable food in Germany", *Appetite*, Vol. 161, pp. 1-8, doi: 10.1016/j.appet.2021.105118.

Liu, M.W. and Keh, H.T. (2015), "Consumer delight and outrage: scale development and validation", *Journal of Service Theory and Practice*, Vol. 25 No. 6, pp. 680-699.

Locander, W.B. and Hermann, P.W. (1979), "The effect of self-confidence and anxiety on information seeking in consumer risk reduction", *Journal of Marketing Research*, Vol. XVI, pp. 268-274.

Magano, J., Vidal, D.G., Sousa, H.F.P.S., Dinis, M.A.P. and Leite, A. (2021), "Validation and psychometric properties of the Portuguese version of the coronavirus anxiety scale (CAS) and fear of COVID-19 scale (FCV-19S) and associations with travel, tourism and hospitality", *International Journal of Environmental Research Public Health*, Vol. 18 No. 427, pp. 1-12, doi: 10.3390/ijerph18020427.

Malhotra, K.N. (2005), *Measurement and Scaling: Non - Comparative Scaling Techniques. Marketing Research: An Applied Orientation*, 4th ed., Pearson Education, New York, NY.

Menasco, M.B. and Hawkins, D.I. (1978), "A field test of the relationship between cognitive dissonance and state anxiety", *Journal of Marketing Research*, Vol. 15, pp. 650-655.

Mertens, G., Gerritsen, L., Duijndam, S., Salemink, E. and Engelhard, I.M. (2020), "Fear of the coronavirus (COVID-19): predictors in an online study conducted in March 2020", *Journal of Anxiety Disorders*, Vol. 74, p. 102258, doi: 10.1016/j.janxdis.2020.102258.

Micalizzi, L., Zambrotta, N.S. and Bernstein, M.H. (2021), "Stockpiling in the time of COVID-19", *British Journal of Health Psychology*, Vol. 26, pp. 535-543, doi: 10.1111/bjhp.12480.

Moon, J., Choe, Y. and Song, H. (2021), "Determinants of consumers' online/offline shopping behaviours during the COVID-19 pandemic", *International Journal of Environmental Research and Public Health*, Vol. 18 No. 1593, pp. 1-15, doi: 10.3390/ijerph18041593.

Mora-Magana, I., Lee, S.A., Maldonado-Castellanos, I., ~ Jimenez-Puig, C., Mendez-Venegas, J., Maya-del-Moral, A., Rosas-Munive, M.D., Mathis, A.A. and Jobe, M.C. (2020), "Coronaphobia among healthcare professionals in Mexico: a psychometric analysis", *Death Studies*, pp. 1-10, doi: 10.1080/07481187.2020.1808762.

Netemeyer, R.G., Durvasula, S. and Lichtenstein, D.R. (1991), "A cross-national assessment of the reliability and validity", *Journal of Marketing Research*, Vol. 28 No. 3, pp. 320-335.

Ogundijo, D.A., Tas, A.A. and Onarinde, B.A. (2021), "Exploring the impact of COVID-19 pandemic on eating and purchasing behaviours of people living in England", *Nutrients*, Vol. 13, pp. 1-14, doi: 10.3390/nu13051499.

Orrù, G., Bertelloni, D., Diolaiuti, F., Conversano, C., Ciacchini, R. and Gemignani, A. (2021), "A psychometric examination of the coronavirus anxiety scale and the fear of coronavirus disease

2019 scale in the Italian population", *Frontiers in Psychology*, Vol. 12, pp. 1-8, doi: 10.3389/fpsyg.2021.669384.

Oshikawa, S. (1972), "The measurement of cognitive dissonance: some experimental findings", *Journal of Marketing*, Vol. 36, pp. 64-67.

Padovan-Neto, F.E., Lee, S.A., Guimaraes, R.P., Godoy, L.D., Costa, H.B., Zerbini, F.L.S. and Fukusima, S.S. (2021), "Brazilian adaptation of the coronavirus anxiety scale: a psychometric investigation of a measure of coronaphobia", *OMEGA—Journal of Death and Dying*, pp. 1-19, doi: 10.1177/0030222821991325.

Palmer, F., Jung, S.E., Shahan, M.K. and Ellis, A. (2021), "P66 understanding how the COVID-19 pandemic influenced older adults' grocery shopping habits", *Journal of Nutrition Education and Behavior*, Vol. 53 No. 7, pp. S54-S55, doi: 10.1016/j.jneb.2021.04.125.

Pelegrín-Borondo, J., Juaneda-Ayensa, E., González-Menorca, L. and González-Menorca, C. (2015), "Dimensions and basic emotions: a complementary approach to the emotions produced to tourists by the hotel", *Journal of Vacation Marketing*, Vol. 21 No. 4, pp. 351-365.

Penz, E. and Hogg, M. (2011), "The role of mixed emotions in consumer behavior", *European Journal of Marketing*, Vol. 45 Nos 1/2, pp. 104-132.

Peter, J.P. (1981), "Construct validity: a review of basic issues and marketing practices", *Journal of Marketing Research*, Vol. 18, pp. 133-145.

Pham, V.K., Thi, T.H.D. and Le, T.H.H. (2020), "A study on the COVID-19 awareness affecting the consumer perceived benefits of online shopping in Vietnam", *Cogent Business and Management*, Vol. 7 No. 1, pp. 1-16, doi: 10.1080/23311975.2020.1846882.

Raykov, T. (1997), "Estimation of composite reliability for congeneric measures", *Applied Psychological Measurement*, Vol. 21 No. 2, pp. 173-184.

Russell, J. (1980), "A circumplex model of affect", *Journal of Personality and Social Psychology*, Vol. 39, pp. 1161-1178.

Russell, J. (2003), "Core affect and the psychological construction of emotion", *Psychological Review*, Vol. 110 No. 1, pp. 145-172.

Sachdeva, R. (2015), "Scale to assess the efficacy of consumer decision making", *The IUP Journal of Marketing Management*, Vol. 14 No. 2, pp. 7-25.

Sachdeva, R. (2020), "An empirical investigation of factors influencing young Indian consumer decision making", *Journal of Asia-Pacific Business*, Vol. 21 No. 3, pp. 1-20.

Sanaullah, M., Faheem Ul, H.D., Ali, M.G., Basit, S.A. and Majeed, D.A. (2020), "The impact of attitude and consumer buying behavior towards online purchasing in Pakistan after COVID-19 (A Case Study of SBBU, Campus Naushahro Feroze)", *Ilkogretim Online*, Vol. 20 No. 5, pp. 3855-3860, doi: 10.17051/ilkonline.2021.05.422.

Sayed, S.E., Shokry, D. and Gomaa, S. (2020), "Coronavirus anxiety scale: content validity and reliability of Arabic version", *The Egyptian Journal of Hospital Medicine*, Vol. 81 No. 4, pp. 1775-1779.

Scherer, K.R. (1987), "Toward a dynamic theory of emotion: the component process model of affective states", *Geneva Studies in Emotion and Communication*, Vol. 1, pp. 1-98, available at: http://www.unige.ch/fapse/emotion/genstudies/genstudies.html.

Scherer, K.R. (2001), "Appraisal considered as a process of multi-level sequential checking", in Scherer, K.R., Schorr, A. and Johnstone, T. (Eds), *Appraisal Processes in Emotion: Theory, Methods, Research*, Oxford University Press, New York and Oxford, pp. 92-120.

Scherer, K.R. (2005), "What are emotions? And how can they be measured?", *Social Science Information*, Vol. 44 No. 4, pp. 695-729.

Shell, M.A. and Buell, R.W. (2019), "Why anxious customers prefer human customer service. Harvard business review digital articles, April 15", available at: https://hbr.org/2019/04/why-anxiouscustomers-prefer-human-customer-service (accessed 1 February 2022).

Singh, K.D. (2021), "Coronavirus anxiety scale: a validation study in an Indian population", *Medical Journal of Dr. D.Y. Patil Vidyapeeth*, Vol. 14 No. 3, pp. 303-307, doi: 10.4103/mjdrdypu.mjdrdypu_504_20.

Spielberger, C.D. (1966), "Theory and research on anxiety", in Spielberger, C.D. (Ed.), *Anxiety and Behavior*, Academic Press, New York, pp. 3-20.

Spielberger, C.D., Reigosa, F.G., Urrutia, A.M., Natalicio, L.F.S. and Natalicio, D.S. (1971), "Development of the Spanish edition of the state-trait anxiety inventory", *Interamerican Journal of Psychology*, Vol. 5 Nos 3-4, pp. 145-158.

Taha, V.A., PencarellI, T., Veronika Škerháková, V., Fedorko, R. and Košíková, M. (2021), "The use of social media and its impact on shopping behavior", *Sustainability*, Vol. 13, pp. 1-19, doi: 10.3390/su13041710.

Torales, J., O'Higgins, M., Castaldelli-Maia, J.M. and Ventriglio, A. (2020), "The outbreak of COVID-19 coronavirus and its impact on global mental health", *International Journal of Social Psychiatry*, Vol. 66 No. 4, pp. 317-320, doi: 10.1177/0020764020915212.

Vinaccia, S., Bahamón, M.J., Trejos-Herrera, A.M., Lee, S.A., Quiceno, J.M., Gómez, C.A., DoLugar, S.V. and Pelaez, E.C. (2021), "Validating the coronavirus anxiety scale in a Colombian sample", *Death Studies*, pp. 1-10, doi: 10.1080/07481187.2021.1944401.

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