Food retailing in the world of Covid-19: Consumers attitudes and response to the store health precautions.

2020

Faculty of Business, Economics and Law

A thesis submitted to Auckland University of Technology
in fulfilment of the requirements for the degree of Master of Business

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Abstract

Background: The current pandemic situation is getting worse day by day. Businesses are worried about the uncertain business environment as countries are forced to enact lockdown conditions to overcome the global pandemic. This pandemic situation motivates research into how to manage this condition in retail businesses. The present study investigates the effect of store health precautions, and how they impact shoppers' intentions.

Purpose: Health precautions taken by a retail store is, at face value, an important factor contributing to potential customers' feelings of comfort and the minimisation of perceived risk and, consequently, affecting decision making and behaviour. The perception of risk and the psychological comfort of shoppers are two crucial elements in purchase likelihood and loyalty intentions of shoppers. However, the precise relationship between is still disputed. Therefore, this thesis aims to examine the association between store health precautions and purchase likelihood, or loyalty, and also to examine the major factors that mediate the relationship.

Design/methodology/approach: The research utilises an online survey, Amazon Mechanical Turk (MTurk) and Qualtrics. A total of 124 participants participated in the survey. The study uses an experimental design to collect data from the respondents. Data is mostly collected on Likert-type 7-point scales. Independent t-tests and regression analysis was conducted using SPSS version 26 software.

Findings: The findings of the research show that health precautions of the store positively impact shoppers' purchase likelihood and their loyalty. In addition, the study also finds that shoppers' psychological comfort and perceived risk play a sequential mediation role between the relationship of store health precautions and loyalty. Similarly, the results also show the same partial sequential mediation of psychological comfort and perceived risk between the relationship of store health precautions and purchase likelihood. Shoppers' psychological comfort mediates the relationship between store health precautions and shoppers' purchase likelihood.

Research implications: Health precautions in the store will impact on shoppers purchase likelihood, and this relationship is mediated by shoppers' psychological comfort feeling and perceived risk. Also, health precautions impact on store loyalty and this relationship is also mediated by perceived risk and psychological comfort feeling. Store health precautions will influence shoppers to buy from the food store, and, in return, shoppers will become more loyal to the store. Thus, food store owners should provide masks for sales agents, install glass screens on sales counters and maintain social distancing in the store to positively change the buying intentions of the shoppers.

Research limitations: Research only focused on retail food stores in the USA. Future research should focus on other sectors and in different geographical locations to get a better picture of shoppers' purchase likelihood and loyalty.

Originality/value: The empirical findings of the research added new theoretical understanding of consumer behaviour such as the implementation of health precautions in the store has a sequential impact of perceived risk and psychological comfort to shoppers' purchase likelihood and store loyalty.

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Attestation of Authorship

I now declare that this submission is my work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

22.09.2020

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Signature   Date

Acknowledgements

In the beginning, my wholehearted gratitude and thanks to my supervisors, Dr Megan Phillips and Professor Roger Marshall, of the Marketing Department, the Faculty of Business, Economics and Law, at AUT University. Dr Megan Phillips guided me from the beginning with patience, flexibility, genuine care and faith in me during the thesis completion process. Dr Roger Marshall mostly gave me mental support, study guidance and encouraged me to complete my thesis on time. Both my supervisors painstakingly proofread my thesis work and guided me through this journey. I admire both of them for pushing me the extra mile.

I want to give my heartfelt thanks to my only daughter Zian, who taught me the meaning of life and is always cheerful when the dad is around her. My thanks also go to my mom, dad and sisters, who called me a lot and inspired me to complete my work on time.

I would like to thank the Business, Economics and Law Faculty for funding my online survey. I also thank my lecturers of the coursework papers, who gave me the basics skills to make writing a thesis possible.

My thanks also go to AUT library system, both physical and online. Without the online library, I couldn't complete this thesis. From time to time they also conducted many training programmes, which helped me a lot to complete this thesis.

Last but not least, my thanks also go to the AUT writing group who acted as a motivator to finish this thesis. We met on several occasions and I received special tips on writing and other ideas from them.

Ethics approval of the thesis is granted by the Auckland University of Technology Ethics Committee (AUTEC) on 23 June 2020(AUTEC reference number is 20/140).

Chapter 1: Introduction

1.1 Research problem

COVID 19 has sparked a global pandemic, which has almost immobilised the World and forced countries to work together in pursuit of solutions – more than 23 million people infected with coronavirus and 803,245 people have died from the pandemic (*COVID-19 Coronavirus pandemic*, 2020) and this number is expanding alarmingly at the time of writing. However, the medical and social struggle is still in the early stages of the fight to control the novel coronavirus. Lockdown, self-isolation and social distancing seem to be the best joint solution of this pandemic situation at this time and for the foreseeable future, rather than a vaccination. Thousands of flights have already been cancelled to stop the spread of COVID 19, and the global economy has forecasted negative growth similar to that of the great depression of the '30s.

Currently, then, consumers are avoiding crowded places to stay safe. Research conducted prior to Covid-19 suggests that the physical retail environment has a significant impact on shopper comfort perception (Ainsworth & Foster, 2017). This means that if potential shoppers feel that the store environment is healthy, then they will feel sufficiently comfortable to enter the shop. However, one crucial element – the COVID 19 health precautions – are not yet present in the retail store literature. Most retailers are taking precautions to safeguard against the spread of COVID 19; nonetheless, the effects of the health precautions on shoppers' attitudes and behaviours have never be empirically tested before in a pandemic environment.

1.2 Research rational

COVID-19 is forcing retailers to change their food store environment strategy to invite shoppers to purchase from the store. In return, shoppers will probably be more loyal if they perceive a healthier environment in the food store. Existing research suggests that comfortable shoppers stay longer in the store and purchase more (Yun & Good, 2007). However, in the current COVID-19 scenario, it is a challenging task for retailers to encourage shoppers to visit their stores but if no health precautions are obvious in the store this might persuade shoppers to avoid the visit.

Daniels (2000) described comfort as an at ease position. On the other hand, in the context of shopping, comfort is defined as the psychological state of a shopper, regarding shoppers' concern about whether product or service standards are being met (Spake, Beatty, Brockman, & Crutchfield, 2003). The current research is limited to comfort in a shopping environment only, so Spake et al. (2003)'s definition applies.

Consumers' perceived risk can be defined as the perception of doubt about the unfavourable impact of purchasing a product or services (Dowling & Staelin, 1994). The effect of consumer's perceived risk can be purchase intention which defined as the probability of customer's buying decision to purchase a product (Dodds et al., 1991; Grewal et al., 1998). Another impact of consumer's perceived risk can be revisiting intentions which defined a customer's willingness to come back to the same environment or settings and to refer the place to other customers.

1.3 Research question

This research aims to address the issue of whether health precautions taken by the store has an impact on shoppers in the food store context. More formally, the following is the main research question:

"How do COVID 19 health precautions impact on shoppers' behavioural intentions?"

1.4 Overview of thesis

To satisfy the question mentioned above, this work first reviews the relevant literature. Second, hypotheses are developed from both theory and logic. Following this, the research methods used are described before a report of the results is presented. Finally, future research is suggested, drawing on the findings, limitations and implications of the research.

To address the research question, a web-based experimental study is made, using data generated through Amazon Mechanical Turk and Qualtrics. The data is analysed using SPSS version 26. The thesis consists of six chapters as illustrated in Figure 1:

Chapter 1: Introduction:

Global pandemic COVID 19 is creating uncertainty in the business. How do store health precautions impact on shoppers' behavioural intentions?

Chapter 2: A literature review

Store health precautions play an essential role in shoppers' psychological comfort and perceived risk to influence shoppers to purchase and to bolster loyalty.

Chapter 3: Research methodology

An online survey is conducted, and the data generated analysed statistically using means difference tests, factor analysis, and Hayes PROCESS regression mediation analysis.

Chapter 4: Findings

A positive relationship between store health precautions and shoppers' purchase likelihood or loyalty is identified. Psychological comfort and perceived risk mediate these relationships

Chapter 5: Discussion and conclusion

Food stores should implement relevant anti-coronavirus safety measures, such as masks for retailers' staff, installation of glass screens on counters and encouragement of shoppers to maintain social distance in the store.

Figure 1: Overview of the thesis

1.5 Chapter Conclusion

This chapter offers an outline of the rationale for the thesis that begins with COVID 19 health precautions and their impact on shoppers' attitude. More specifically, shoppers' comfort feelings and perception of risk are discussed, as it is probable that these factors play a mediating role between health precautions and purchase intentions/loyalty in shoppers' mindsets. This chapter also described the research rationale, points out gaps in domain knowledge and spells out the research question. The literature is now briefly reviewed and presented in the next chapter.

Chapter 2: literature review

2.1 Background

This chapter critically discusses previous research findings of health precautions and their impact on shoppers' attitude. The chapter begins with a discussion of in-store health precautions then moves on to consider psychological comfort. Perceived risk, store loyalty and purchase likelihood of shoppers are then discussed, to provide an overall picture of the research. Mainly, this chapter points out the research gap in the literature that indicates appropriate further study further study.

2.2 In-store Health precautions

According to WHO (2007, p. 1), "Standard precautions are meant to reduce the risk of transmission of bloodborne and other pathogens from both recognized and unrecognized sources". Because of the pace with which COVID 19 is spreading, consumers are less interested in shopping inside stores (Grashuis, Skevas, & Segovia, 2020). This pandemic situation is forcing shoppers to be cautious about visiting stores; it affects consumer behaviour and raises awareness of food safety (Jribi, Ben Ismail, Doggui, & Debbabi, 2020). Before the pandemic research mainly focused on the food safety of the store (Buzby & Frenzen, 1999; Cuthbertson, 1989; Drewnowski, 2012; Lu et al., 2010; Marino, 2007; Panghal et al., 2018; Rizou, Galanakis, Aldawoud, & Galanakis, 2020; Sharma & Singhvi, 2017; Sudershan, Rao, Rao, Rao, & Polasa, 2008; Tempels, Blok, & Verweij, 2020; Todd, Pivnick, Hendricks, Thomas, & Riou, 1970; Viscusi, 1988; Wilcock, Pun, Khanona, & Aung, 2004; Young & Waddell, 2016; Zepeda & Li, 2007).

In other studies on health precautions researchers argue that the use of health precautions will reduce the occurrence of malaria, influenza, and other preventable illness (Ezeoke et al., 2016). Evidence supporting this conjecture is provided by the fact that in New Zealand the number of people admitted to hospital with influenza has dropped by over 90% (retrieved from Stuff 05/08/2020). In a similar vein, travel researcher Korzeniewski (2017) argues that health prevention or precautions are a precondition for safe travel and maintaining good health. It is now common

knowledge, but Clark, Davila, Regis, and Kraus (2020) found that taking health precautions such as mask-wearing, social distancing, handwashing, and staying at home will be useful for preventing COVID 19 (Clark et al., 2020).

Research suggests that negative emotions impact on shoppers' risk perception (Lerner & Keltner, 2001). The probability of getting infected from COVID 19 is a source of negative emotion, or fear, which affects the perceived risk of contracting an infection from a store (Szymkowiak, Gaczek, Jeganathan, & Kulawik, 2020). Thus, the environmental stimulus, fear of getting infected in the store, changes shoppers' behaviour. According to the Stimulus-Organism-Response (S-O-R) model of Woodworth (1930), the researcher suggests that an organism mediates the relationship between stimuli and responses. Store health precautions act as a stimulus which should mediate the relationship between shoppers and shoppers' intentions such as buying intentions and store loyalty.

To the best of the author's knowledge, no previous study has investigated the link between health precautions and purchase likelihood or store loyalty in food stores. Thus, the main objective of the research is to gain knowledge of the relationship between health precautions in food store and the attitude of shoppers. Also, the study aims to confirm the mediating influence of psychological comfort and the perceived risk of shoppers drawn from the literature and suggested in the above discussion.

2.3 The role of shoppers' psychological comfort and its impact on shoppers' behavioural intentions

Psychological comfort can be defined as the shoppers' worry-free feelings about the shopping environment (Owens, Stryker, & Goodman, 2006). On the other hand, the psychology of comfort is also involved in the selection made by shoppers to reduce the difficulty of the purchasing situation (Sheth & Parvatiyar, 1995). There are two main types of comfort, one is physical and the other one is psychological. Both kinds of comfort are thoroughly discussed in psychology (Cook, Calcagno, Arrow, & Malle, 2012; McBurney, Shoup, & Streeter, 2006). Physical comfort is related to a physical

easiness sensation (Valkenburg et al., 2011). In contrast, psychological comfort represents individuals feeling at ease in an environment (Spake et al., 2003).

Researchers have found that there is a significant impact of shoppers' comfort feeling on shoppers' trust (Spake et al., 2003), satisfaction (Dabholkar, Shepherd, & Thorpe, 2000) and commitment (Caplan & Thomas, 1995). In other research, Healy (2014) argues that shoppers' emotion also play a vital role in shopping activities. In this way, he observed that store ambience has a significant effect on shoppers' feeling of comfort to such a degree that shopping decision making processes are expedited.

Lindquist (1974), in his store image research, pointed out that shoppers' comfort feelings impact on their image of the store. Osman (1993) further found a positive link between store image and store loyalty. Likewise, researchers have also found that comfort is an essential component of store image, and that it positively affects shoppers' store loyalty (Alan, Kabadayi, & Yilmaz, 2016; Schary & Christopher, 1979). Research also finds that there is a direct relationship between shoppers' psychological comfort and store patronage (Haytko & Baker, 2004). In yet another study, in an online environment, Abbott, Chiang, and Hwang (2000) argue that customer comfort would have a positive impact on shoppers' satisfaction, and that shoppers' satisfaction positively influences customer loyalty. Grah and Tominc (2015) do not disagree with these arguments but do point out that the perception of store image differs according to gender, which subsequent impacts on store loyalty. So, store image has an impact on shoppers' comfort feeling. Shoppers tend to rely on the positive image perception of the store, that ultimately guides them to be loyal to the store.

In determining market segmentation and the dimensions of store equity Florêncio, Spers, da Silva, and Pizzinatto (2020) also argue that shoppers value shopping comfort. Researchers have, though, pointed out that psychological comfort is also related to unavoidable circumstances such as the likelihood of pickpockets or being overcharged by the retailer (Beranová, 2011). Not only physical comfort but also shoppers' psychological comfort encourages them to visit a store.

Researchers suggested that the attraction of the environment impacts shoppers' physical as well as psychological comfort during sellers' and shoppers' interactions

(Aubert-Gamet, 1997; Wakefield & Blodgett, 1994). Ultimately, this interaction will influence the likelihood of shoppers' purchasing from the store (Trihas & Konstantarou, 2016).

Whilst discussing the role of delight in driving purchase intentions, Meyer, Barnes, and Friend (2017) observed that customer comfort and salesperson expertise both impact on customer satisfaction, and this effect enhance shoppers repurchase intentions. In contrast, other research found that delight has a positive relationship with repurchase intention but not with satisfaction (Bartl, Gouthier, & Lenker, 2013). However, researchers generally agree about designing a comfortable environment for shoppers (Meyer et al., 2017). Research also indicates that relationship-prone shoppers will be more loyal to the store (Gaur, Madan, & Xu, 2009). Thus, a comfortable store environment will encourage shoppers to buy from the store.

In summary, shoppers' psychological comfort is an essential factor contributing to shoppers' purchase likelihood and store loyalty. It is the contention of this researcher that psychological comfort mediates consumers' attitude towards the store and the store environment, alongside perceived risk.

2.4 The role of shoppers' perceived risk and its impact on shoppers' behavioural intentions:

Perceived risk can be defined as a perceived probable loss in pursuing an expected result (Featherman & Pavlou, 2003). Cox and Rich (1964) argue that the nature and amount of indecision perceived by shoppers in predicting a buying decision is called perceived risk. However, an earlier and more comprehensive definition of perceived risk is given by Bauer (1960, p. 24), "Consumer behaviour involves risk in the sense that any action of the consumer will produce consequences which he [*sic*] cannot anticipate with anything approximating certainty, and some of which are likely to be unpleasant". Perceived risk consists of various types of risk such as performance risk, financial risk, psychological risk, social risk and time risk (Johnson, Sivadas, & Garbarino, 2008). Researchers have already conducted study on retail store format with a mediating role for perceived risk (Agarwal & Teas, 2001); perceived risk in-store choice (Dash,

Schiffman, & Berenson, 1976; Hisrich, Dornoff, & Kernan, 1972); perceived risk in retail patronage (Hawes & Lumpkin, 1986; Prasad, 1975); perceived risk in pricing (Hoffman, Turley, & Kelley, 2002); online shoppers' perceived risk and purchase intentions (Kim & Lennon, 2013; Lim, 2003; Spence, Engel, & Blackwell, 1970; Tsiros & Heilman, 2005; Wang & Tsai, 2014); perceived risk in retail strategy (Mitchell & Harris, 2005); and, finally, perceived risk in organic food buying (Hammitt, 1990).

The performance of the product affects shoppers' store loyalty (Hisrich et al., 1972). similarly, Yavas and Tuncalp (1984) argue that product choice impact on shoppers' store selection. However, shoppers seem to perceive minimal risk regarding product quality in buying *via* catalogue, online or retail stores for houseware items (Larson, Engelland, & Taylor, 2004). Shoppers with high pre-purchase product information search for more information to buy from a speciality store, in contrast to shoppers with little pre-purchase information who buy from a supermarket (van Waterschoot, Sinha, Van Kenhove, & De Wulf, 2008). Researchers have also observed that perceived risk is involved with food store loyalty (Garretson & Clow, 1998). So, overall, low perceived risk appears to be an essential antecedent of store loyalty.

Some relationship marketing researchers propose that risk is part of trust (Doney & Cannon, 1997), although this idea has been discredited as they are quite separate variables. Perceived risk features widely in food products research (Brooker, 1984; Toh & Heeren, 1982). However, in online shopping, perceived risk is assumed as the main barrier to purchase (Forsythe & Shi, 2003). In addition, these researchers also suggested that older internet users are shoppers rather than the young, who are more likely to be browsers. Moreover, experienced Internet users are more likely to purchase online (although this is, perhaps a correlational rather than a causal relationship). Not surprisingly, research has found that online vendor reputation diminishes online users' perceived risk of purchase likelihood (Walsh, Schaarschmidt, & Ivens, 2017). However, shoppers' loyalty to the brand will be enhanced with increases to the vendors' trust and commitment level (Hajli, Shanmugam, Papagiannidis, Zahay, & Richard, 2017).

Commitment has a direct relationship with shoppers' satisfaction and an indirect relationship with perceived risk (Johnson et al., 2008). In other research, Verhoef, Franses, and Hoekstra (2002) suggest that the length of shoppers' relationship with a store may impact on satisfaction and affective commitment. However, researchers suggest that once shoppers' patronage to the store is developed, it may be distinct from the current shoppers' satisfaction (i.e., satisfaction is transient and not vital to commitment once a strong relationship is established). Other researchers agree that the traditional idea of satisfaction lead directly to store loyalty may not always be right (Jones, 1995). Thus, shoppers perceived risk of patronising a store might have negative impact satisfaction which will only ultimately affect store loyalty (Johnson et al., 2008).

There is a large number of somewhat disconnected studies that do bear upon the issue of risk in the context of retail patronage. Li et al. (2020) , for instance, suggest only an indirect relationship between shoppers' perceived risk and purchase behaviour. They found geographical location, purchasing channel and development status of a country may all impact the relationship.

Gender has also been discussed in this context. It seems as if male shoppers are more risk-taking than female shoppers (Hersch, 1996), although this study is over 20 years old and gender behaviours are shifting rapidly. As is so often the case in academia, other researchers found no relationship between gender and risk perception (Barke, Jenkins-Smith, & Slovic, 1997). Interestingly, female shoppers have been found to be more cognisant of perceive risk in various sector such as financial and medical (Gutteling & Wiegman, 1993), but there are more frequent studies failing to find general gender differences in perceived risk and purchase behaviour (Heikkilä, Pouta, Forsman, & Mäkelä, 2013).

Shoppers can become dissatisfied and perceive the psychological risk of faulty products or services to be high (Ueltschy, Laroche, Tamilia, & Yannopoulos, 2004). Leading from this observation, shoppers do tend to switch brands and this itself can cause psychological pressure due to uncertainties with the new brands (Kwon, Lee, & Kwon, 2008). Likewise, research suggests that psychological risk is indirectly related to purchasing intention (Bhukya & Singh, 2015). This means if the product or service is

perceived to be inferior by the shoppers, they feel the psychological risk of buying the product or service.

In pursuit of finding the effect of task-technology fit on purchase intention, Chen and Huang (2017) argued that perceived risk acts as a moderator between technology and purchase intention. Fram and Grady (1997) earlier argued similarly that online shoppers are reluctant to purchase due to the risk credit card fraud, and that online shoppers are most interested in buying low perceived risk products or services (Fram & Grady, 1997).

Perceived risks features as a mediator between perceived product and service quality and value for money relationship according to some Australian researchers (Sweeney, Soutar, & Johnson, 1999). Tuu, Olsen, and Linh (2011) later also found that perceived risk takes a mediator role between uncertain quality and satisfaction/loyalty.

A link between perceived risk and psychological comfort is noted in the literature, where when shoppers' perceive less risk in purchasing a product or service, they may feel more relief or comfort in their buying decision-making (Mitchell, 1995). Dowling and Staelin (1994) also claimed that higher perceived risk, or uncertain consequences, impact on shoppers' feeling of discomfort.

In summary, perceived risk is vital to shoppers' purchase likelihood and their loyalty, and perceived risk probably play a part as a mediator between consumer attitudes and store environment. In addition, shoppers' perceived risk certainly has an impact on shoppers' feeling of comfort.

2.5 Shoppers' purchase likelihood

Purchase likelihood is described as customers' plans to buy a particular product or service (Shao, Baker, & Wagner, 2004). Obviously, as purchase likelihood is so central to the whole existence of retailers, there has been a plethora of research on the topic. A selection of these is presented in Table 1.

Authors	Topic
Anderson, Knight, Pookulangara, and Josiam (2014) Das (2014)	1. Retail shoppers purchase intentions in a retail store format
Ma'rof, Nik Mat, Rashid, Nasuredin, and Sanita (2012) Newberry, Klemz, and Boshoff (2003)	2. Loyalty
Park, Jeon, and Sullivan (2015)	Store brand attitude
Yang and He (2011)	Shoppers' experience in China
Cheah, Waller, Thaichon, Ting, and Lim (2020)	Luxury items
Widodo (2013)	Shoppers' attitude
Su, Jeong, Choi, & Kim, 2015	Ethical perspective
Nguyen, Jeong, & Chung, 2018	Pricing strategy
Ihsan, Ashar, Javed, Khalid, & Nawaz, 2014	Store characteristics
Ur Rehman & Ishaq, 2017	store brand image

Table 1: Summary of purchase likelihood research

Most of these marketers assume that consumers will always buy products or services that are priced low, but this assumption is not always true. By using Equity Theory and Veblen's Theory of the Leisure Class, researchers have tested the moderating role of perceived price and purchase intention and found no negative relationships (Son & Jin, 2019).

Store image also influences the purchase intentions of customers (Wu, Yeh, & Hsiao, 2011). Store image and consumers' purchase intentions have a direct positive relationship that means the better the brand image of the store, the greater the

intention of customers to purchase the product or service from the store. Customers also consider environment-friendly products or services in their buying decision process (Barber, Kuo, Bishop, & Goodman, 2012). In more research on the green environment, Ramayah, Lee, and Mohamad (2010) found, in a developing country, a relationship between individual values and attitudes with purchase intention of green products. Likewise, customers green-brand knowledge accelerates the development of service purchase intention (Suki, 2016).

As marketers have known for a long time, been brand equity also affects purchasing decisions (Jalilvand, Samiei, & Mahdavinia, 2011). Thus a well-known media brand such as Facebook has a significant impact on purchase intention and brand image of the product and service for advertisers (Dehghani & Tumer, 2015). Researchers argue that perceived technology and perceived risk are directly related to online trust, which ultimately positively relates to shoppers' purchase likelihood (Ling, Daud, Piew, Keoy, & Hassan, 2011).

Celebrity endorsement of the brand increases brand acceptance and grabs the attention of shoppers (Seno & Lukas, 2007). Other researchers studying celebrity endorsement have also found that celebrity endorsement generates a positive attitude and heightened purchase intention towards the products (Laroche, Kim, & Zhou, 1996). Younus, Rasheed, and Zia (2015) agree, finding that perceived value, customer knowledge, celebrity endorsement all have a positive relationship with purchase intention.

The perceived value of the product or service, naturally enough, influences shoppers' purchase intention (Chang & Wildt, 1994). As does prior online purchase experience and online trust (Goyal, Maity, Thamizhvanan, & Xavier, 2013).

In summary, attaining shoppers' patronage, and a prime indicator such as purchase likelihood, are the goals of retailers. Thus, purchase likelihood is used here as one major dependent variable, relating to specific, hitherto unresearched, proposed antecedents.

2.6 Shoppers' loyalty

In the light of Jacoby and Chestnut (1978) work, researchers define store loyalty as ''the biased (i.e. non-random) behavioural response (i.e. revisit), expressed over time, by some decision-making unit with respect to one store out of a set of stores, which is a function of psychological (decision making and evaluative) processes resulting in brand commitment'' (Bloemer & De Ruyter, 1998, p. 500). Another researcher, Majumdar (2005), defined shoppers' store loyalty as the intensity of the relationship between a shoppers' comparative attitude and revisit intentions. Loyalty consists of behavioural and attitudinal components (Day, 1976). Shoppers' loyalty gets much attention in the retail literature of the past decades (Ailawadi, Pauwels, & Steenkamp, 2008; Bloemer & De Ruyter, 1998; Chebat, El Hedhli, & Sirgy, 2009; Huddleston, Whipple, & VanAuken, 2003; Labeaga, Lado, & Martos, 2007; Macintosh & Lockshin, 1997; Sirohi, McLaughlin, & Wittink, 1998; Sivadas & Baker-Prewitt, 2000).

Shoppers' store loyalty depends on service quality and merchandise quality perceptions (Sirohi et al., 1998). In addition, there are many other less common influences also at work. Shoppers' religious attachment has a positive impact on store loyalty intentions (Swimberghe, Sharma, & Flurry, 2009). Moreover, culture and price positively impact on shoppers' loyalty intentions (Pandey, Khare, & Bhardwaj, 2015). In turn, shoppers' store loyalty directly impacts on a store's profitability (Rafiq, Fulford, & Lu, 2013). Satisfaction is probably best known to have an indirect impact on loyalty through trust (Ha, Janda, & Muthaly, 2010).

Satisfaction is the outcome of shoppers' post-purchase assessment from a store, whether its features surpass or met their anticipation (Oliver, 1980). In addition, satisfaction causes shoppers to revisit intentions and loyalty (Oliver, 1980). Moreover, shoppers cognitive age significantly impacts on their store loyalty (Teller, Gittenberger, & Schnedlitz, 2013). However, service quality relates strongly to satisfaction and is claimed by some to be the most potent impactor of shoppers store loyalty (Molina, Martín, Santos, & Aranda, 2009).

Perceived value is defined as the shoppers' total effectiveness of the product or service constructed on the observation of what he [*sic*] had assumed and what he [*sic*] had

obtained (Oliver, 1999). Shoppers' perceived value is a direct predictor of shoppers' store loyalty (Chen & Chen, 2010). However, shoppers' perceived value has an indirect effect on loyalty via satisfaction (Lai, Griffin, & Babin, 2009).

Shoppers trust in the store confirms shoppers store loyalty (Liang & Wang, 2006), and loyalty is developed through cumulative satisfaction experience (Selnes, 1993). As shopper's retention cost is less than acquisition cost, stores are more focused on identifying the underlying forces shaping shoppers' loyalty (Oliver, 1999).

In an attempt to find the antecedents of food store shoppers' loyalty Huddleston et al. (2003) state that the behaviour of the salesperson toward the shoppers also influence their store loyalty. This supports both the Theory of Reasoned Action and Expectancy Theory, where direct experience with the food store helps to form a positive attitude towards the store (Ajzen & Fishbein; Vroom, 1964). Research has established that loyal shoppers purchase more even in higher price situations, which leads to a direct relationship between shoppers' loyalty and store financial performance (Morgan & Rego, 2006).

In summary, loyalty is the summative indicator of shoppers' attitude towards a store. Loyal shoppers tend to visit repeatedly and generate more revenue for the store. Consequently, the store needs to focus on the store environment to ensure satisfaction. It is the contention and central idea of this thesis that implementing a healthy environment in the store will assist in generating greater loyalty.

2.7 Hypotheses development:

This study seeks to confirm that shoppers' comfort feelings and their perceived risk play a part as mediators in shoppers' loyalty response to the health precautions of food stores during the global coronavirus pandemic. From the media, it can be inferred that store COVID-19 precautions have a significant impact on shopper's comfort feelings (Meyersohn, 2020). A shopper's mind is typically occupied with health and safety-related issues of the food store (Schifferstein & Ophuis, 1998). Thus, it can be assumed that a perceived healthier environment will lead to a tendency to visit the store which has more precautions against infection. As COVID 19 is a recent

phenomenon, there are few academic papers published on the impact of the pandemic on retail food shoppers' loyalty or purchase intentions.

The first section of the research has discussed the theoretical background, the next focusses on hypothesis development in the light of the current literature. The next section will present the philosophical approach leading to the researcher's chosen method, measurement issues, variable consideration, data collection and analysis. Lastly, conclusions are made and limitations, and consequent opportunities for further research, discussed.

Figure 2 diagrammatically illustrates the research model concerning the impact of health precautions on purchase likelihood and Figure 3 the same model but for on loyalty. The hypotheses are designed to help test the theoretical model.
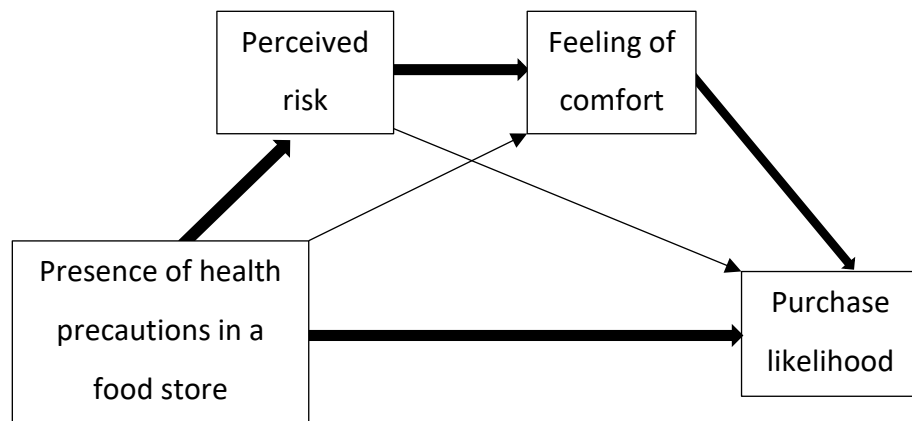
Figure·2: Presence of health precautions and its impact on purchase likelihood
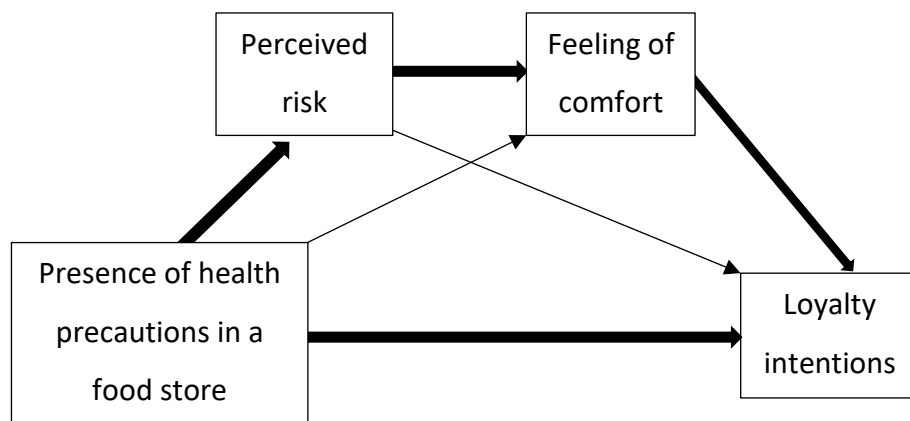
Figure 3: Presence of health precautions and its impact on store loyalty intentions

Celik and Dane (2020) argued that, before the pandemic, shoppers' priority was cost and health, but after the pandemic, it changed to quality and health. In addition, by using Random Utility Theory, Grashuis et al. (2020) observed that during the COVID-19 period shoppers are less willing to spend time inside a shop. Health awareness and social opinion increase the purchase likelihood of shoppers from the stores (Chu, 2018). In a similar vein, Yadav and Pathak (2016) hold that health consciousness positively influences the shoppers to purchase from the store. This is not the same as the health value of the food also being essential to shoppers (Awan, Siddiquei, & Haider, 2015). In other research, Barber et al. (2012) suggest that individual shopper's health awareness is also essential to assure purchase likelihood from the store. Thus, the Hypothesis 1 follows from this logic:

> H1: Presence (vs absence) health precautions in the sales counter area will
> have a positive impact on the effect of purchase likelihood

Researchers working on perceived risk believe that consumer behaviour is related to uncertainty and perceived risk (Bauer, 1960). Masoud (2013) agreed, observing that perceived risk is the potentiality of losing from the desired outcome of shopping. On the other hand, a comfortable environment in the store will create a friendly atmosphere and that will help create a relaxing shopping trip (Ainsworth & Foster, 2017). Hong and Cha (2013) suggest that perceived risk plays a mediator role in shoppers' purchase intentions. A healthy environment will create a positive mood and increase the purchase likelihood of shoppers – health precautions in a store will surely diminish the perceived health risk of the store. Consequently, this will impact on the comfort feeling of the store's environment and shoppers will be more likely to purchase from the store. The second hypothesis follows:

> H1a: The relationship between health precautions perceived in a food store
> and purchase likelihood are mediated by shoppers' perceived risk
> and feelings of comfort.

The implementation of health issues in food stores started in the first-world countries; later, it spread to the other countries (Kim, Park, Kim, & Ryu, 2013). In the food store shoppers obviously look for a healthy environment (Yüksel & Yüksel, 2003), which acts

as a generator of loyalty to the retailer. Healthy brand value of the store is also claimed as essential for the selection of the food store (Irmak, Vallen, & Robinson, 2011; Jeong & Jang, 2017). Perceived food healthiness of the store increases the satisfaction of the shoppers and its consequent impact on the shoppers revisit intentions to the food store (Kim et al., 2013). These researchers also suggested that food stores should be more responsive to public health and include more health activities in the store environment (Kim et al., 2013). The third hypothesis, H2, is simple, and reflects these ideas:

> H2: Presence (vs absence) health precautions in the sales counter area will
> have a positive impact on store loyalty.

The store that makes their shoppers happy will win more loyal shoppers (Ray & Chiagouris, 2009). Factors such as shoppers' feeling of comfort are essential for repeat purchases or loyalty intentions (Tjokrosaputro & Cokki, 2020). In another research, investigators showed that perceived healthiness of the store impacts on the revisit intentions of the shoppers and this relationship is mediated by value and satisfaction (Kim et al., 2013). In contrast, customer loyalty is revealed by the shoppers' attitude and repeat patronage and this connection is mediated by social practices and situational factors (Majumdar, 2005). Shoppers' feeling of comfort fully mediates the relationship between store layout and hedonic or utilitarian values (Ainsworth & Foster, 2017). Shoppers' perceived risk attitude toward the store is thus mediated by the healthy precautions taken by the store. Hypothesis 2a is central to this thesis, and expresses the major testable idea encapsulated in the serial mediation shown in Figure 2 and 3:

> H2a: The relationship between health precautions perceived in a food store
> and loyalty intentions are mediated by shoppers' perceived risk and
> feelings of comfort.

2.8 Hypothesis summary:

The hypotheses are summarised in the following table:

Summary	
Hypothesis	Path
H1	Health precautions (presence vs absence) → purchase likelihood
H1a	Health precautions (presence vs absence) →psychological comfort → perceived risk →Purchase likelihood
H2	Health precautions (presence vs absence) →loyalty intentions
H2a	Health precautions (presence vs absence) → perceived risk → psychological comfort →loyalty intentions

Table 2:Hypothesis summary

Chapter 3 first explains the general research approach and then discusses the research process and methods. This includes discussion of the variables, scales, and development of the research instrument, as well as the analytical techniques utilised.

Chapter 3 - Research Methodology and Method

3.1 Introduction

The previous chapter discussed what existing literature on COVID 19 precautions, psychological comfort, perceived risk, purchase likelihood and store loyalty of shoppers has to offer. The current chapter discusses the methods used in this study. As the aim of the study is to explore causal relationships between variables, the research uses a quantitative approach rather than a qualitative (Malhotra & Birks, 2007).

3.2 Research questions and objectives:

Just to remind the reader, the research will seek to answer the following general research question, "How do COVID-19 precautions in the shopping environment influence shoppers' behavioural intentions?"

The study is designed to identify the shopper's purchase intention and loyalty reactions to the COVID-19 precautions such as wearing of masks, glass screens and social distancing that some food stores are mounting.

3.3 Research Method

To test the proposed hypotheses, an experimental study is designed. A 2 (presence: presence vs absence) x 2 (purchase likelihood and store loyalty) between-subjects design is employed. The main objective is to test the hypotheses underlying the model presented in Figures 2 and 3.

3.3.1 Research design

From the literature reviewed it is evident that there is an absence of theoretical background on COVID 19 atmospheric environment of a food store and feeling of shoppers. To understand the relationship, the first step is to find if the basic relationship does exist in the marketplace. In Study One, shoppers are introduced to a healthy store environment, where USA customers are confronted with mask, glass and social distance, and their reactions measured.

An experimental design was chosen because it can test the associations between and among variables (Malhotra & Birks, 2007). To find a causal effect the best method is

experimental (Koschate-Fischer & Schandelmeier, 2014). Experimental research design is used commonly in many business disciplines (Burmeister & Schade, 2007; Gino & Pierce, 2010; Krahnen & Weber, 2001; Mohnen, Pokorny, & Sliwka, 2008; Weber & Zuchel, 2005).

3.3.2   Survey design and method

The research uses an online survey to gather data to enable a test to determine whether COVID 19 precautions do, in fact, have an impact on shoppers and their intentions. Although face-to-face interviews are clearly structured, flexible and adaptable, this type of research suffers from geographical limitations and respondents' time pressure (Holbrook, Green, & Krosnick, 2003). On the other hand, an online survey is more effective, visual and interactive (Kellner, 2004). After considering the geographical data collection benefit along with cost-effectiveness, the study used online data collection method to conduct the research.

The survey will be distributed via Amazon Mechanical Turk, (MTurk) a panel provider in the United States of America. MTurk is a third-party panel provider who is independent of the research for which they collect data. Research suggests that MTurk users pay more attention to their instructions than other data collection sources (Hauser & Schwarz, 2016). This tool is more cost-effective than Cint and similar providers and is easy to use. In addition, data is collected from the USA where COVID-19 is still spreading. Professional survey-takers are barred from participating in the panel to ensure the validity of the study (Gravetter & Forzano). Many researchers have expressed confidence that MTurk is a reliable source of social science research projects (Buhrmester, Kwang, & Gosling, 2011).

In a technical sense, my survey was first designed in Word, then transferred to Qualtrics© and then linked to the MTurk panel. Qualtrics allows the insertion of pictures, gives choice of scale measurement methods and has an interface that allows the survey to answered on a mobile device.

Two different picture scenarios were presented in the questionnaire, and each participant was exposed to one scenario randomly. In one scenario, the participants

saw a picture where sales counter agent is serving shoppers whilst wearing a mask and having a glass panel barrier installed between the assistant and the shopper. The shoppers in the picture maintained a social distance inside the store. On the other hand, the participants exposed to the second scenario saw a sales agent serving the shoppers while not wearing a mask, with no glass installed between agent and shopper and no observation of social distancing. After observing the pictures, the participants were instructed as follows:

For the first picture; "Please take your time to consider the picture and scenario below.

You have just entered a food store to buy take-outs. You see that the sales associate is wearing protective equipment whilst serving a customer from behind a protective screen. There is a second customer waiting to be served who is maintaining social distance."

And for the second picture; "Please take your time to consider the picture and scenario below.

You have just entered a food store to buy take-outs. You see that the sales associate is NOT wearing protective equipment whilst serving a customer NOT behind a protective screen. There is a second customer waiting to be served who is NOT maintaining social distance."

The survey used in the study is attached in Appendix C. Most of the questions were closed except for the name of the State in which participants live. The questions could be answered by using any device such as a smartphone or laptop via the internet and takes from five to ten minutes to answer.

Closed questions are more accessible to code and statistically analyse (Pallant, 2020). Moreover, such questions are more comfortable and quicker for the respondent. At the end on the instrument a few nominal scale questions were asked to determine the demographic information of the respondents. To check the attention of the respondents, two non-analysed questions were asked.

After completing the answers to the questions in one or the other scenario, the respondents were requested to offer some personal background information regarding age, gender, education, income and the name of the State in which they reside. These questions are necessary simply as screening questions to ascertain suitability.

3.3.3   Ethical consideration

The research was approved by the Auckland University of Technology Ethics Committee (AUTEC) on 23rd June 2020 before starting the survey. In addition, AUTEC also mentioned that the research is approved until 22nd June 2023. The approval number is 20/140 and a copy of the approval is attached in Appendix A.

3.3.4   Research variables

The research variables consist of three types, namely independent, dependent and mediator variables. As the construction of these variables is so critical to the research, I will describe them here in more detail.

3.3.5   Independent variables

Independent variables are measured in two different scenarios. In the first scenario which is marked as '1' described as a sales counter agent wearing a mask, a glass protector between customer and sales counter agent and social distance maintained among the customers. In contrast, the second scenario marked as '2' has the sales counter agent not wearing a mask, no glass protector between customers and sales counter agent and no social distance is maintained among the customers. This variable is related to shopper's comfort and perceived risk which may impact on shopper's purchase and loyalty intentions.

3.3.6   Dependent variables

3.3.6.1 Store loyalty

There is a plethora of studies concerning loyalty in a store context, even a food store context, and this has been discussed in the previous section. A multi-item scale to measure shopper's store loyalty is thus drawn from this literature and adapted to my

research. The new scale items are: a) I will consider the food store my first choice to buy services; b) Given the choice; I will do more business with the food store in the next few years; c) I will encourage friends and relatives to do business with the food store. All the scales are 7-point Likert-type but anchored by 1 = 'Not at all' and 7 = 'Very much.'

3.3.6.2 Purchase likelihood

Previous research on purchase likelihood specifically considers purchase likelihood of shoppers in marketing environment (Bhaduri & Ha-Brookshire, 2011; Kim & Chung, 2011; Wang, Li, Barnes, & Ahn, 2012). Purchase likelihood of shoppers in an online environment has also been investigated quite widely (Dehghani & Tumer, 2015; Meskaran, Ismail, & Shanmugam, 2013; Park, Lennon, & Stoel, 2005). Recently green product purchase likelihood has also come under the research spotlight (Ramayah et al., 2010; Suki, 2016). Purchase likelihood in the current research measures the purchase intention of the shopper's in a food store during COVID 19 environment.

The survey once again includes multi-item scales that evaluate the purchase likelihood of shoppers in a food store. The measurement scale consists of a seven-point Likert-type scale anchored by 1 = 'Not at all' and 7 = 'Very much'. The questions asked to generate participants' responses are as follows: a) How likely are you to buy food from this store? b) How willing are you to buy food from this store?

3.3.7   Mediator variables

Perceived risk and psychological comfort of the shoppers are the mediator variables. Perceived risk is divided into physical and psychological risk (Stone & Grønhaug, 1993). Though risk can be predicted in six dimensions such as financial, performance, physical, psychological, social and time related, I use only the two relevant items of physical risk and psychological risk relevant to COVID 19 store health precautions. The items are applied in a totally different context to the original so new items, some only loosely based in the originals, are developed and shown in Table 3. The scales used are semantic differential type, using semantic gradation scale points from extremely unlikely to extremely likely.

Questions to measure comfort are taken in their original format from Ainsworth and Foster (2017). This scale allows respondents to rate shoppers feeling of comfort on a seven-point bipolar matrix type scale in a mobile-friendly format. Seven items anchored by 1 = 'Uncomfortable', 'Very tensed', 'Insecure', 'Worried', 'Distressed', 'Turbulent', 'Troublesome' are presented on the left side of the scale, and by 7 = 'Comfortable', 'Very relaxed', 'Secure', 'Worry-free', 'Calm', 'Serene', 'Peace of mind' was presented on the right side of the scale (Appendix C)

	Original (Stone & Grønhaug, 1993)	New/adapted items
	Physical risk	
1	One concern I have about purchasing a personal computer within the next 12 months for use at home is that eye strain for some members of the family could result, due to overuse of the computer	One concern I have about purchasing from this food store is that I will catch coronavirus, due to safety measures not being followed
2	My purchase of a personal computer within the next 12 months for use at home leads to concerns about whether the product could lead to some uncomfortable physical side-effects such as bad sleeping, backaches and the like.	My purchase of food from this store could lead to some uncomfortable physical side-effects such as sneezing, cough, fever-like Covid-19 symptoms
3		When I contemplate purchasing food from this store, I become concerned about potential physical risks associated with the store
	Psychological risk	
1	The thought of purchasing a personal computer within the next 12 months for use at home makes me feel psychologically uncomfortable	The thought of purchasing food from this store makes me feel psychologically uncomfortable
2	The thought of buying a personal computer within the next 12 months for use at home gives me feeling unwanted anxiety	The thought of purchasing food from this store gives me a feeling of unwanted anxiety
3	The thought of purchasing a personal computer within the next 12 months of use at home causes me to experience unnecessary tension	The thought of purchasing food from this store causes me to experience unnecessary tension

Table 3:Physical risk and psychological risk questionnaire

3.3.8   Characteristics of the sample

Two hundred participants were invited to participate in the online study, where they were exposed to one of the two experimental conditions. To find correlations or conduct regression analysis the general rule of thumb is that there should be a minimum of fifty participants in the experiment (VanVoorhis & Morgan, 2007), so this sample size will provide sufficient statistical power. The regional requirement of the survey, to widely represent the USA, is determined by MTurk within the limitations of their panel membership.

3.3.9   Data analysis method

Each participant is randomly exposed to either one of the scenarios. Descriptive statistics, Cronbach's alpha, independent t-tests and regression analysis will be calculated by using SPSS 26.0 software. Perceived risk and psychological comfort of shoppers will be tested as a mediator, to see shoppers' purchase likelihood and loyalty intentions. Haye's PROCESS model 6 helps to define the logical, causal sequence with two mediators (Hayes, 2017). This model permits the control of the indirect effect of individual mediators. Bootstrapping with 5000 samples is used with bias-corrected and enhanced intervals to make inferences.

3.3.10 Conclusion

This chapter discusses the method and process that will be used in the study. The target sample size is two hundred. The sample size is targeted in the U.S.A as it is currently a hotbed of COVID-19. The target sample will be collected from any state of the USA, with respondents having different educational background and gender and is aged between 18-75. There is no barrier to collect sample size of diverse socio-economic background. The next chapter will discuss the findings.

Chapter 4: Findings

4.1 Introduction

The previous chapter discussed the research methodology of the thesis. This chapter will focus on the findings of the research. The details of the chapter include the respondent's characteristic which describes respondents' gender, age, education, income and state. Then the chapter discussed on reliability analysis which conducted Cronbach's co-efficient α to test the reliability of the data. The chapter also discussed the result of the tested hypothesis. The first part of the test hypothesis reviewed the store health precautions and its impact on shoppers' behavioural intentions. In addition, the second part of the test hypothesis discussed the store health precautions and their impact on shoppers' behavioural intentions and mediators.

4.2 Respondents characteristics:

One hundred and twenty-four participants responded to the survey. However, after attention check of the respondents, eight participants' data were excluded from the study as they did not answer the control questions for "attention" properly - they ignored the simple question of 'Please click on number 3' and 'Please select extremely unlikely.' Slightly more men (54%) than women (47%) participated in the survey. In addition, it was millennials and gen Z, 25-34 years old age group, that participated (43%) more than any other age group. Interestingly, Gen X participated (33%) the second-most in the study. In addition, mostly college graduates participated in the survey as research data showed that over half of respondents (52%) were college graduates, whereas postgraduates participated (31%) in the research. The descriptive data presented in Table 4 and 5 gives more detail. Overall, although of course not representative of the USA, a reasonable spread of respondents was gathered, even if weighted toward the student respondents who tend to populate panels such as MTurk.

Gender		Frequency	Per cent
	Male	63	54.3
	Female	53	45.7
	Total	116	100.0
Age	18-24 years old	4	3.4
	25-34 years old	50	43.1
	35-44 years old	15	12.9
	45-54 years old	38	32.8
	55-64 years old	5	4.3
	65-74 years old	4	3.4
	Total	116	100.0
Education	High School graduate or some College (2)	20	17.2
	College Graduate (4 years) (3)	60	51.7
	Postgraduate degree (4)	36	31.0
	Total	116	100.0
Income	$140,001 or above. (15)	4	3.4
	$130,001 - 140,000 (14)	8	6.9
	$120,001 - 130,000 (13)	4	3.4
	$110,001 - 120,000 (12)	1	.9
	$100,001 - 110,000 (11)	6	5.2
	$90,001 - 100,000 (10)	5	4.3
	$80,001 - 90,000 (9)	9	7.8
	$70,001 - 80,000 (8)	11	9.5
	$60,001 - 70,000 (7)	9	7.8
	$50,001 - 60,000 (6)	24	20.7
	$40,001 - 50,000 (5)	16	13.8
	$30,001 - 40,000 (4)	7	6.0
	$20,001 - 30,000 (3)	7	6.0
	$10,001 - 20,000 (2)	4	3.4
	$0 - 10,000 (1)	1	.9
	Total	116	100.0

Table 4: Respondents' gender, age, education and income

State	N	%	State	N	%
Alabama	1	.9	Mississippi	2	1.7
Alaska	1	.9	Missouri	1	.9
Arizona	1	.9	Nevada	4	3.4
California	16	13.8	New Jersey	1	.9
Colorado	1	.9	New York	5	4.3
Connecticut	1	.9	North Carolina	1	.9
Delaware	1	.9	Ohio	4	3.4
Florida	5	4.3	Oklahoma	1	.9
Idaho	2	1.7	Oregon	5	4.3
Illinois	9	7.8	Pennsylvania	8	6.9
Kansas	5	4.3	Rhode Island	1	.9
Kentucky	1	.9	South California	1	.9
Louisiana	3	2.6	South Carolina	1	.9
Maryland	1	.9	South Dakota	1	.9
Massachusetts	2	1.7	Tennessee	1	.9
Michigan	2	1.7	Texas	21	18.1
Minnesota	4	3.4	Virginia	1	.9
Mississippi	2	1.7	Washington	1	.9
			Total:	116	100.0

Table 5: Respondents' State of residence

4.3 Reliability and correlation analysis:

Cronbach's α is used to assess the reliability of the psychological comfort, perceived risk, purchase likelihood, loyalty scales. A Cronbach's α value greater than 0.70 is generally considered tolerable for exploratory work (Fayers & Machin, 2000). The result of Cronbach's alpha testing, shown in Table 6, suggests that all the scales exhibit satisfactory internal consistency. All items contribute to their relevant scales.

DVs	Cronbach's alpha	No. of items
Psychological comfort	0.955	7
Psychological risk	0.91	3
Purchase likelihood	0.897	2
Loyalty intention	0.92	3
Physical risk	0.868	3

Table 6: Reliability analysis

4.4 Hypothesis testing

4.4.1 Health precautions impact on shoppers' behavioural intentions:

H1: Presence (vs absence) of health precautions in the sales counter area will have an impact on purchase likelihood:

An independent sample t-test was conducted to compare purchase intentions in a high health precautions condition (mask, glass and social distance) to a no health precautions condition (no mask, no glass and no social distance), to address this hypothesis. There is a significant main effect apparent in the expected direction (N = 93, $M_{healthy}$ = 5.46, SD= 1.11; $M_{unhealthy}$ = 3.99, SD= 1.85; t = 5.17, p < .001). These results (Appendix D-1) show clearly that health precautions do have an impact on the purchase likelihood of shoppers and thus offers support for Hypothesis 1.

H2: Presence (vs absence) health precautions in the sales counter area will have a positive impact on the effect of store loyalty

A similar analysis is carried our but replacing purchase intentions with loyalty. Again, a t-test reveals a significant main effect of health precautions on store loyalty (N = 88; $M_{healthy}$ = 5.25, SD= 1.19; $M_{unhealthy}$ = 3.93, SD= 1.87; t = 4.75, p < .001. These results (Appendix D-2) also show support for the hypothesis as health precautions do have an impact on store loyalty intentions of the shoppers in this sample in the expected fashion.

4.4.2 Health precautions impact on shoppers' behavioural intentions and the mediators:

<u>H1a: The relationship between health precautions perceived in a food store and purchase likelihood are mediated by shoppers' perceived risk and feelings of comfort.</u>

To test the H1a hypothesis the sequential mediation PROCESS Model 6 (Hayes, 2017) report is run from SPSS. The mediating effect of perceived risk and psychological comfort on health precautions and purchase likelihood relationship is tested. The result (Appendix E-3) show that perceived risk and psychological comfort sequentially had mediated effect (i.e., X → M1 → M2→ Y) on the store health precautions and purchase likelihood. The result is significant also exclude zero (indirect effect: β = -0.29, 95% CI: -0.61, to -0.12). In addition, the result also indicates that psychological comfort has a mediating effect on purchase likelihood, (indirect effect: β = -0.94, 95% CI: -1.37, to -0.53). Figure 4 shows the sequential mediation effect of health precautions on purchase likelihood.
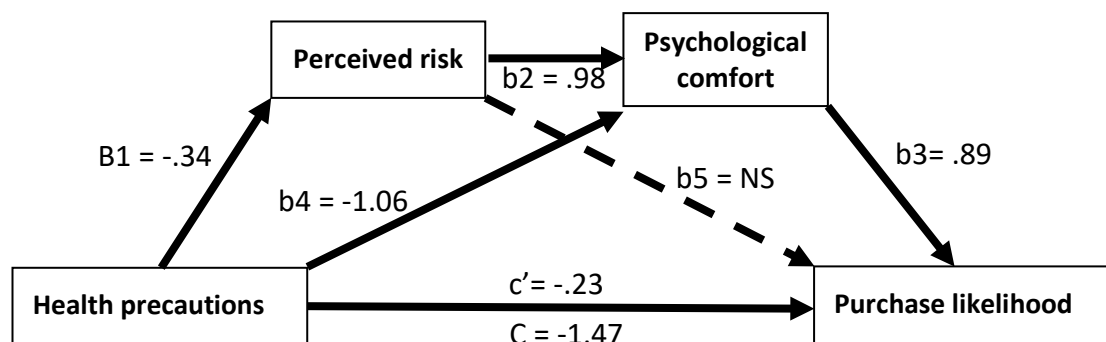
Figure 4: Sequential mediation model of health precautions on shoppers' store purchase likelihood through perceived risk and shoppers' comfort feeling.

Notes: a) N=116

b) 5000 bootstrap samples (Hayes, 2017).

c) The total indirect effect is significant (β = -1.23; 95% CI: -1.76 to -0.72).

d) The indirect effect of perceived risk alone is insignificant (β = <.001; 95% CI: -0.08-0.08).

To test reverse mediation the sequential mediation PROCESS Model 6 (Hayes, 2017) is again run on store health precautions and shoppers' purchase likelihood, but with the mediators reversed. Result show that psychological comfort and perceived risk have

no sequential mediating effect (i.e., X → M2 → M1→ Y) as the result (Appendix E-4) of the indirect effect is insignificant (β = 0.00; 95% CI from -0.11 to 0.10). This indicates that the earlier model, where perceived risk precedes psychological comfort, represents a causal serial relationship.

H2a: The relationship between health precautions perceived in a food store and loyalty intentions are mediated by shoppers' perceived risk and feelings of comfort.

To test the H2a hypothesis the same technique as for the previous test is followed. The sequential mediation process model 6 (Hayes, 2017) report is run from SPSS. In this report, the mediating effect of perceived risk and psychological comfort on store health precautions and loyalty is tested. The result (Appendix E-1) shows that perceived risk and psychological comfort do indeed have a sequential mediating effect (i.e., X → M1 → M2→ Y) on the relationship between store health precautions and loyalty. The result is significant and excludes zero (indirect effect: β = -0.23, 95% CI: -.29, to -0.01). Figure 5 illustrates the model results.
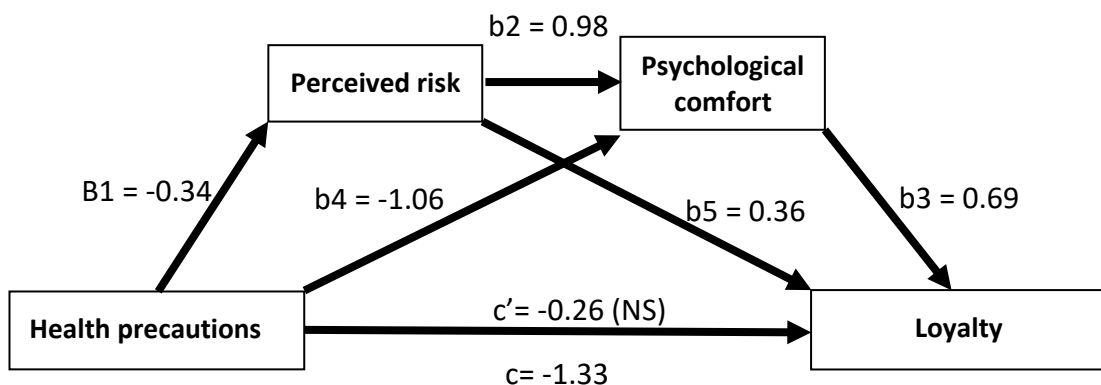
Figure 5:Sequential mediation model of health precautions on shoppers' store loyalty through shoppers' perceived risk and comfort feeling.

Notes: a) N = 116

  b) 5000 bootstrapped samples are used

  c) The total indirect effect is significant (β = -1.07; 95% CI: -1.64 to -0.54).

  d) The total indirect effect via comfort and risk is significant (β = -0.23; 95% CI from -0.29 to -0.01).

Finally, another reverse test of sequential mediation, similar to the previously reported test, is conducted again using Hayes PROCESS model 6 (Hayes, 2017), but using loyalty instead of purchase intentions. The results (Appendix E-2 and Figure 6) show that psychological comfort and perceived risk together do have a sequential mediating effect (even in a reverse direction) to that hypothesised, i.e., X → M2 → M1→ Y. The indirect effect: β = -0.19, 95%; CI: -.35, to -.06 – this result suggests a dialectic rather than a one-way causal relationship, which I will discuss later.
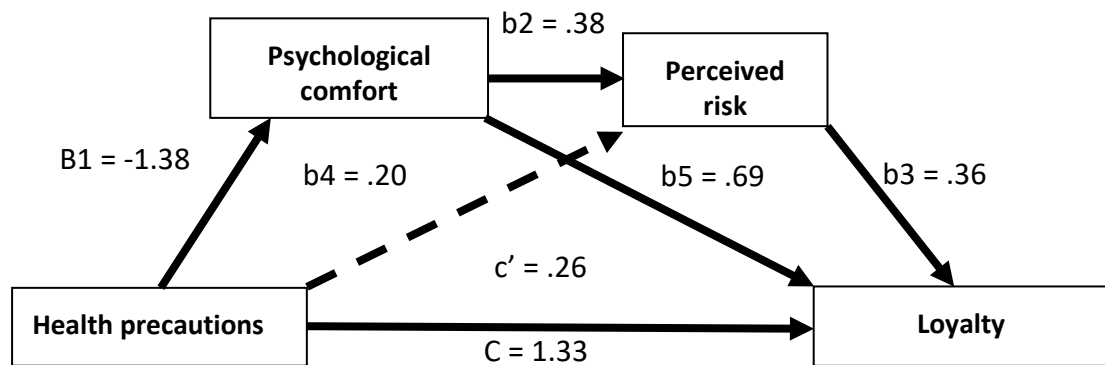
Figure 6: Sequential mediation model of health precautions on shoppers' store loyalty through shoppers' psychological comfort feeling and perceived risk.

Notes: a) N = 116)

b) 5000 bootstrapped samples

c) The total indirect effect is significant (β = -1.07; 95% CI: -1.64 to -0.54).

d) The indirect effect via comfort and risk is also significant (β = -0.19; 95% CI from -0.35 to -0.06).

4.5 Overall results of health precautions in shoppers' behavioural attitude

Both the first and the second hypotheses are supported by a strong, significant, result. Of more interest are the mediation results, which use a more powerful regression technique rather than simple means' difference test, and for which the results are very interesting. The relationship of precautionary health measures in a store and both shoppers' purchase intentions and loyalty are sequentially mediated by shoppers' perceived risk and psychological comfort. Reverse mediation proves to be insignificant when purchase intentions are the dependent variable but significant when loyalty is the dependent variable. The next section will discuss these findings and conclude.

Chapter 5: Discussion and conclusion

5.1 Introduction:

This Chapter of the thesis will present discussion of the findings of the research in terms of the hypotheses developed and the implications of the results for theory and practice. As for all research, the limitations experienced offer opportunities for further research, which are also discussed here.

Adoption of health-related issues in research is a recent trend (Megicks, Memery, & Angell, 2012). The COVID-19 pandemic has generated anxiety, sometimes to the point of panic, and a generally unstable status to the shoppers (Celik & Dane, 2020). Shoppers' are more concerned about buying from a food store, and tend to follow the instructions from the health officials, seemingly constantly updated about the pandemic circumstances. Before the pandemic, shoppers' first consumption preferences were for meat and bakery items but after the outbreak shoppers' tend to focus more on fruits and vegetables (Celik & Dane, 2020). Health precautions forced shoppers to change their food consumption habit or, perhaps, their attitude towards food consumption.

Pandemic lockdowns also impact on attitude towards food wastage. Research suggests that consumers are more worried about the future and movement restrictions make it more challenging to buy food now (Jribi et al., 2020). Health precaution exhibited by shoppers mean that customers are more concern about the availability of food, which is a change of attitude towards food consumption.

Research also suggests that shoppers are not only interested in buying goods from inside the store, but are also concerned about health-related precautions taken by the shop (Grashuis et al., 2020). Specifically, food stores encourage customers to maintain social distance and use of hand sanitiser in the store.

5.2 General discussion of research findings:

Researchers have previously investigated the impact of feelings of comfort and perceived risk, and how they impact on particular attitudes of shoppers such as purchase likelihood and loyalty (Ainsworth & Foster, 2017; Bhukya & Singh, 2015; Chia-Jen, 2018; Dalmoro, Isabella, de Almeida, & dos Santos Fleck, 2019; Grosso & Castaldo, 2015; Huddleston et al., 2003; Johnson et al., 2008; Jun, 2020; Lăzăroiu, Neguriţă, Grecu, Grecu, & Mitran, 2020; Li et al., 2020; Roy, Shekhar, Quazi, & Quaddus, 2020; Spake et al., 2003). However, very little was found in the literature about the sequential impact of shoppers' comfort feeling and perceived risk on health precautions, purchase likelihood and store loyalty. So, the main objective of the research was to find the relationship of health precautions (presence vs. absence) and behavioural intentions of shoppers in respect particularly to these two variables of comfort and perceived risk.

The first objective of the study is to simply assess the relationship between health precautions in the store and the purchase likelihood of shoppers. The results show that there is, as proposed in Hypothesis 1, a strong relationship between health precautions in the store and purchase likelihood. The store that implements a healthier environment by adding Covid-19 precautionary measures in the store, at this time tends to attract more shoppers. In contrast, the absence of health precautions in the store would discourage shoppers from entering the store with a consequent drop in purchase likelihood.

The second hypothesis, H1a, is also supported by the research results. This hypothesis proposes that the store health precautions, and shoppers' purchase likelihood are mediated by perceived risk and the psychological comfort feelings of shoppers. This means that the store's implementation of health precautions (such as mask, glass screens and social distance) will generate a greater purchase likelihood from their stores because of the lower perceived risk involved in a within-store transaction and the feeling of psychological comfort regarding being the shop environment. It is of interest here that comfort feelings alone do not mediate the relationship, only when linked to perceived lower level of risk is the mediation significant. It is tempting to speculate why this may be but there is no data available in this dataset on which to

base any speculation. Shoppers may be aware of the risk avoidance measures taken but still not be comfortable.

That a reverse mediation conducted adds value to the analysis, as it is not significant. this implies that there is a causal connection through perceived risk and comfort, but not the other way around. It is interesting, again, to speculate why this may be so. On the one hand if a potential shopper sees the precautions taken and feels comfortable about entering the store then s/he will come in. The reverse mediation suggests that those who feel uncomfortable will not come in even if they do see that precautions have been taken.

The third and fourth hypotheses simply address the same issues but with loyalty as the dependent variable, instead of purchase intention. Previous research on healthy food found that shoppers do seek a healthy food environment (Yüksel & Yüksel, 2003). In addition, healthy food environment seekers tend to show loyalty to the chosen food store (Jin, Goh, Huffman, & Yuan, 2015; Jin, Lee, & Huffman, 2012). It is not surprising, then then that this hypothesis is also supported by the data.

The fourth hypothesis echoes earlier tests and finds the significant relationship between Coronavirus precautions and loyalty is mediated by shoppers' perceived risk and comfort feeling. If a retail food store implements more health precautions in store, shoppers' perceived risk about getting infected from any viral disease from the store will be diminished, their comfort level increases, and they will become more loyal to the store. The fourth hypothesis also offers some support to prior work by Kim et al. (2013), who propose a similar model – healthiness → value → satisfaction → revisit intentions. In addition, the research also showed that shoppers' psychological comfort and perceived risk individually support the store loyalty of shoppers. This indicates that store health precautions status has an impact on the loyalty intentions of shoppers and this relationship is mediated by shoppers' perceived risk and psychological comfort individually. Health precautions create a positive image of the store which encourage the shoppers to be a loyal shopper.

What is of great interest here is the reverse mediation test carried out. This test shows that the relationship holds in reverse as well as in the predicted direction. This implies

that the relationship is more correlational that causal. Although I was disappointed with this result at first, when I stopped to consider the nature of loyalty this makes sense, as loyalty is less the outcome of a linear process and more the outcome of a dialectic between the store and the customer. That is, loyalty affects perceptions of risk and comfort in the same way that comfort and risk affect loyalty; unlike purchase, they build on and feed off each other.

5.3 Theoretical and practical contribution:

This research has both theoretical and practical implications. Shoppers' purchase likelihood will increase if the food stores take necessary health precautions of the store, especially during a pandemic such as we are currently experiencing. This finding supports the existing retail research conducted by several, including Tuu et al. (2011), who found the mediator role of perceived risk between satisfaction and loyalty. This is not that surprising in a holistic sense, but the detailed relationship between the precautions, risk, comfort and sales/loyalty variables is of interest and value.

The whole analysis was repeated for each gender, and it is of interest that no differences were identified. Irrespective of gender, all shoppers feel the same about store health precautions which motivate them to purchase from or to be loyal to the store.

The research also revealed some practical implications for food store managers. During the Covid-19 period, the store should be even more cautious than usual about the store health environment. Managers should not only implement health precautions in the store to encourage customers to be loyal or purchase more from the store, but these measures should be clearly visible and communicated strongly to potential customers. Although there is a clear social responsibility to provide strong precautionary measures, there is also a sound public relations aspect that should be taken advantage of – there is nothing anti-social or underhand about this, as if proper precautions are taken then making sure customers are aware of this serves the dual purpose of not only increasing sales and loyalty but also giving customers both a real reduction in risk and an enhanced feeling of comfort.

5.4 Limitations and future research proposals:

As with all research, this research has several limitations which provide an opportunity for future research. The study used the online-based questionnaire with scenarios to find the relationship of health precautions and shoppers' attitudes. It would be better if the research could use the real event to ask the same questions – a field study would add great external validity and value.

The research finds the impact of health precautions on purchase likelihood and store loyalty through only two variables, psychological comfort and perceived risk. Still, there are possibly many more antecedent variables to behaviour in this context, such as trust, commitment, transparency and a host of other relational variables. Future research could fill this gap by taking account of more variables to see if the variables currently featured still have an impact or are washed out or even exacerbated, as real life's variables are not simply linear, they are interactive and complex.

The research only takes the respondents from the USA. However, shoppers from different geographical area may have very different attitudes and behaviours. Replication of the same study in different geographical locations would add insight.

Shoppers demographic information (age, income, region) might moderate the relationship between health precautions and purchase likelihood or loyalty intentions. Although the data here allowed a test of gender (which was not significant) there is insufficient data to test for the impact of other demographic information on the relationship.

Finally, to round out the generalisability of the research, the study could be replicated in other sectors as well. Food stores are clearly vulnerable to health considerations, and the choice of such stores was guided by the research principle that a researcher should give the desired effect every chance to show. Nevertheless, it would be of interest to see if the relationships identified here still pertain in a clothing shop, a general retailer. Technically there should be no difference, but in reality food is strongly related to health and although the risk of getting Covid-19 in a clothing shop is no less than in a food store, perception could rule otherwise!

5.5 Endnote:

The study supports the practice of mask usage, installation of glass screens and maintaining social distance in food stores, particularly in a pandemic, and thus both comforting customers and gaining sales and loyalty for the store. The study also suggests the route to affecting both sales and loyalty is through lowering perceived risk and making customers feel more psychologically comfortable.

In spite of the drawbacks imposed by the paucity of variables and a limited sample size, I feel a contribution has been made. The same effects of the pandemic as are felt by customers and retailers are also experienced by research students, and this has been a stressful and difficult time for me. In the same way that retail customers have felt their stress reduced by appropriate support from retailers, so have I experienced stress reduction though the appropriate support from my supervisors and university but, like the shoppers, a feeling of general discomfort certainly affects my research output. I sincerely hope that future researchers advancing this research work in a more positive environment.

References

Abbott, M., Chiang, K.-P., & Hwang, Y.-S. (2000). The process of on-line store loyalty formation. *ACR North American Advances*.

Agarwal, S., & Teas, R. K. (2001). Perceived value: mediating role of perceived risk. *Journal of Marketing Theory and Practice, 9*(4), 1-14.

Ailawadi, K. L., Pauwels, K., & Steenkamp, J.-B. E. (2008). Private-label use and store loyalty. *Journal of marketing, 72*(6), 19-30.

Ainsworth, J., & Foster, J. (2017). Comfort in brick and mortar shopping experiences: Examining antecedents and consequences of comfortable retail experiences. *Journal of Retailing and Consumer Services, 35*, 27-35.

Ajzen, I. F., & Fishbein, M. M.(1980). *Understanding attitudes and predicting social behavior*.

Alan, A. K., Kabadayi, E. T., & Yilmaz, C. (2016). Cognitive and affective constituents of the consumption experience in retail service settings: effects on store loyalty. *Service Business, 10*(4), 715-735.

Anderson, K. C., Knight, D. K., Pookulangara, S., & Josiam, B. (2014). Influence of hedonic and utilitarian motivations on retailer loyalty and purchase intention: a facebook perspective. *Journal of Retailing and Consumer Services, 21*(5), 773-779.

Aubert-Gamet, V. (1997). Twisting servicescapes: diversion of the physical environment in a re-appropriation process. *International Journal of Service Industry Management*.

Awan, H. M., Siddiquei, A. N., & Haider, Z. (2015). Factors affecting Halal purchase intention–evidence from Pakistan's Halal food sector. *Management Research Review*.

Barber, N., Kuo, P. J., Bishop, M., & Goodman, R. (2012). Measuring psychographics to assess purchase intention and willingness to pay. *Journal of Consumer Marketing*.

Barke, R. P., Jenkins-Smith, H., & Slovic, P. (1997). Risk perceptions of men and women scientists. *Social Science Quarterly*, 167-176.

Bartl, C., Gouthier, M. H., & Lenker, M. (2013). Delighting consumers click by click: Antecedents and effects of delight online. *Journal of service research, 16*(3), 386-399.

Bauer, R. A. (1960). Consumer behavior as risk taking. *Chicago, IL*, 384-398.

Beranová, M. (2011). Small-Scale Retail in Czech Republic from the Customers Perspective. *Economics & Sociology, 4*(2), 50-65.

Bhaduri, G., & Ha-Brookshire, J. E. (2011). Do transparent business practices pay? Exploration of transparency and consumer purchase intention. *Clothing and Textiles Research Journal, 29*(2), 135-149.

Bhukya, R., & Singh, S. (2015). The effect of perceived risk dimensions on purchase intention. *American Journal of Business*.

Bloemer, J., & De Ruyter, K. (1998). On the relationship between store image, store satisfaction and store loyalty. *European Journal of Marketing*.

Brooker, G. (1984). An assessment of an expanded measure of perceived risk. *ACR North American Advances*.

Buhrmester, M., Kwang, T., & Gosling, S. (2011). Amazon's Mechan.

Burmeister, K., & Schade, C. (2007). Are entrepreneurs' decisions more biased? An experimental investigation of the susceptibility to status quo bias. *Journal of Business Venturing, 22*(3), 340-362.

Buzby, J. C., & Frenzen, P. D. (1999). Food safety and product liability. *Food Policy, 24*(6), 637-651.

Caplan, T., & Thomas, H. (1995). Safety and comfort, content and process: Facilitating open group work with men who batter. *Social Work with Groups, 18*(2-3), 33-51.

Celik, B., & Dane, S. (2020). The effects of COVID-19 Pandemic Outbreak on Food Consumption Preferences and Their Causes. *Journal of Research in Medical and Dental Science, 8*(3), 169-173.

Chang, T.-Z., & Wildt, A. R. (1994). Price, product information, and purchase intention: An empirical study. *Journal of the Academy of Marketing science, 22*(1), 16-27.

Cheah, J.-H., Waller, D., Thaichon, P., Ting, H., & Lim, X.-J. (2020). Price image and the sugrophobia effect on luxury retail purchase intention. *Journal of Retailing and Consumer Services, 57*, 102188.

Chebat, J.-C., El Hedhli, K., & Sirgy, M. J. (2009). How does shopper-based mall equity generate mall loyalty? A conceptual model and empirical evidence. *Journal of Retailing and Consumer Services, 16*(1), 50-60.

Chen, C.-F., & Chen, F.-S. (2010). Experience quality, perceived value, satisfaction and behavioral intentions for heritage tourists. *Tourism Management, 31*(1), 29-35.

Chen, Y.-S., & Huang, S. Y. (2017). The effect of task-technology fit on purchase intention: The moderating role of perceived risks. *Journal of Risk Research, 20*(11), 1418-1438.

Chia-Jen, H. (2018). A Study on the Correlation among Brand Image, Perceived Risk, and Purchase Intention in Food and Beverage Industry. *Revista de Cercetare şi Intervenţie Socială*(61), 122-133.

Chu, K. M. (2018). Mediating influences of attitude on internal and external factors influencing consumers' intention to purchase organic foods in China. *Sustainability, 10*(12), 4690.

Clark, C., Davila, A., Regis, M., & Kraus, S. (2020). Predictors of COVID-19 voluntary compliance behaviors: An international investigation. *Global Transitions, 2*, 76-82.

Cook, J. E., Calcagno, J. E., Arrow, H., & Malle, B. F. (2012). Friendship trumps ethnicity (but not sexual orientation): Comfort and discomfort in inter-group interactions. *British Journal of Social Psychology, 51*(2), 273-289.

COVID-19 Coronavirus pandemic. (2020). Retrieved 22 Aug 2020, from https://www.worldometers.info/coronavirus/

Cox, D. F., & Rich, S. U. (1964). Perceived risk and consumer decision-making—the case of telephone shopping. *Journal of marketing research, 1*(4), 32-39.

Cuthbertson, W. (1989). What is a healthy food? *Food Chemistry, 33*(1), 53-80.

Dabholkar, P. A., Shepherd, C. D., & Thorpe, D. I. (2000). A comprehensive framework for service quality: an investigation of critical conceptual and measurement issues through a longitudinal study. *Journal of retailing, 76*(2), 139-173.

Dalmoro, M., Isabella, G., de Almeida, S. O., & dos Santos Fleck, J. P. (2019). Developing a holistic understanding of consumers' experiences. *European Journal of Marketing*.

Daniels, K. (2000). Measures of five aspects of affective well-being at work. *Human Relations, 53*(2), 275-294.

Das, G. (2014). Linkages of retailer awareness, retailer association, retailer perceived quality and retailer loyalty with purchase intention: A study of Indian food retail brands. *Journal of Retailing and Consumer Services, 21*(3), 284-292.

Dash, J. F., Schiffman, L. G., & Berenson, C. (1976). Risk-and Personality-Related Dimensions of Store Choice: To what extent do self-confidence and level of perceived risk affect a customer's choice of retail outlet? *Journal of marketing, 40*(1), 32-39.

Day, G. S. (1976). A two-dimensional concept of brand loyalty. In *Mathematical models in marketing* (pp. 89-89): Springer.

Dehghani, M., & Tumer, M. (2015). A research on effectiveness of Facebook advertising on enhancing purchase intention of consumers. *Computers in Human Behavior, 49*, 597-600.

Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer–seller relationships. *Journal of marketing, 61*(2), 35-51.

Dowling, G. R., & Staelin, R. (1994). A model of perceived risk and intended risk-handling activity. *Journal of consumer research, 21*(1), 119-134.

Drewnowski, A. (2012). The economics of food choice behavior: why poverty and obesity are linked. In *Obesity treatment and prevention: new directions* (Vol. 73, pp. 95-112): Karger Publishers.

Ezeoke, I., Saffa, A., Guthartz, S., Tate, A., Varma, J. K., & Vora, N. M. (2016). Health precautions taken by travelers to countries with Ebola virus disease. *Emerging infectious diseases, 22*(5), 929.

Fayers, P., & Machin, D. (2000). Quality of life: assessment, analysis and interpretation. Chichester, New York: Weinheim, Brisbane, Singapore, Toronto: John Wiley & Sons Ltd.

Featherman, M. S., & Pavlou, P. A. (2003). Predicting e-services adoption: a perceived risk facets perspective. *International journal of human-computer studies, 59*(4), 451-474.

Florêncio, J. C. F., Spers, E. E., da Silva, H. M. R., & Pizzinatto, N. K. (2020). Market segmentation and dimensions of store equity: a study in retail construction. *Revista de Administração da UFSM, 13*(1), 125-143.

Forsythe, S. M., & Shi, B. (2003). Consumer patronage and risk perceptions in Internet shopping. *Journal of Business Research, 56*(11), 867-875.

Fram, E. H., & Grady, D. B. (1997). Internet shoppers: is there a surfer gender gap? *DIRECT MARKETING-GARDEN CITY-, 59*, 46-51.

Garretson, J. A., & Clow, K. E. (1998). The impact of coupons on service quality evaluations, risk, and purchase intentions. *Journal of Restaurant & Foodservice Marketing, 2*(4), 3-19.

Gaur, S. S., Madan, S., & Xu, Y. (2009). Consumer comfort and its role in relationship marketing outcomes: An empirical investigation. *ACR Asia-Pacific Advances*.

Gino, F., & Pierce, L. (2010). Robin Hood under the hood: Wealth-based discrimination in illicit customer help. *Organization Science, 21*(6), 1176-1194.

Goyal, A., Maity, M., Thamizhvanan, A., & Xavier, M. (2013). Determinants of customers' online purchase intention: an empirical study in India. *Journal of Indian Business Research*.

Grah, M., & Tominc, P. (2015). Relationships among store image and store loyalty in Slovenia. *Naše gospodarstvo/Our economy, 61*(6), 28-37.

Grashuis, J., Skevas, T., & Segovia, M. S. (2020). Grocery Shopping Preferences during the COVID-19 Pandemic. *Sustainability, 12*(13), 5369.

Gravetter, F. J., & Forzano, L. B.(2009). *Research methods for the behavioural sciences, 3*.

Grosso, M., & Castaldo, S. (2015). How store attributes impact shoppers' loyalty: do different national cultures follow the same loyalty building process? *The International Review of Retail, Distribution and Consumer Research, 25*(5), 503-515.

Gutteling, J. M., & Wiegman, O. (1993). Gender-specific reactions to environmental hazards in the Netherlands. *Sex roles, 28*(7-8), 433-447.

Ha, H. Y., Janda, S., & Muthaly, S. K. (2010). A new understanding of satisfaction model in e-re-purchase situation. *European Journal of Marketing*.

Hajli, N., Shanmugam, M., Papagiannidis, S., Zahay, D., & Richard, M.-O. (2017). Branding co-creation with members of online brand communities. *Journal of Business Research, 70*, 136-144.

Hammitt, J. K. (1990). Risk perceptions and food choice: An exploratory analysis of organic-versus conventional-produce buyers. *Risk Analysis, 10*(3), 367-374.

Hauser, D. J., & Schwarz, N. (2016). Attentive Turkers: MTurk participants perform better on online attention checks than do subject pool participants. *Behavior research methods, 48*(1), 400-407.

Hawes, J. M., & Lumpkin, J. R. (1986). Perceived risk and the selection of a retail patronage mode. *Journal of the Academy of Marketing science, 14*(4), 37-42.

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*: Guilford publications.

Haytko, D. L., & Baker, J. (2004). It's all at the mall: exploring adolescent girls' experiences. *Journal of retailing, 80*(1), 67-83.

Healy, S. (2014). Atmospheres of consumption: Shopping as involuntary vulnerability. *Emotion, Space and Society, 10*, 35-43.

Heikkilä, J., Pouta, E., Forsman, H. S., & Mäkelä, J. (2013). Heterogeneous risk perceptions: the case of poultry meat purchase intentions in Finland. *International journal of environmental research and public health, 10*(10), 4925-4943.

Hersch, J. (1996). Smoking, seat belts, and other risky consumer decisions: Differences by gender and race. *Managerial and decision economics, 17*(5), 471-481.

Hisrich, R. D., Dornoff, R. J., & Kernan, J. B. (1972). Perceived risk in store selection. *Journal of marketing research, 9*(4), 435-439.

Hoffman, K. D., Turley, L. W., & Kelley, S. W. (2002). Pricing retail services. *Journal of Business Research, 55*(12), 1015-1023.

Holbrook, A. L., Green, M. C., & Krosnick, J. A. (2003). Telephone versus face-to-face interviewing of national probability samples with long questionnaires: Comparisons of respondent satisficing and social desirability response bias. *Public opinion quarterly, 67*(1), 79-125.

Hong, I. B., & Cha, H. S. (2013). The mediating role of consumer trust in an online merchant in predicting purchase intention. *International Journal of Information Management, 33*(6), 927-939.

Huddleston, P., Whipple, J., & VanAuken, A. (2003). Food store loyalty: Application of a consumer loyalty framework. *Journal of Targeting, Measurement and Analysis for Marketing, 12*(3), 213-230.

Irmak, C., Vallen, B., & Robinson, S. R. (2011). The impact of product name on dieters' and nondieters' food evaluations and consumption. *Journal of consumer research, 38*(2), 390-405.

Jacoby, J., & Chestnut, R. W. (1978). Brand loyalty: Measurement and management.

Jalilvand, M. R., Samiei, N., & Mahdavinia, S. H. (2011). The effect of brand equity components on purchase intention: An application of Aaker's model in the automobile industry. *International business and management, 2*(2), 149-158.

Jeong, E., & Jang, S. S. (2017). Heuristic evaluation of healthy menus: examining the effect of brand image congruity. *International Journal of Contemporary Hospitality Management*.

Jin, N., Goh, B., Huffman, L., & Yuan, J. J. (2015). Predictors and outcomes of perceived image of restaurant innovativeness in fine-dining restaurants. *Journal of Hospitality Marketing & Management, 24*(5), 457-485.

Jin, N., Lee, S., & Huffman, L. (2012). Impact of restaurant experience on brand image and customer loyalty: Moderating role of dining motivation. *Journal of Travel & Tourism Marketing, 29*(6), 532-551.

Johnson, M. S., Sivadas, E., & Garbarino, E. (2008). Customer satisfaction, perceived risk and affective commitment: an investigation of directions of influence. *Journal of Services Marketing*.

Jones, T. (1995). 0.; Sasser, WE (1995): Why Satisfied Customers Defect. *Harvard Business Review, 73*(4), 88-98.

Jribi, S., Ben Ismail, H., Doggui, D., & Debbabi, H. (2020). COVID-19 virus outbreak lockdown: What impacts on household food wastage? *Environment, Development and Sustainability, 22*, 3939-3955.

Jun, S.-H. (2020). The Effects of Perceived Risk, Brand Credibility and Past Experience on Purchase Intention in the Airbnb Context. *Sustainability, 12*(12), 5212.

Kellner, P. (2004). Can online polls produce accurate findings? *International Journal of Market Research, 46*(1), 3-22.

Kim, H. J., Park, J., Kim, M.-J., & Ryu, K. (2013). Does perceived restaurant food healthiness matter? Its influence on value, satisfaction and revisit intentions in restaurant operations in South Korea. *International Journal of Hospitality Management, 33*, 397-405.

Kim, H. Y., & Chung, J. E. (2011). Consumer purchase intention for organic personal care products. *Journal of Consumer Marketing*.

Kim, J., & Lennon, S. J. (2013). Effects of reputation and website quality on online consumers' emotion, perceived risk and purchase intention. *Journal of Research in Interactive Marketing*.

Korzeniewski, K. (2017). Travel health prevention. *International Maritime Health, 68*(4), 238-244.

Koschate-Fischer, N., & Schandelmeier, S. (2014). A guideline for designing experimental studies in marketing research and a critical discussion of selected problem areas. *Journal of Business Economics, 84*(6), 793-826.

Krahnen, J. P., & Weber, M. (2001). Marketmaking in the laboratory: Does competition matter? *Experimental Economics, 4*(1), 55-85.

Kwon, K. N., Lee, M. H., & Kwon, Y. J. (2008). The effect of perceived product characteristics on private brand purchases. *Journal of Consumer Marketing*.

Labeaga, J. M., Lado, N., & Martos, M. (2007). Behavioural loyalty towards store brands. *Journal of Retailing and Consumer Services, 14*(5), 347-356.

Lai, F., Griffin, M., & Babin, B. J. (2009). How quality, value, image, and satisfaction create loyalty at a Chinese telecom. *Journal of Business Research, 62*(10), 980-986.

Laroche, M., Kim, C., & Zhou, L. (1996). Brand familiarity and confidence as determinants of purchase intention: An empirical test in a multiple brand context. *Journal of Business Research, 37*(2), 115-120.

Larson, D. A., Engelland, B., & Taylor, R. (2004). Information search and perceived risk: are there differences for in-home versus in-store shoppers? *Marketing Management Journal, 14*(2).

Lăzăroiu, G., Neguriţă, O., Grecu, I., Grecu, G., & Mitran, P. C. (2020). Consumers' Decision-Making Process on Social Commerce Platforms: Online Trust, Perceived Risk, and Purchase Intentions. *Frontiers in Psychology, 11*.

Lerner, J. S., & Keltner, D. (2001). Fear, anger, and risk. *Journal of personality and social psychology, 81*(1), 146.

Li, Z., Sha, Y., Song, X., Yang, K., ZHao, K., Jiang, Z., & Zhang, Q. (2020). Impact of risk perception on customer purchase behavior: a meta-analysis. *Journal of Business & Industrial Marketing*.

Liang, C.-J., & Wang, W.-H. (2006). Evaluating the interrelation of a retailer's relationship efforts and consumers' attitudes and behaviour. *Journal of Targeting, Measurement and Analysis for Marketing, 14*(2), 156-172.

Lim, N. (2003). Consumers' perceived risk: sources versus consequences. *Electronic Commerce Research and Applications, 2*(3), 216-228.

Lindquist, J. D. (1974). Meaning of image-survey of empirical and hypothetical evidence. *Journal of retailing, 50*(4), 29-+.

Ling, K. C., Daud, D. B., Piew, T. H., Keoy, K. H., & Hassan, P. (2011). Perceived risk, perceived technology, online trust for the online purchase intention in Malaysia. *International Journal of Business and Management, 6*(6), 167.

Lu, H. Y., Hou, H. Y., Dzwo, T. H., Wu, Y. C., Andrews, J. E., Weng, S. T., . . . Lu, J. Y. (2010). Factors influencing intentions to take precautions to avoid consuming food containing dairy products. *British Food Journal*.

Ma'rof, R. A., Nik Mat, N. K., Rashid, U. K., Nasuredin, J., & Sanita, F. (2012). Store loyalty, retail satisfaction and competitive resistance towards purchase intention. *American Journal of Economics*.

Macintosh, G., & Lockshin, L. S. (1997). Retail relationships and store loyalty: a multi-level perspective. *International Journal of Research in marketing, 14*(5), 487-497.

Majumdar, A. (2005). A model for customer loyalty for retail stores inside shopping malls–an Indian perspective. *Journal of Services Research, 27*(1), 5-21.

Malhotra, N. K., & Birks, D. F. (2007). *Marketing research: An applied approach*: Pearson education.

Marino, D. D. (2007). Water and food safety in the developing world: global implications for health and nutrition of infants and young children. *Journal of the American Dietetic Association, 107*(11), 1930-1934.

Masoud, E. Y. (2013). The effect of perceived risk on online shopping in Jordan. *European Journal of Business and Management, 5*(6), 76-87.

McBurney, D. H., Shoup, M. L., & Streeter, S. A. (2006). Olfactory Comfort: Smelling a Partner's Clothing During Periods of Separation 1. *Journal of Applied Social Psychology, 36*(9), 2325-2335.

Megicks, P., Memery, J., & Angell, R. J. (2012). Understanding local food shopping: Unpacking the ethical dimension. *Journal of Marketing Management, 28*(3-4), 264-289.

Meskaran, F., Ismail, Z., & Shanmugam, B. (2013). Online purchase intention: Effects of trust and security perception. *Australian journal of basic and applied sciences, 7*(6), 307-315.

Meyer, T., Barnes, D. C., & Friend, S. B. (2017). The role of delight in driving repurchase intentions. *Journal of Personal Selling & Sales Management, 37*(1), 61-71.

Meyersohn, N. (2020, May 01 2020). This is the most dangerous place in the grocery store. *CNN*. Retrieved from https://edition.cnn.com/2020/04/30/business/grocery-stores-coronavirus-cashiers/index.html

Mitchell, V. (1995). Organisational perceived risk: a literature review. *British Management Journal, 6*(2), 115-133.

Mitchell, V. W., & Harris, G. (2005). The importance of consumers' perceived risk in retail strategy. *European Journal of Marketing*.

Mohnen, A., Pokorny, K., & Sliwka, D. (2008). Transparency, inequity aversion, and the dynamics of peer pressure in teams: Theory and evidence. *Journal of Labor Economics, 26*(4), 693-720.

Molina, A., Martín, V. J., Santos, J., & Aranda, E. (2009). Consumer service and loyalty in Spanish grocery store retailing: an empirical study. *International Journal of Consumer Studies, 33*(4), 477-485.

Morgan, N. A., & Rego, L. L. (2006). The value of different customer satisfaction and loyalty metrics in predicting business performance. *Marketing science, 25*(5), 426-439.

Newberry, C. R., Klemz, B. R., & Boshoff, C. (2003). Managerial implications of predicting purchase behavior from purchase intentions: a retail patronage case study. *Journal of Services Marketing*.

Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of marketing research, 17*(4), 460-469.

Oliver, R. L. (1999). consumption experience. *Consumer value: A framework for analysis and research*, 43.

Osman, M. Z. (1993). A conceptual model of retail image influences on loyalty patronage behaviour. *International review of retail, distribution and consumer research, 3*(2), 133-148.

Owens, T. J., Stryker, S., & Goodman, N. (2006). *Extending self-esteem theory and research: Sociological and psychological currents*: Cambridge University Press.

Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*: Routledge.

Pandey, S., Khare, A., & Bhardwaj, P. (2015). Antecedents to local store loyalty: influence of culture, cosmopolitanism and price. *International Journal of Retail & Distribution Management*.

Panghal, A., Yadav, D., Khatkar, B. S., Sharma, H., Kumar, V., & Chhikara, N. (2018). Post-harvest malpractices in fresh fruits and vegetables: Food safety and health issues in India. *Nutrition & Food Science*.

Park, H. H., Jeon, J. O., & Sullivan, P. (2015). How does visual merchandising in fashion retail stores affect consumers' brand attitude and purchase intention? *The International Review of Retail, Distribution and Consumer Research, 25*(1), 87-104.

Park, J., Lennon, S. J., & Stoel, L. (2005). On-line product presentation: Effects on mood, perceived risk, and purchase intention. *Psychology & Marketing, 22*(9), 695-719.

Prasad, V. K. (1975). Socioeconomic product risk and patronage preferences of retail shoppers. *Journal of marketing, 39*(3), 42-47.

Rafiq, M., Fulford, H., & Lu, X. (2013). Building customer loyalty in online retailing: The role of relationship quality. *Journal of Marketing Management, 29*(3-4), 494-517.

Ramayah, T., Lee, J. W. C., & Mohamad, O. (2010). Green product purchase intention: Some insights from a developing country. *Resources, conservation and recycling, 54*(12), 1419-1427.

Ray, I., & Chiagouris, L. (2009). Customer retention: Examining the roles of store affect and store loyalty as mediators in the management of retail strategies. *Journal of Strategic Marketing, 17*(1), 1-20.

Rizou, M., Galanakis, I. M., Aldawoud, T. M., & Galanakis, C. M. (2020). Safety of foods, food supply chain and environment within the COVID-19 pandemic. *Trends in Food Science & Technology*.

Roy, S. K., Shekhar, V., Quazi, A., & Quaddus, M. (2020). Consumer engagement behaviors: do service convenience and organizational characteristics matter? *Journal of Service Theory and Practice*.

Schary, P. B., & Christopher, M. (1979). Anatomy of a stock-out. *Journal of retailing, 55*(2), 59-70.

Schifferstein, H. N., & Ophuis, P. A. O. (1998). Health-related determinants of organic food consumption in the Netherlands. *Food quality and Preference, 9*(3), 119-133.

Selnes, F. (1993). An examination of the effect of product performance on brand reputation, satisfaction and loyalty. *European Journal of Marketing, 27*(9), 19-35.

Seno, D., & Lukas, B. A. (2007). The equity effect of product endorsement by celebrities: A conceptual framework from a co-branding perspective. *European Journal of Marketing, 41*(1-2), 121-134.

Shao, C. Y., Baker, J. A., & Wagner, J. (2004). The effects of appropriateness of service contact personnel dress on customer expectations of service quality and purchase intention: The moderating influences of involvement and gender. *Journal of Business Research, 57*(10), 1164-1176.

Sharma, N., & Singhvi, R. (2017). Effects of chemical fertilizers and pesticides on human health and environment: a review. *International Journal of Agriculture, Environment and Biotechnology, 10*(6), 675-680.

Sheth, J. N., & Parvatiyar, A. (1995). The evolution of relationship marketing. *International Business Review, 4*(4), 397-418.

Sirohi, N., McLaughlin, E. W., & Wittink, D. R. (1998). A model of consumer perceptions and store loyalty intentions for a supermarket retailer. *Journal of retailing, 74*(2), 223-245.

Sivadas, E., & Baker-Prewitt, J. L. (2000). An examination of the relationship between service quality, customer satisfaction, and store loyalty. *International Journal of Retail & Distribution Management*.

Son, J., & Jin, B. E. (2019). When do high prices lead to purchase intention? Testing two layers of moderation effects. *Asia Pacific Journal of Marketing and Logistics*.

Spake, D. F., Beatty, S. E., Brockman, B. K., & Crutchfield, T. N. (2003). Consumer comfort in service relationships: Measurement and importance. *Journal of service research, 5*(4), 316-332.

Spence, H. E., Engel, J. F., & Blackwell, R. D. (1970). Perceived risk in mail-order and retail store buying. *Journal of marketing research, 7*(3), 364-369.

Stone, R. N., & Grønhaug, K. (1993). Perceived risk: Further considerations for the marketing discipline. *European Journal of Marketing, 27*(3), 39-50.

Sudershan, R., Rao, G. S., Rao, P., Rao, M. V. V., & Polasa, K. (2008). Food safety related perceptions and practices of mothers–A case study in Hyderabad, India. *Food control, 19*(5), 506-513.

Suki, N. M. (2016). Green product purchase intention: impact of green brands, attitude, and knowledge. *British Food Journal*.

Sweeney, J. C., Soutar, G. N., & Johnson, L. W. (1999). The role of perceived risk in the quality-value relationship: A study in a retail environment. *Journal of retailing, 75*(1), 77-105.

Swimberghe, K., Sharma, D., & Flurry, L. (2009). An exploratory investigation of the consumer religious commitment and its influence on store loyalty and consumer complaint intentions. *Journal of Consumer Marketing*.

Szymkowiak, A., Gaczek, P., Jeganathan, K., & Kulawik, P. (2020). The impact of emotions on shopping behavior during epidemic. What a business can do to protect customers. *Journal of Consumer Behaviour*.

Teller, C., Gittenberger, E., & Schnedlitz, P. (2013). Cognitive age and grocery-store patronage by elderly shoppers. *Journal of Marketing Management, 29*(3-4), 317-337.

Tempels, T., Blok, V., & Verweij, M. (2020). Injustice in Food-Related Public Health Problems: A Matter of Corporate Responsibility. *Business Ethics Quarterly, 30*(3).

Tjokrosaputro, M., & Cokki, C. (2020). The Role of Social Influence Towards Purchase Intention With Value Perception as Mediator: A Study on Starbucks Coffee as an Environmentally Friendly Product*Atlantis Press.* Symposium conducted at the meeting of the 8th International Conference of Entrepreneurship and Business Management Untar (ICEBM 2019)

Todd, E., Pivnick, H., Hendricks, S., Thomas, J., & Riou, J. (1970). An evaluation of public health hazards of barbecued chickens. *Canadian Journal of Public Health/Revue Canadienne de Sante'e Publique*, 215-225.

Toh, R., & Heeren, S. G. (1982). Perceived risks of generic grocery products and risk reduction strategies of consumers. *Akron Business and Economic Review, 13*(4), 43-48.

Trihas, N., & Konstantarou, A. (2016). Spa-goers' characteristics, motivations, preferences and perceptions: Evidence from Elounda, Crete. *Almatourism-Journal of Tourism, Culture and Territorial Development, 7*(14), 106-127.

Tsiros, M., & Heilman, C. M. (2005). The effect of expiration dates and perceived risk on purchasing behavior in grocery store perishable categories. *Journal of marketing, 69*(2), 114-129.

Tuu, H. H., Olsen, S. O., & Linh, P. T. T. (2011). The moderator effects of perceived risk, objective knowledge and certainty in the satisfaction-loyalty relationship. *Journal of Consumer Marketing*.

Ueltschy, L. C., Laroche, M., Tamilia, R. D., & Yannopoulos, P. (2004). Cross-cultural invariance of measures of satisfaction and service quality. *Journal of Business Research, 57*(8), 901-912.

Valkenburg, A. J., Boerlage, A. A., Ista, E., Duivenvoorden, H. J., Tibboel, D., & van Dijk, M. (2011). The COMFORT-behavior scale is useful to assess pain and distress in 0-to 3-year-old children with Down syndrome. *Pain, 152*(9), 2059-2064.

van Waterschoot, W., Sinha, P. K., Van Kenhove, P., & De Wulf, K. (2008). Consumer learning and its impact on store format selection. *Journal of Retailing and Consumer Services, 15*(3), 194-210.

VanVoorhis, C. W., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. *Tutorials in quantitative methods for psychology, 3*(2), 43-50.

Verhoef, P. C., Franses, P. H., & Hoekstra, J. C. (2002). The effect of relational constructs on customer referrals and number of services purchased from a multiservice provider: does age of relationship matter? *Journal of the Academy of Marketing science, 30*(3), 202-216.

Viscusi, W. K. (1988). Predicting the effects of food cancer risk warnings on consumers. *Food Drug Cosm. LJ, 43*, 283.

Vroom, V. H. (1964). Work and motivation.

Wakefield, K. L., & Blodgett, J. G. (1994). The importance of servicescapes in leisure service settings. *Journal of Services Marketing*.

Walsh, G., Schaarschmidt, M., & Ivens, S. (2017). Effects of customer-based corporate reputation on perceived risk and relational outcomes: empirical evidence from gender moderation in fashion retailing. *Journal of Product & Brand Management*.

Wang, C. L., Li, D., Barnes, B. R., & Ahn, J. (2012). Country image, product image and consumer purchase intention: Evidence from an emerging economy. *International Business Review, 21*(6), 1041-1051.

Wang, E. S.-T., & Tsai, B.-K. (2014). Consumer response to retail performance of organic food retailers. *British Food Journal*.

Weber, M., & Zuchel, H. (2005). How do prior outcomes affect risk attitude? Comparing escalation of commitment and the house-money effect. *Decision Analysis, 2*(1), 30-43.

WHO. (2007). *Standard precautions in health care*. Retrieved 23 Aug, 2020, from https://www.who.int/docs/default-source/documents/health-topics/standard-precautions-in-health-care.pdf?sfvrsn=7c453df0_2

Widodo, T. (2013). The influence of Muslim consumers perception toward halal food product on attitude and purchase intention at retail stores. *Inovbiz, 1*(1), 1-18.

Wilcock, A., Pun, M., Khanona, J., & Aung, M. (2004). Consumer attitudes, knowledge and behaviour: a review of food safety issues. *Trends in Food Science & Technology, 15*(2), 56-66.

Woodworth, R. S. (1930). Dynamic psychology.

Wu, P. C., Yeh, G. Y.-Y., & Hsiao, C.-R. (2011). The effect of store image and service quality on brand image and purchase intention for private label brands. *Australasian Marketing Journal (AMJ), 19*(1), 30-39.

Yadav, R., & Pathak, G. S. (2016). Intention to purchase organic food among young consumers: Evidences from a developing nation. *Appetite, 96*, 122-128.

Yang, Z.-Y., & He, L.-Y. (2011). Goal, customer experience and purchase intention in a retail context in China: An empirical study. *African Journal of Business Management, 5*(16), 6738-6746.

Yavas, U., & Tuncalp, S. (1984). Perceived risk in grocery outlet selection: a case study in Saudi Arabia. *European Journal of Marketing*.

Young, I., & Waddell, L. (2016). Barriers and facilitators to safe food handling among consumers: a systematic review and thematic synthesis of qualitative research studies. *PloS one, 11*(12), e0167695.

Younus, S., Rasheed, F., & Zia, A. (2015). Identifying the factors affecting customer purchase intention. *Global Journal of Management and Business Research*.

Yüksel, A., & Yüksel, F. (2003). Measurement of tourist satisfaction with restaurant services: A segment-based approach. *Journal of vacation marketing, 9*(1), 52-68.

Yun, Z. S., & Good, L. K. (2007). Developing customer loyalty from e-tail store image attributes. *Managing Service Quality: An International Journal*.

Zepeda, L., & Li, J. (2007). Characteristics of organic food shoppers. *Journal of Agricultural and Applied Economics, 39*(1379-2016-112892), 17-28.

Appendix A: Ethical approval

Auckland University of Technology Ethics Committee (AUTEC)

Auckland University of Technology

D-88, Private Bag 92006, Auckland 1142, NZ

T: +64 9 921 9999 ext. 8316

E: ethics@aut.ac.nz

www.aut.ac.nz/researchethics

23 June 2020

Megan Phillips

Faculty of Business Economics and Law

Dear Megan

Re Ethics Application: **20/140 Uniqueness: Contactless mobile payment and its impact on customer's attitudes and behaviours toward the store**

Thank you for providing evidence as requested, which satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC).

Your ethics application has been approved for three years until 22 June 2023.

Non-Standard Conditions of Approval

1. Please ensure that the updated Information Sheet will be included on the first page of the survey, before any questions

Non-standard conditions must be completed before commencing your study. Non-standard conditions do not need

to reviewed by AUTEC before commencing your study, but please forward the updated documents for our file.

Standard Conditions of Approval

1. The research is to be undertaken in accordance with the Auckland University of Technology Code of Conduct for Research and as approved by AUTEC in this application.
2. A progress report is due annually on the anniversary of the approval date, using the EA2 form.
3. A final report is due at the expiration of the approval period, or, upon completion of project, using the EA3 form.
4. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form.
5. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
6. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.

7. It is your responsibility to ensure that the spelling and grammar of documents being provided to participants or external organisations is of a high standard and that all the dates on the documents are updated.

AUTEC grants ethical approval only. You are responsible for obtaining management approval for access for your research from any institution or organisation at which your research is being conducted and you need to meet all ethical, legal, public health, and locality obligations or requirements for the jurisdictions in which the research is being undertaken.

Please quote the application number and title on all future correspondence related to this project.

For any enquiries please contact ethics@aut.ac.nz. The forms mentioned above are available online through http://www.aut.ac.nz/research/researchethics

(This is a computer-generated letter for which no signature is required)

The AUTEC Secretariat

Auckland University of Technology Ethics Committee

Cc: dqm8506@aut.ac.nz; Roger Marshall

Appendix B: Participant information sheet

Auckland University of Technology Ethics Committee (AUTEC)

Participant Information Sheet

Date Information Sheet Produced:
18 June 2020

Project title:
Food retailing: consumers attitudes and response to the shopping environment.

An Invitation

I Mohammod Hasan invite you to participate in my study on consumers attitudes to a retail food store. The research will contribute to my Master's degree. Thank you for your participation in this study. The following questions are related to your shopping experience in a food shop and some more general questions around your shopping behavior.

What is the purpose of this research?

This research is particularly interested in understanding your thoughts and reactions during a buying experience at a food store. Moreover, the findings of this research may be used for academic publications and presentations.

How was I identified and why am I being invited to participate in this research?

Amazon Mturk contacted you because you are living in the U.S.A and are 18+ years old. If you are below 18 years and not living in the U.S.A, you are not eligible to participate in this survey.

How do I agree to participate in this research?

Your participation in this research is voluntary (it is your choice) and whether you choose to participate will neither advantage nor disadvantage you. You are able to withdraw from the survey at any time before your responses are submitted. If you choose to withdraw from the survey, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal and identification of your data may not be possible. Your consent to participate in this research and providing your information on the terms above will be confirmed by

completing the survey questionnaire. The sharing of research data and its future use will be limited to the current research purpose only.

What will happen in this research?
More than one hundred and twenty participants will be invited by Amazon Mturk to participate in the study. You will be exposed to an image and a scenario and will be asked to answer some questions. These questions will be about the scenario, as well as some more general lifestyle and demographic questions.

What are the discomforts and risks?

It is very unlikely that any discomforts or risks will arise from participating in the study. The question and the scenario given relate to everyday behavior. However, I am assuring you that all information regarding this survey will be kept anonymous and the level of questions asked are not too details. Personal care will be taken to protect the privacy of the data.

How will these discomforts and risks be alleviated?

Your participation in the study is voluntary. At any stage of the participation, you may decide not to answer the questions or even withdraw from the study without any penalty. Moreover, you may choose your own time to answer the questions.

What are the benefits?

The researcher will be awarded his Master's degree qualification after completing this research. Retail researchers would benefit from understanding consumers attitudes towards shopping environment. The research result will be beneficial for consumers to understand their attitudes in changing shopping environment.

How will my privacy be protected?

All information you provide to us as part of this survey will be kept strictly anonymous. We take our privacy and our compliance with the Privacy Act 1993 seriously. We will keep the information you provide to us secure. Your responses to our questions will only be presented or published to third parties or the public in aggregated and anonymised form, and no individual results which identify you will be disclosed to the public. Results will not be released to any third-party (except Auckland University of Technology, New Zealand). The demographic information that I ask you to provide at the end of the questionnaire will be used for comparative purposes only.You will have two weeks to consider the survey invitation.

Will I receive feedback on the results of this research?

The summary of the survey result url will be found in the following address: https://autuni-my.sharepoint.com/:f:/g/personal/dqm8506_autuni_ac_nz/EuJWpiZZU19JuaOtMwrIKlIBp56SmJR0fuTxerCbpa9a3A?e=TYZaXx

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Dr Megan Phillips, mphillip@aut.ac.nz, +64 9 921 9999 ext. 5428

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, ethics@aut.ac.nz , (+649) 921 9999 ext 6038.

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:
Mohammod Hasan, dqm8506@autuni.ac.nz
Project Supervisor Contact Details:
Dr Megan Phillips, mphillip@aut.ac.nz, +64 9 921 9999 ext. 5428

Approved by the Auckland University of Technology Ethics Committee on 23/06/2018, AUTEC Reference number 20/140

Appendix C: Survey of study

Scenario 1_safety

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First Click: *0 seconds*

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Please take your time to consider the picture and scenario below. When you have finished, please move to the next page.

You have just entered a food store to buy takeouts. You see that the sales associate is **wearing protective equipment** whilst serving a customer from behind a **protective screen**. There is a second customer waiting to be served who is **maintaining social distance**.

Considering the picture and the scenario below, please answer the questions below.

You have just entered a food store to buy takeouts. You see that the sales associate is **wearing protective equipment** whilst serving a customer from behind a **protective screen**. There is a second customer waiting to be served who is **maintaining social distance**.

Whilst considering the store above, please indicate your agreement with the following questions:

	1 Not at all	2	3	4	5	6	7 Very much
I will say positive things about the food store to other people.	O	O	O	O	O	O	O
I will recommend the food store to someone who seeks my advice.	O	O	O	O	O	O	O
I will encourage friends and relatives to do business with the food store.	O	O	O	O	O	O	O
I will consider the food store my first choice to buy services.	O	O	O	O	O	O	O
Given the choice, I will do more business with the food store in the next few years.	O	O	O	O	O	O	O

	1 Not at all	2	3	4	5	6	7 Very much
Given the choice, I will do less business with the food store in the next few years	O	O	O	O	O	O	O

Please indicate your likelihood of purchasing from the above store

	1 Not at all	2	3	4	5	6	7 Very much
How likely are you to buy food from this store?	O	O	O	O	O	O	O
How willing are you to buy food from this store?	O	O	O	O	O	O	O
Please click on the number 3	O	O	O	O	O	O	O

Considering the picture and the scenario, please answer the questions below

You have just entered a food store to buy takeouts. You see that the sales associate is **wearing protective equipment** whilst serving a customer from behind a **protective screen**. There is a second customer waiting to be served who is **maintaining social distance**.

If you entered the food store shown in the above picture, please indicate how you would feel by answering the questions below

Uncomfortable	O	O	O	O	O	O	Comfortable
Very tensed	O	O	O	O	O	O	Very relaxed
Insecure	O	O	O	O	O	O	Secure
Worried	O	O	O	O	O	O	Worry free
Distressed	O	O	O	O	O	O	Calm
Turbulent	O	O	O	O	O	O	Serene
Troublesome	O	O	O	O	O	O	Peace of mind

Please answer the following questions in relation to the image and scenario above

	Extremely unlikely	Moderately unlikely	Slightly unlikely	Neither likely nor unlikely	Slightly likely	Moderately likely
The thought of purchasing food from this store makes me feel psychologically uncomfortable	O	O	O	O	O	O
The thought of purchasing food from this store gives me a feeling of unwanted anxiety	O	O	O	O	O	O
The thought of purchasing food from this store causes me to experience unnecessary tension	O	O	O	O	O	O

Please answer the following question in relation to the image and scenario above:

	Extremely unlikely	Moderately unlikely	Slightly unlikely	Neither likely nor unlikely	Slightly likely	Moderately likely	Extremely likely
One concern I have about purchasing from this food store is that I will catch coronavirus, due to safety measures not being followed	O	O	O	O	O	O	O
Please select extremely unlikely	O	O	O	O	O	O	O
My purchase of food from this store could lead to some uncomfortable physical side-effects such as sneezing, couch, fever like Covid-19 symptoms	O	O	O	O	O	O	O

	Extremely unlikely	Moderately unlikely	Slightly unlikely	Neither likely nor unlikely	Slightly likely	Moderately likely	Extremely likely
When I contemplate purchasing food from this store, I become concerned about potential physical risks associated with the store	○	○	○	○	○	○	○

Scenario 2_nonsafety

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Please take your time to consider the picture and scenario below. When you have finished, please move to the next page.

You have just entered a food store to buy takeouts. You see that the sales associate **is NOT wearing protective equipment** whilst serving a customer **NOT behind a protective screen**. There is a second customer waiting to be served who is **NOT maintaining social distance**.

Considering the picture and the scenario, please answer the questions below.

You have just entered a food store to buy takeouts. You see that the sales associate **is NOT wearing protective equipment** whilst serving a customer **NOT behind a protective screen**. There is a second customer waiting to be served who is **NOT maintaining social distance**.

Whilst considering the store above, please indicate your agreement with the following questions:

	1 Not at all	2	3	4	5	6	7 Very much
I will say positive things about the food store to other people.	O	O	O	O	O	O	O
I will recommend the food store to someone who seeks my advice.	O	O	O	O	O	O	O
I will encourage friends and relatives to do business with the food store.	O	O	O	O	O	O	O
I will consider the food store my first choice to buy services.	O	O	O	O	O	O	O

	1 Not at all	2	3	4	5	6	7 Very much
Given the choice, I will do more business with the food store in the next few years.	O	O	O	O	O	O	O
Given the choice, I will do less business with the food store in the next few years	O	O	O	O	O	O	O

Please indicate your likelihood of purchasing from the above store

	1 Not at all	2	3	4	5	6	7 Very much
How likely are you to buy food from this store?	O	O	O	O	O	O	O
How willing are you to buy food from this store?	O	O	O	O	O	O	O
Please click on number 3	O	O	O	O	O	O	O

Considering the picture and the scenario, please answer the questions below.

You have just entered a food store to buy takeouts. You see that the sales associate **is NOT wearing protective equipment** whilst serving a customer **NOT behind a protective screen**. There is a second customer waiting to be served who is **NOT maintaining social distance**.

If you entered the food store shown in the above picture, please indicate how you would feel by answering the questions below

Uncomfortable	O	O	O	O	O	O	Comfortable
Very tensed	O	O	O	O	O	O	Very relaxed
Insecure	O	O	O	O	O	O	Secure
Worried	O	O	O	O	O	O	Worry free
Distressed	O	O	O	O	O	O	Calm
Turbulent	O	O	O	O	O	O	Serene
Troublesome	O	O	O	O	O	O	Peace of mind

Please answer the following questions in relation to the image and scenario above

	Extremely unlikely	Moderately unlikely	Slightly unlikely	Neither likely nor unlikely	Slightly likely	Moderately likely
The thought of purchasing food from this store makes me feel psychologically uncomfortable	○	○	○	○	○	○
The thought of purchasing food from this store gives me a feeling of unwanted anxiety	○	○	○	○	○	○
The thought of purchasing food from this store causes me to experience unnecessary tension	○	○	○	○	○	○

Please answer the following question in relation to the image and scenario above:

	Extremely unlikely	Moderately unlikely	Slightly unlikely	Neither likely nor unlikely	Slightly likely	Moderately likely	Extremely likely
One concern I have about purchasing from this food store is that I will catch coronavirus, due to safety measures not being followed	○	○	○	○	○	○	○
Please select extremely unlikely	○	○	○	○	○	○	○
My purchase of food from this store could lead to some uncomfortable physical side-effects such as sneezing, couch, fever like Covid-19 symptoms	○	○	○	○	○	○	○

	Extremely unlikely	Moderately unlikely	Slightly unlikely	Neither likely nor unlikely	Slightly likely	Moderately likely	Extremely likely
When I contemplate purchasing food from this store, I become concerned about potential physical risks associated with the store	◯	◯	◯	◯	◯	◯	◯

Manipulation check

These page timer metrics will not be displayed to the recipient.

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Thinking back to the image of the food store and information about the image:

How much do you think the food retailer is following safety precautions against COVID 19?

Not at all ◯ ◯ ◯ ◯ ◯ ◯ ◯ Very much

Do you agree that the food retailer in the picture is implementing health and safety measurements?

Strongly agree	Agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Disagree	Strongly disagree
◯	◯	◯	◯	◯	◯	◯

The following statements relate to the store you have been evaluating. I felt the store was: (*please select the appropriate circle for each line*)

Colourful	O	O	O	O	O	O	O	Drab
Negative	O	O	O	O	O	O	O	Positive
Stimulating	O	O	O	O	O	O	O	Boring
Attractive	O	O	O	O	O	O	O	Unattractive
Tense	O	O	O	O	O	O	O	Relaxed
Comfortable	O	O	O	O	O	O	O	Uncomfortable
Depressing	O	O	O	O	O	O	O	Cheerful
Good	O	O	O	O	O	O	O	Bad
Unlively	O	O	O	O	O	O	O	Lively
Bright	O	O	O	O	O	O	O	Dull
Unmotivating	O	O	O	O	O	O	O	Motivating
Pleasant	O	O	O	O	O	O	O	Unpleasant

Per week, how frequently do you buy take out? (i.e., Burger King, McDonalds, Kebabs, Pizza, Sushi)

O Never
O Less than 1 time per week
O Once a week
O 2-3 times per week
O 4-5 times per week
O 6-7 times per week
O more than 8 times per week

Awareness_Check

What do you think the purpose of this experiment was?

[text area]

What do you think the hypotheses (questions) being tested in this study are?

[text area]

Demographic

What is your sex?

○ Male
○ Female

What is your families yearly income?

○ $140,001 or above. (15)
○ $130,001 - 140,000 (14)
○ $120,001 - 130,000 (13)
○ $110,001 - 120,000 (12)
○ $100,001 - 110,000 (11)
○ $90,001 - 100,000 (10)
○ $80,001 - 90,000 (9)
○ $70,001 - 80,000 (8)
○ $60,001 - 70,000 (7)
○ $50,001 - 60,000 (6)
○ $40,001 - 50,000 (5)
○ $30,001 - 40,000 (4)
○ $20,001 - 30,000 (3)
○ $10,001 - 20,000 (2)
○ $0 - 10,000 (1)

Appendix D–1: Independent sample test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		Lower	Upper
DV_purchase_likelihood_avg_1	Equal variances assumed	28.292	0.000	5.173	114	0.000	1.46552	0.28333		0.90425	2.02679
	Equal variances not assumed			5.173	93.273	0.000	1.46552	0.28333		0.90291	2.02813

Group Statistics

	Scenario	N	Mean	Std. Deviation	Std. Error Mean
DV_purchase_likelihood_avg_1	mask,glass,social distance	58	5.4569	1.10931	.14566
	no mask, no glass, no social distance	58	3.9914	1.85077	.24302

Appendix D–2: Independent sample test

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | | | | | | | | 95% Confidence Interval of the Difference | |
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
DV_Store_loyalty_intentions_avg	Equal variances assumed	44.094	.000	4.749	114	.000	1.32759	.27957	.77375	1.88142
	Equal variances not assumed			4.749	88.085	.000	1.32759	.27957	.77200	1.88317

Group Statistics

	Scenario	N	Mean	Std. Deviation	Std. Error Mean
DV_Store_loyalty_intentions_avg	mask,glass,social distance	58	5.2586	1.01843	.13373
	no mask, no glass, no social distance	58	3.9310	1.86980	.24552

Appendix E -1: Sequential mediation of perceived risk and psychological comfort on store loyalty intentions

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5
*****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**********************************************************************
****
Model  : 6
    Y  : DVStrlyl
    X  : IV_scena
   M1  : DVpercei
   M2  : DV_psych

Sample
Size:  116

**********************************************************************
****
OUTCOME VARIABLE:
 DVpercei

Model Summary
          R         R-sq        MSE          F         df1         df2
p
      .1860      .0346       .8002     4.0864      1.0000    114.0000
.0456

Model
              coeff         se          t          p         LLCI
ULCI
constant      5.2804      .2626     20.1044       .0000      4.7601
5.8007
IV_scena      -.3358      .1661     -2.0215       .0456      -.6649     -
.0067

Standardized coefficients
              coeff
IV_scena      -.3704

**********************************************************************
****
OUTCOME VARIABLE:
 DV_psych

Model Summary
          R         R-sq        MSE          F         df1         df2
p
      .7069      .4997      1.2666    56.4370      2.0000    113.0000
.0000

Model
```

	coeff	se	t	p	LLCI ULCI
constant	1.6395	.7045	2.3271	.0217	.2437 3.0352
IV_scena	-1.0556	.2127	-4.9627	.0000	-1.4770 - .6342
DVpercei	.9788	.1178	8.3068	.0000	.7454 1.2122

Standardized coefficients

	coeff
IV_scena	-.6692
DVpercei	.5625

****
****

OUTCOME VARIABLE:
 DVStrlyl

Model Summary

R	R-sq	MSE	F	df1	df2 p
.8340	.6956	.8413	85.2991	3.0000	112.0000 .0000

Model

	coeff	se	t	p	LLCI ULCI
constant	.0226	.5878	.0384	.9695	-1.1420 1.1871
IV_scena	-.2574	.1913	-1.3452	.1813	-.6364 .1217
DVpercei	.3583	.1219	2.9395	.0040	.1168 .5997
DV_psych	.6863	.0767	8.9508	.0000	.5343 .8382

Standardized coefficients

	coeff
IV_scena	-.1569
DVpercei	.1980
DV_psych	.6598

*************************** TOTAL EFFECT MODEL
****

OUTCOME VARIABLE:
 DVStrlyl

Model Summary

R	R-sq	MSE	F	df1	df2 p
.4064	.1651	2.2667	22.5494	1.0000	114.0000 .0000

Model

	coeff	se	t	p	LLCI ULCI
constant	6.5862	.4420	14.8994	.0000	5.7105 7.4619
IV_scena	-1.3276	.2796	-4.7486	.0000	-1.8814 - .7738

```
Standardized coefficients
              coeff
IV_scena     -.8092


*************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y
**************


Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI
c_ps
    -1.3276      .2796    -4.7486      .0000    -1.8814     -.7738
-.8092


Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI
c'_ps
     -.2574      .1913    -1.3452      .1813     -.6364      .1217
-.1569


Indirect effect(s) of X on Y:
          Effect      BootSE    BootLLCI    BootULCI
TOTAL    -1.0702       .2775    -1.6399      -.5490
Ind1      -.1203       .0761     -.2969      -.0029
Ind2      -.7244       .2020    -1.1506      -.3518
Ind3      -.2256       .1239     -.4921      -.0105


Partially standardized indirect effect(s) of X on Y:
          Effect      BootSE    BootLLCI    BootULCI
TOTAL     -.6524       .1464     -.9382      -.3675
Ind1      -.0733       .0461     -.1824      -.0018
Ind2      -.4415       .1112     -.6716      -.2313
Ind3      -.1375       .0717     -.2866      -.0068


Indirect effect key:
Ind1 IV_scena     ->     DVpercei     ->     DVStrlyl
Ind2 IV_scena     ->     DV_psych     ->     DVStrlyl
Ind3 IV_scena     ->     DVpercei     ->     DV_psych     ->     DVStrlyl


********************** ANALYSIS NOTES AND ERRORS
************************


Level of confidence for all confidence intervals in output:
  95.0000


Number of bootstrap samples for percentile bootstrap confidence
intervals:
  5000


NOTE: Standardized coefficients for dichotomous or multicategorical X
are in
      partially standardized form.


WARNING: Variables names longer than eight characters can produce
incorrect output
when some variables in the data file have the same first eight
characters. Shorter
variable names are recommended. By using this output, you are
accepting all risk
and consequences of interpreting or reporting results that may be
incorrect.


------ END MATRIX -----
```

Appendix E -2: Reverse mediation of perceived risk and psychological comfort on store loyalty intentions

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5
****************

          Written by Andrew F. Hayes, Ph.D.        www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

************************************************************************
****
Model  : 6
    Y  : DVStrlyl
    X  : IV_scena
   M1  : DV_psych
   M2  : DVpercei

Sample
Size:  116

************************************************************************
****
OUTCOME VARIABLE:
 DV_psych

Model Summary
          R         R-sq        MSE          F          df1         df2
p
      .4407       .1942      2.0221     27.4798      1.0000    114.0000
.0000

Model
            coeff          se           t           p         LLCI
ULCI
constant     6.8079       .4175     16.3057        .0000      5.9808
7.6350
IV_scena    -1.3842       .2641     -5.2421        .0000     -1.9073     -
.8611

************************************************************************
****
OUTCOME VARIABLE:
 DVpercei

Model Summary
          R         R-sq        MSE          F          df1         df2
p
      .6329       .4006       .5012     37.7631      2.0000    113.0000
.0000

Model
            coeff          se           t           p         LLCI
ULCI
constant     2.6434       .3795      6.9664        .0000      1.8917
3.3952
```

```
IV_scena       .2004       .1465      1.3681       .1740      -.0898
.4905
DV_psych       .3873       .0466      8.3068       .0000       .2950
.4797
```

```
************************************************************************
****
OUTCOME VARIABLE:
 DVStrlyl
```

Model Summary
```
          R         R-sq        MSE          F          df1          df2
p
      .8340       .6956       .8413     85.2991      3.0000     112.0000
.0000
```

Model
```
              coeff         se          t          p         LLCI
ULCI
constant      .0226       .5878       .0384       .9695      -1.1420
1.1871
IV_scena     -.2574       .1913     -1.3452       .1813      -.6364
.1217
DV_psych      .6863       .0767      8.9508       .0000       .5343
.8382
DVpercei      .3583       .1219      2.9395       .0040       .1168
.5997
```

```
***************** DIRECT AND INDIRECT EFFECTS OF X ON Y
*****************
```

Direct effect of X on Y
```
    Effect         se          t          p         LLCI         ULCI
    -.2574       .1913     -1.3452       .1813      -.6364        .1217
```

Indirect effect(s) of X on Y:
```
          Effect      BootSE     BootLLCI     BootULCI
TOTAL    -1.0702       .2770      -1.6278      -.5506
Ind1      -.9499       .2556      -1.4841      -.4821
Ind2       .0718       .0528       -.0187       .1877
Ind3      -.1921       .0721       -.3458      -.0587
```

Indirect effect key:
```
Ind1 IV_scena    ->      DV_psych    ->      DVStrlyl
Ind2 IV_scena    ->      DVpercei    ->      DVStrlyl
Ind3 IV_scena    ->      DV_psych    ->      DVpercei    ->      DVStrlyl
```

```
*********************** ANALYSIS NOTES AND ERRORS
***********************
```

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence
intervals:
  5000

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incorrect output
when some variables in the data file have the same first eight
characters. Shorter

variable names are recommended. By using this output, you are accepting all risk
and consequences of interpreting or reporting results that may be incorrect.

------ END MATRIX -----

Appendix E -3: Sequential mediation of perceived risk and psychological comfort on shoppers' purchase likelihood

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5
****************


          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

************************************************************************
****
Model  : 6
    Y  : DV_purch
    X  : IV_scena
   M1  : DVpercei
   M2  : DV_psych

Sample
Size:  116


************************************************************************
****
OUTCOME VARIABLE:
 DVpercei

Model Summary
         R         R-sq        MSE          F          df1         df2
p
     .1860      .0346       .8002      4.0864      1.0000    114.0000
.0456

Model
            coeff         se          t          p         LLCI
ULCI
constant     5.2804      .2626     20.1044       .0000      4.7601
5.8007
IV_scena     -.3358      .1661     -2.0215       .0456      -.6649     -
.0067


************************************************************************
****
OUTCOME VARIABLE:
 DV_psych

Model Summary
         R         R-sq        MSE          F          df1         df2
p
     .7069      .4997      1.2666     56.4370      2.0000    113.0000
.0000

Model
            coeff         se          t          p         LLCI
ULCI
constant     1.6395      .7045      2.3271       .0217      .2437
3.0352
```

```
IV_scena      -1.0556     .2127     -4.9627      .0000     -1.4770     -
.6342
DVpercei       .9788      .1178      8.3068      .0000      .7454
1.2122
```

```
**********************************************************************
****
OUTCOME VARIABLE:
 DV_purch
```

Model Summary

R	R-sq	MSE	F	df1	df2	p
.8651	.7484	.7360	111.0649	3.0000	112.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.8608	.5498	1.5657	.1202	-.2285	1.9500
IV_scena	-.2321	.1789	-1.2970	.1973	-.5866	.1225
DVpercei	-.0012	.1140	-.0109	.9913	-.2271	.2246
DV_psych	.8914	.0717	12.4297	.0000	.7493	1.0334

```
************************** TOTAL EFFECT MODEL
***************************
OUTCOME VARIABLE:
 DV_purch
```

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4360	.1901	2.3280	26.7549	1.0000	114.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	6.9224	.4480	15.4525	.0000	6.0350	7.8099
IV_scena	-1.4655	.2833	-5.1725	.0000	-2.0268	-.9042

```
************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y
**************
```

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI
-1.4655	.2833	-5.1725	.0000	-2.0268	-.9042

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.2321	.1789	-1.2970	.1973	-.5866	.1225

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	-1.2334	.2667	-1.7576	-.7213
Ind1	.0004	.0372	-.0797	.0756

```
Ind2       -.9409       .2160    -1.3705       -.5303
Ind3       -.2930       .1515     -.6138       -.0127


Indirect effect key:
Ind1 IV_scena    ->    DVpercei    ->    DV_purch
Ind2 IV_scena    ->    DV_psych    ->    DV_purch
Ind3 IV_scena    ->    DVpercei    ->    DV_psych    ->    DV_purch


*********************** ANALYSIS NOTES AND ERRORS
***********************

Level of confidence for all confidence intervals in output:
  95.0000


Number of bootstrap samples for percentile bootstrap confidence
intervals:
  5000


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and consequences of interpreting or reporting results that may be
incorrect.

------ END MATRIX -----
```

Appendix E -4: Reverse mediation of perceived risk and psychological comfort on shoppers' purchase likelihood

```
Run MATRIX procedure:

****************** PROCESS Procedure for SPSS Version 3.5
****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
     Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**********************************************************************
****
Model  : 6
     Y  : DV_purch
     X  : IV_scena
    M1  : DV_psych
    M2  : DVpercei

Sample
Size:  116

**********************************************************************
****
OUTCOME VARIABLE:
 DV_psych

Model Summary
          R         R-sq        MSE         F          df1         df2
p
      .4407       .1942      2.0221     27.4798      1.0000    114.0000
.0000

Model
               coeff        se          t          p          LLCI
ULCI
constant     6.8079       .4175     16.3057       .0000      5.9808
7.6350
IV_scena    -1.3842       .2641     -5.2421       .0000     -1.9073      -
.8611

**********************************************************************
****
OUTCOME VARIABLE:
 DVpercei

Model Summary
          R         R-sq        MSE         F          df1         df2
p
      .6329       .4006       .5012     37.7631      2.0000    113.0000
.0000

Model
               coeff        se          t          p          LLCI
ULCI
constant     2.6434       .3795      6.9664       .0000      1.8917
3.3952
```

```
IV_scena        .2004       .1465       1.3681       .1740      -.0898
.4905
DV_psych        .3873       .0466       8.3068       .0000       .2950
.4797
```

****
****
OUTCOME VARIABLE:
 DV_purch

Model Summary
```
          R         R-sq        MSE          F         df1         df2
p
      .8651       .7484       .7360    111.0649      3.0000    112.0000
.0000
```

Model
```
              coeff         se          t          p         LLCI
ULCI
constant       .8608       .5498       1.5657       .1202      -.2285
1.9500
IV_scena      -.2321       .1789      -1.2970       .1973      -.5866
.1225
DV_psych       .8914       .0717      12.4297       .0000       .7493
1.0334
DVpercei      -.0012       .1140       -.0109       .9913      -.2271
.2246
```

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y
****

Direct effect of X on Y
```
     Effect          se          t          p         LLCI         ULCI
     -.2321       .1789      -1.2970       .1973      -.5866        .1225
```

Indirect effect(s) of X on Y:
```
          Effect      BootSE    BootLLCI    BootULCI
TOTAL    -1.2334       .2705    -1.7725      -.7270
Ind1     -1.2338       .2722    -1.7669      -.7226
Ind2      -.0002       .0231     -.0495       .0489
Ind3       .0007       .0531     -.1117       .1004
```

Indirect effect key:
```
Ind1 IV_scena     ->    DV_psych     ->    DV_purch
Ind2 IV_scena     ->    DVpercei     ->    DV_purch
Ind3 IV_scena     ->    DV_psych     ->    DVpercei    ->    DV_purch
```

********************** ANALYSIS NOTES AND ERRORS
****

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence
intervals:
  5000

WARNING: Variables names longer than eight characters can produce
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------ END MATRIX -----