

# Perceived crowding and behavioural intention of restaurant customers – the mediating role of positive emotions

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### ABSTRACT

The aim of this research was to determine the extent of the positive emotions that restaurant patrons experience as well as their behavioural intention given different levels of crowding in a favourite restaurant. Further to this, the objective was to determine if these positive emotions mediate the relationship between perceived crowding and behavioural intention, and if attitudes towards crowding are controlled. The Stimulus-Organism-Response model was proposed as a theoretical grounding for the study, including a randomised experimental model with a treatment and control group that were allocated scenarios to provide intended levels of crowding. The analysis that ensued revealed that crowding does not affect positive emotions or behavioural intentions, and crowding on a restaurant patron's behavioural intention is not mediated by the emotions held towards the eatery. Consequently, possible explanations and implications of these findings are presented.

#### **KEYWORDS**

Crowding, positive emotions, behavioural intentions, restaurant.

# DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

**Ronell Pather** 

07 November 2018

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## **MOTIVATION OF JOURNAL CHOICE**

The journal chosen for this research article is the Journal of Hospitality and Tourism Research which is Scopus indexed and has an Academic Journal Guide quality rating of 2. The type of research, the topic of the research as well as the journal origin of the referenced articles in this research were all taken under consideration when choosing this journal. This type of research refers to a service setting, particularly a restaurant environment which forms part of the hospitality and tourism industry as indicated by the type research contained in the articles that can be found in the journal. This research article references a few journals within the hospitality and tourism industry which include the International Journal of Hospitality Management, the International Journal of Contemporary Hospitality & Tourism Research. This research article aims to understand the emotional and behavioural intention outcomes as a result of crowding in a restaurant setting which rests within the types of research published in this journal.

## LITERATURE REVIEW CHAPTER

## 1. Introduction

This chapter provides a literature review for the study, outlining the key constructs together with their definitions and an exposition of their interrelationships. The main objective of this research paper is to determine the extent of the positive emotional outcomes that customers experience as well as their behavioural intention given different levels of crowding in a restaurant. More specifically, the objective is to determine if these positive emotional outcomes mediate the relationship between perceived crowding and behavioural intention, and if attitudes towards crowding are controlled.

The review commences with introducing the theory grounding the study and furthermore provides an exposition of the application of the theory within the context of this study. This is followed by an overview of each of the study's constructs – namely perceived crowding, positive emotional outcomes, and behavioural intentions. This section concludes with the conceptual model for the study and the hypotheses formulated for the study.

## 2. S-O-R model

This study is grounded in the S-O-R model, developed by Mehrabian and Russell (1974), and is with explaining responses to environmental stimuli where the authors put forward that these stimuli lead to an emotional reaction, which is followed by a behavioural response. Therefore, the S (Stimuli) – O (Emotional reaction) – R (Behavioural response) model refers to three emotional reactions that are proposed to occur as a result of the environmental stimulus (S) – namely pleasure arousal and dominance (O), with the resultant behavioural response being either approach or avoidance (R) (Jang & Namkung, 2009; Mehrabian & Russell,1974; Vieira, 2013). This model has been used in numerous studies where behavioural responses to environments in a service, retail, tourism and leisure setting have been studied (Brunner-Sperdin, Peters & Strobl, 2012; Chen, Peng & Hung, 2015; Jang & Namkung, 2009; Sherman, Mathur & Smith, 1997; Turley & Milliman, 2000). Figure 1 provides a graphic depiction of the S-O-R model, where the stimulus environment acts as stimulus eliciting an emotion that result in a behavioural response.

# Figure 1: The Mehrabian-Russell model – the S-O-R model



Source: Mehrabian and Russell (1974).

The first component of the model, the environmental stimuli, may include stimuli such as service quality, space, design, colour, lighting, music and food quality (Jang & Namkung, 2009). Research on atmospherics considers environmental stimuli to include external variables relating to the building of the retail outlet; general interior variables that include lighting, colour and flooring; layout and design variables regarding the placement of fixtures inside the store in relation to other fixtures; point-of-purchase variables that comprise sales and marketing material; and human variables, including crowding (Turley & Milliman, 2000). In this study, perceived crowding was considered as the environmental stimuli in reference to the S-O-R model, where the environment was manipulated to depict two varying scenarios of perceived crowding from which observations were made. Perceived crowding has been referred to in other similar studies as environmental stimulus (Mehta, Sharma & Swami, 2013).

According to Vieira (2013) as well as Mehrabian and Russell (1974), environmental stimulus leads to a change in a person's internal or organismic state in the form of emotional response. This has been tested in other studies where the organism portion of the model includes positive and negative emotions (Jang & Namkung, 2009); personal situation and shopping orientation (Turley & Milliman, 2000); pleasure and arousal (Sherman *et al.*, 1997); and satisfaction (Heung & Gu, 2012). In this study, the organism referred to the positive emotions that were hypothesised to emerge from the environmental stimuli of perceived crowding.

The third and last component of the model relates to the response, in the form of approach or avoidance behaviour (Kühn & Petzer, 2018; Vieira, 2013). Theory suggests that the extent of arousal and pleasure experienced in the organism element will determine the approach or avoidance behaviour in the response component (Vieira, 2013). Furthermore, Donovan and Rossiter (1982, p. 37) describe four aspects of approach and avoidance behaviours: a desire to stay or leave the environment;

exploring the environment or remaining unresponsive to the environment; a desire to communicate with other people in this environment instead of a lack thereof, and ignoring incoming communication from others; and "the degree of enhancement (approach) or hindrance (avoidance) of *performance and satisfaction* with task performances". Regarding this final component, the response element in this study refers to the behavioural intention of the respondents given the perceived crowding experienced as environmental stimuli as well as the positive emotions encountered in the organism phase.

#### 3. Perceived crowding

Crowding typically refers to the proximity of people or objects to an individual and in prior studies, but consequently the two types of perceived crowding have been distinguished. Firstly, spatial crowding refers to the environmental factors that may influence one's perception of crowding – for instance, in a restaurant, spatial crowding could relate to the tables, chairs and fixtures that are not human in nature, but rather objects surrounding an individual (Hock & Bagchi 2018; Machleit, Eroglu & Mantel, 2000; Machleit, Kellaris & Eroglu, 1994). Secondly, social density or social crowding refers to the proximity of other individuals to one another as well as the level of interaction between them (Hock & Bagchi, 2018; Machleit *et al.*, 1994; Machleit *et al.*, 2000). Maeng, Tanner and Soman (2013, p. 739) describe social crowding as "a large group of people gathered together such that the likelihood of an individual's personal space being violated is significantly increased". This study focussed on social and human density in a restaurant, as environmental cues from both forms of crowding were used to create the stimuli of the restaurant environment.

The environment a person is exposed to has also previously been referred to as "atmospherics", and is a familiar and important concept to restaurateurs. This is because it has been found that a patron's emotional reaction to a service environment with atmospheric elements can be linked to consumption within that service environment (Donovan, Rossiter, Marcoolyn & Nesdale, 1994; Foxall & Greenley, 1999; Ha & Jang, 2012; Sharma & Strafford, 2000). Whilst atmospherics include elements like store window type, lighting, music and a combination of these variables, crowding is also an element of atmospherics and was used as the environmental stimuli in this study using the Mehrabian-Russell (M-R) model (Heung & Gu, 2012).

According to Mehta (2013), perceived crowding is a subjective view on spatial density as experienced by, for example, a restaurant patron. In their study on mall crowding, Baker and Wakefield (2012) state that perceived crowding is referred to negatively, where the words confined, constrained and restricted are strongly associated with the term.

### 4. Emotions

In their study on the role of emotions in marketing, Bagozzi, Gopinath and Nyer (1999, p. 184) described emotions as "mental states of readiness that arise from appraisals of events or one's own thoughts". According to Fournier (1998), the emotional bond with a service provider is more closely linked to purchase intentions in the future, than with other constructs like satisfaction. Furthermore, several researchers conclude that the main determinants of consumer behaviour in the long term are consumption, satisfaction and emotion (Allen, Machleit & Kleine, 1992; Allen, Machleit, Kleine & Notani, 2005; Anderson & Sullivan, 1993; Cronin & Taylor, 1992; Han, Back & Barrett, 2009).

Numerous studies have stated that the need to gain an understanding of emotions in the service environment is crucial for those who operate in them, as emotions can be linked to purchase and consumption behaviour within service environments (Brunner-Sperdin *et al.*, 2012; Donovan *et al.*, 1994; Foxall & Greenley, 1999; Ha & Jang, 2012; Sharma & Strafford, 2000). Previous research has explored the role of positive and negative emotions in determining behavioural intention in a given environment. The focus of this study is positive emotions that, according to Tsaur, Luoh and Syue (2015, p. 117), can be defined as "a type of state created by the pre-existing mood of an organism tempered by responses to its surroundings".

Ladhari, Brun and Morales (2008) considered the determinants of dining satisfaction and post-dining behavioural intention and found that dining satisfaction stems from positive emotions and perceptions of service quality, and that positive emotions have more of an effect on satisfaction; as well as that satisfaction impacts recommendation, retention and willingness to pay more, which are forms of behavioural intention. Using the M-R model, this study examined the positive emotional outcomes of perceived crowding and tested for the existence of positive outcomes for a given level of crowding. According to Jang and Namkung (2009), there seems to be an avoidance in expressing negative emotions, which takes away from its effect on behavioural intention – a further reason to focus on positive emotions within this study (Tsaur *et al.*, 2015). The positive emotions this research focussed on were pleasure, excitement, contentment, refreshment, relaxation, and interest, which were adapted from a similar study by which was found to be appropriate for the restaurant environment (Izard, 1977; Ladhari, Brun & Morales, 2008; Jang and Namkung, 2009; Tsaur *et al.*, 2015). Izard (1977) states that pleasure experienced by an individual relates to a decrease in tension; excitement is experienced when there is a reduction in fear in an individual; and that excitement can then be compounded action. Izard (1977), as well as Liu and Jang (2009), refer to contentment as a sense of joy and confidence, additionally accompanied by feelings of being loved. Refreshment relates to feeling refreshed and cool, where relaxation refers to an individual experiencing peacefulness, comfort, and restfulness (Chen *et al.*, 2015; Izard, 1977; Jang & Namkung, 2009). The last item on the emotional scale is interest, which can be described as relating to hope and expectation (Izard, 1997; Prayag, Hosany, Muskat & Del Chiappa, 2017).

## 5. Behavioural intention

Behavioural intention can be defined as the extent to which a person will engage in a certain type of behaviour (Jani & Han, 2011; Oliver, 1997). Warshaw and Davis (as cited in Jang & Namkung, 2009, p. 454) state that behavioural intention is "the degree to which a person has formulated conscious plans to perform or not perform some specified future behaviour". Jang and Namkung (2009) also relate to previous studies where behavioural intention is understood to be an indicator of actual behaviour, thus behavioural intention was used in this study as an outcome of perceived crowding. Behavioural intention in previous studies specifically focusses on intention to return, communicate positive word of mouth (WOM) and recommendations to others, as well as willingness to pay more (Heung & Gu, 2012).

Ryu and Jang (2007), in their research on behavioural intentions through emotions in upscale restaurants, discovered by also using the S-O-R model, that although pleasure and arousal notably impacted behavioural intention, pleasure was more significant with its effect on the behavioural intention response. Within this study, the focus on behavioural intention as a response following the hypothesised positive emotions will involve positive WOM regarding the restaurant in question, recommendation to others considering the experience, and intention to revisit this restaurant in future (Tsaur *et al.*, 2015).

WOM can be described as a type of communication between and among consumers that is interpersonal in nature. In a practical sense, this can refer to an individual promoting an organisation for its products or services as a result of intended marketing efforts (Longart, 2010). Tsaur *et al.* (2015) allude to recommendation relating to an individual suggesting a restaurant to friends and family. A recommendation regarding dining out is an important driver in decision-making when choosing a restaurant to eat at (Longart, 2010). Intention to revisit refers to an individual who would return to the restaurant in the future (Tsaur *et al.*, 2015).

## 6. Conceptual model development

## 6.1 Perceived crowding and behavioural intention

Consumers in retail or even restaurant patrons are in some way influenced by the environment around them; this may be in the form of individuals around them, otherwise known as social crowding (Maeng *et al.*, 2013). This influence can present itself through approach or avoidance behaviour in terms of visitation, amount paid and purchased, and recommending that particular place where crowding is experienced to another individual (Tsaur *et al.*, 2015; Turley & Milliman, 2000; Žabkar, Brenčič & Dmitrović, 2010). The link between perceived crowding and behavioural intention in relation to the S-O-R model can be described as the link between the stimulus and the response components.

Previous research has shown positive and negative outcomes arise from perceived crowding. Looking at negative outcomes, studies in this field indicate that the higher the level of crowding, the lower the chances of the shoppers remaining in the store in question and even determine their final consumption choices (Eroglu, Machleit, and Barr, 2005; Hui & Bateson, 1991; Maeng *et al.*, 2013). Further research has proven that crowding has negative outcomes in terms of satisfaction, browsing, amount of purchases, shopping being postponed, choosing another store, excitement, and perceptions of quality (Eroglu & Machleit, 1990; Grossbart, Hampton, Rammohan & Lapidus, 1990; Turley & Milliman, 2000; Wakefield & Blodgett, 1994).

In their study on retail crowding, emotions and outcomes in a retail environment, Li, Kim and Lee (2009) found that human crowding positively influenced shoppers' feelings. Crowding in a retail setting can lead to positive behaviour where there are many individuals in a shopping environment that can be perceived as exciting (Li *et al.*, 2009; Wakefield & Blodgett, 1994).

The level of crowding that may lead to unfavourable behavioural intentions in a shopping retail environment could be the same level that would lead to preferable and

favourable behavioural intentions in a restaurant environment. Given that the outcomes may differ depending on the context of the environmental stimuli, the below hypothesis has been formulated:

 $H_1$ : Crowding in a restaurant affects customers' behavioural intention towards the restaurant.

# 6.2 Perceived crowding and positive emotions

The first link in the S-O-R model connects the environmental stimuli to the organismic variable – in this case, it relates to perceived crowding and positive emotions. The level of perceived crowding experienced by a shopper in a retail context may lead to negative emotions being encountered, which is exacerbated when the crowding is unexpected (Hui & Bateson, 1991; Machleit *et al.*, 2000; Nagar & Pandey, 1987). In a study by Li *et al.* (2007), it was found that whilst human crowding positively affected emotions in a hypermarket retail setting, spatial crowding negatively affected positive emotions in the same setting.

In a study by Machleit *et al.* (2000), spatial crowding elicited positive emotions of interest and joy, whilst human and spatial crowding significantly increased all of the negative emotional states tested. Liu and Jang (2009) affirm that dining atmospherics, which included the element of crowding, significantly influenced positive emotions, and that positive emotions was a key determinant in behavioural intention. Based on these findings, the following hypothesis has been formulated to understand how perceived crowding in a restaurant setting may effect an individual's emotions in this setting:

H<sub>2</sub>: Crowding in a restaurant effects customers' emotions towards the restaurant.

# 6.3 Perceived crowding, positive emotions, and behavioural intention

In keeping with the S-O-R model, one of the aims of this research is to determine if the organism component (emotions) mediates the relationship between perceived crowding (environmental stimuli) and behavioural intentions (response component). Emotions as a mediating variable has been examined in several related studies, including Jang and Namkung's (2009), where positive emotions was confirmed as a mediating variable between store atmospherics and future behavioural outcomes. Additionally, in the study by Liu and Jang (2009), where crowding was included as an element of dining atmospherics, dining atmospherics was found to be a significant variable of influence of positive emotions, and positive emotions was also found to be a

key determinant of behavioural intention within this study. Finally, according to Chen *et al.* (2015), positive emotions was confirmed as a mediating variable between food quality and loyalty as well as atmospherics and loyalty, with negative emotions also being confirmed as a mediating variable between service quality and loyalty, as well as other customer influences and loyalty in a luxury dining restaurant setting.

In marketing literature, Argyriou & Melewar, 2011, suggest that attitudes exist in stored memory that is in the form of "object-related associations" (p. 431), and thus attitudes are relatively enduring and can be called from memory when required, influencing perceptions (Eagly & Chaiken, 1993; Katz, 1960; Shavitt, 1990). Considering the impact of attitudes on perceptions, attitudes as a variable needed to be controlled due to the perception of environments being affected by one's preconceived notions towards crowding regarding attitudes and tolerance, which was similarly indicated by Noone and Mattila (2009b). Therefore, the final hypothesis formulated for the study states that:

 $H_3$ : The effect of perceived crowding on customers' behavioural intention is mediated by the emotions towards the restaurant if attitudes towards perceived crowding is controlled.

Figure 2 provides the conceptual model for the study.



## Figure 2: Conceptual model

Control variable: Attitude towards perceived crowding.

# 7. Conclusion

This literature review outlined the model within which this study is grounded, the S-O-R model, which considers the following components: environmental stimuli, organism, and response. Additionally, this chapter included an overview of each of the constructs tested in this study, namely perceived crowding, positive emotions, and behavioural intention. The constructs were then integrated into the S-O-R model within each of its components.

Within the literature review, references were made to retail-focussed studies and some restaurant-based studies, which considered one or more of the elements that were tested in this research. The positive emotional outcomes and behavioural intention outcomes as a result of perceived crowding in a social family sit-down restaurant environment, with emotions being a mediating variable between perceived crowding and behavioural intention, has not been conducted previously. Therefore, the literature went on to present the interrelationships between the constructs and the conceptual model of the study.

#### **RESEARCH METHODOLOGY CHAPTER**

#### 1. Research design

This study aimed to determine whether perceived crowding results in positive behavioural outcomes in the form of behavioural intentions, as well as the mediating role of positive emotions within a restaurant environment in South Africa. Due to the nature of this research, the philosophy followed was a positivism philosophy, which Saunders and Lewis (2012) describe as being able to predict outcomes through cause and effect cycles. This is pertinent to this research as the aim of collecting responses regarding restaurant experiences in a perceived crowded and non-crowded setting was to establish if the environments lead to positive emotional outcomes. Moreover, the goal was to determine if these outcomes mediate the relationship between perceived crowding and behavioural intention while controlling attitudes towards perceived crowding.

The research design is explanatory in its purpose, where the focus was on why a certain occurrence may take place through a single factor between subjects experimental design (De Vaus, 2001). The methodological choice for this research was a mono method, where a quantitative approach to collect data was adopted. According to Barnham (2015), quantitative research aims to ask the "what" and obtain facts on a particular topic, and the validity and reliability of data can be tested through quantitative methods. The study was experimental in nature and included two scenarios depicting two varying conditions of perceived crowding with all other variables remaining constant.

According to Sanders and Lewis (2012), the purpose of an experimental study is to investigate causal relationship. This relationship occurs when a change in one variable – the independent variable (two different levels of restaurant crowding) – causes a change in the dependent variable, that is positive emotions (Zikmund, 2013). The study is more accurately described as a single factor between subjects experimental design where different treatment conditions are randomly exposed to units of analysis within a study (Millsap & Maydeu-Olivares, 2009). The control group was exposed to a scenario describing an uncrowded restaurant environment, and the treatment group was exposed to a scenario to examine the effects of restaurant crowding on positive emotions and behavioural intention.

The scenarios informed the participants of the environments they needed to envision and they were then asked to complete a questionnaire based on these. The design, which was similar to the experimental design in the crowding study by Machleit *et al.* (2000), differed as instead of videos illustrating crowded and non-crowded environments of a book store, the scenarios described the environment of participants' favourite restaurants under two conditions. This research took place at a single point in time and is cross-sectional as data was recorded at a single point in time (Sekaran & Bougie, 2016).

# 2. Population

The population in this study was restaurant patrons who were 18 years or older and who visit a family sit-down restaurant at least once a month. In terms of the geography, the study focussed on restaurant patrons who visited their favourite restaurants at least once a month within Johannesburg. The focus was on those who frequented family sit-down restaurants for social occasions. Business dining occasions and quick-service restaurant dining were excluded from this study.

# 3. Unit of analysis

The unit of analysis is the entity or thing a study wants to describe or explain (Babbie, 2016). In this instance, the unit of analysis was restaurant patrons who regularly visited their favourite family restaurants for a sit-down meal for social occasions in the Johannesburg vicinity.

## 4. Sampling method and size

At times, one may select a sample on the basis of knowledge of the population or for the purpose of the study (Babbie, 2016), which is referred to as purposive or judgemental sampling. For this research, purposive non-probability sampling was relied upon, as data was collected from the entire population or representative of the entire population, and depended on the knowledge of the participants as well as the research to be conducted. The respondents were approached in person, and via email and social-media forums like WhatsApp, and were asked to indicate if they would be willing to participate in this research.

In establishing a sample size for the research paper, studies using similar methodologies were consulted. In their research on sensory consumption, Batra and Goshal (2017) achieved an average sample of 98 respondents in each of their four

studies relating to sensory consumption. Berry, Burton and Howlett (2018), in their experimental research design for a study on consumer retailer-related responses, had an average of 164 respondents across three studies. Machleit *et al.* (1994) in their study on human versus spatial dimensions included 111 respondents across three studies. Given these findings and Zikmund's (2013) confirmation that sample indications from previous studies may be used when establishing a sample size for a probability study, the sample size for the current study was 120 participants – 60 respondents per group with each being exposed to the different stimuli in the form of the two scenarios discussed. This sample size is an approximate average of the sample sizes achieved in the previous mentioned studies.

According to Kline (2005), power analysis can be used to determine the appropriate sample size for a study. Independent samples t-tests were conducted to compare groups within the research. Van Voorhis and Morgan (2007) indicate that 30 respondents within each cell translates into 80% power, which is sufficient for an ordinary study to test for differences and this paper aimed to achieve a sample of 60 respondents per cell, which is well within the minimum. Regression analysis was also used to determine hypothesised relationships between constructs – VanVoorhis and Morgan (2007) state that the rule of thumb is a minimum of 50 respondents and that the greater the number of independent variables, the larger the sample. There is only one independent variable in this study and the sample for each of the two cells is 60, where one group was exposed to the normal restaurant environment and the other group to the crowded restaurant environment – also well within the range of 50 (VanVoorhis & Morgan, 2007). In summary, it can be said that the sample size in this study is aligned with similar studies and is large enough to allow the use of appropriate statistical techniques to test the hypotheses formulated.

#### 5. Measurement instrument

An online self-administered questionnaire was utilised as a measurement instrument for this research and was structured as per below. A brief introduction to this research outlined the reason and aim of the research as well as the general composition of the online survey. The introduction explained that the respondents' participation is voluntary, they will not be forced to complete the survey, and their responses will be treated with complete confidentiality. An indication of the duration of the survey was also included, in addition to the contact details of the researcher and the supervisor. All questions in the online survey were closed-ended, except for those relating to the name of the restaurant visited and certain demographic questions. **Section A** – This section had screening questions to determine whether the individual meets the minimum criteria to proceed with the survey. The minimum criteria required respondents to be 18 years or older and that they visit their favourite family restaurant socially once a month.

**Section B** – This section requested demographic information, such as age, gender, education, and employment.

**Section C** – This section included a scenario depicting the intended environments. There were two scenarios – one per questionnaire – with the remainder of the survey being identical. One questionnaire described high levels of crowding and the other low levels of crowding in the respondent's favourite restaurant. Participants were randomly assigned to each of the treatment conditions portraying the restaurant environment with either a high level of crowding or an uncrowded environment – for example, if respondent one in the treatment group was given a highly crowded scenario, respondent two in the control group was provided with the uncrowded scenario (see table 1 below). The respondents were not given the option to revert back to the scenario later on in the questionnaire. Once the scenario was read, the respondent was prompted to move onto the next sections of the survey, where emotional outcomes, behavioural intention measures, the manipulation check and general attitudes towards perceived crowding scale type questions were asked based on the scenario described.

Table 1 below includes the scenarios used in this study as per the questionnaire the respondents viewed.

Table 1: Scenarios used to describe the different levels of crowding in a restaurant

Table 2 below provides insight into the cues included in each scenario and whether they were changed or remained constant across the two scenarios.

## Table 2: Experimental scenario cues

Element	Scenario 1 (not crowded)	Scenario 2 (crowded)
Restaurant	Favourite	Favourite
First observation	Not as busy as usual	Busier than usual
Second observation	Quite empty	Quite full
Time to be shown to table	No time at all	Few minutes
Seating	Different, seated further away	Different, seated closer
Atmosphere	Quiet	Vibey
		Part of place where
Feeling	Only ones there	things happen
		Not the only one with
Restroom area	Only one and quite deserted	lively conversation
Quality of food and service		
level	As expected	As expected

**Section D** – This section required respondents to complete questions relating to the positive emotional outcomes given the level of perceived crowding experienced in section C. This scale is a six-item, five-point Likert-type scale, where 1 represents "strongly disagree" and 5 signifies "strongly agree". The scales were adapted and used in a study by Tsaur *et al.* (2015), who measure positive emotions and behavioural intentions of customers in full-service restaurants.

**Section E** – This part examined respondents' behavioural intention in terms of intention to revisit and recommend the restaurant described in the scenario to others. This was measured using a three-item, five-point Likert-type scale adapted from a study by Tsaur *et al.* (2015), where 1 represents "strongly disagree", and 5 "strongly agree".

**Section F –** This component included a manipulation check based on the scenario the respondent viewed using a seven-point Likert-type scale, where 1 is not crowded at all and 7 is very crowded. According to Allen (2017), manipulation checks are required to ensure that the independent variable in the study has been manipulated effectively. The questionnaire was designed so that the word "crowding" did not appear until this section. Rather, crowding cues were utilised to depict the intended restaurant environments.

**Section G** – In empirical studies, certain variables limit the inference of causal relationships and must thus be controlled before the data-collection phase in the experimental design of the study or after the data collection in the analysis of the statistics phase (Nielsen & Raswant, 2018). Due to the perception of environments being affected by one's predisposition to crowding in terms of attitudes and tolerance for crowding, an attitude towards crowding measure was included in this study as a control variable (Machleit, Meyer & Eroglu, 2005; Noone & Mattila, 2009b). In this section, this was measured using the three-item, five-point Likert-type scale, where 1 represents "strongly agree" and 5 "strongly disagree", which was validated in the study by Machleit *et al.* (2005), used by Noone and Mattila (2009b), and adapted for use in this paper.

Table 3 below includes the scales and statements within each scale used as well as where these scales were adapted or adopted from.

Table 3: Scale items used to measure constructs

Construct and scale iter	ns	Source
	The overall feeling I get from	Adapted from Tsaur et
	this restaurant is pleasure	<i>al.</i> (2015)
	The overall feeling I get from	
	this restaurant is excitement	
	The overall feeling I get from	
Positivo omotions	this restaurant is contentment	
	The overall feeling I get from	
	this restaurant is refreshment	
	The overall feeling I get from	
	this restaurant is relaxation	
	The overall feeling I get from	
	this restaurant is interest	
	I would like to give positive	
	WOM regarding this restaurant	Adapted from Tsaur et
	in the future	<i>al.</i> (2015)
Behavioural intentions	I would like to come back to this	
Denavioural internions	restaurant in the future	
	I would like to recommend this	
	restaurant to my friends in the	
	future	
	I avoid crowded places	
	whenever possible	Adapted from Noone and
Attitude towards	A crowded place doesn't really	Mattila (2009b)
crowding	bother me	
	If I see a place that is crowded, I	
	won't even go inside	

## 6. Data gathering process

A pilot test was conducted among 20 respondents. This was carried out to ensure that the scenarios depicted the intended crowded and uncrowded environments, as well as to address any questionnaire design issues in preparation for the study.

Once the pilot tests were conducted, the questionnaires were distributed electronically, encouraging respondents to click on the link provided to participate in the survey. The surveys were self-administered, requiring the participants to follow a link provided in the communication, which redirected them to the online questionnaire on Survey Monkey, where simple instructions could be followed to complete the online questionnaire. Once the respondent arrived on the landing page of the questionnaire, he/she could view an introduction and purpose of the study. This section was followed by the screening questions, where eligible respondents were prompted to complete the questionnaire. The allocated data collection time was six weeks, considering the sample size and individuals' reluctance to participate. The response rate was monitored on an ongoing basis to ensure the minimum sample was achieved. The questionnaire allowed for one section at a time to be completed and the respondents were not allowed to navigate back in the survey.

# 7. Analysis approach

The data collected was analysed using IBM SPSS. This software programme was used to analyse data and perform statistical tests.

## 7.1 Validity and reliability

Validity in research measures the extent to which the findings in a study relate to its purpose and factors considered regarding validity are subject selection, history, testing, mortality, and ambiguity about causal direction (Saunders & Lewis, 2012). Reliability in research refers to data collection and analysis methods that produce consistent findings. This consistency is concerned with the measures used that should yield the same results if they are used in similar studies, researchers in other studies should be able to produce the same results using the same methods, and conclusions in research can be easily interpreted (Saunders & Lewis, 2012).

Cronbach's alpha is a measure of reliability that is regularly used in social sciences research (Bonett & Wright, 2015). Considering that this measure has been used in similar studies on perceived crowding, emotional outcomes and behavioural intentions

(Chen *et al.*, 2015; Noone & Mattila, 2009a; Noone & Mattila, 2009b), Cronbach's alpha was used to assess the internal consistency reliability of the scales measuring the constructs of the study.

# 7.2 Manipulation check

The study included a manipulation check based on the scenario the respondent viewed, using a seven-point Likert-type scale, where 1 is not crowded at all and 7 is very crowded. According to Allen (2017), manipulation checks are required to ensure that the independent variable in the study has been manipulated effectively.

# 7.3 Hypotheses testing

To test for significant differences between groups relating to the effect of crowding on behavioural intention ( $H_1$ ) as well as the effect of crowding on emotions towards the restaurant and attitudes towards crowding ( $H_2$ ), independent samples t-tests were conducted. These are parametric tests used to split two groups of numerical data using a categorical variable to examine the differences that, according to Saunders and Lewis (2012, p. 180), "represents the probability of the differences between the values in the two groups occurring by chance". The following assumptions were met prior to conducting the tests:

- The dependent variable is measured on a continuous scale, (Saunders & Lewis 2012).
- The independent variable consists of two categorical and independent groups, (Saunders & Lewis 2012).
- There is independence of the observations between the two groups, (Saunders & Lewis 2012).
- There are no significant outliers, (Saunders & Lewis 2012).
- The dependent variable is to a large extent normally distributed for each group of the independent variable, (Saunders & Lewis 2012).
- There is homogeneity of variances, (Saunders & Lewis 2012).

In order to test whether emotional outcomes mediate the relationship between perceived crowding and behavioural intention when attitudes towards perceived crowding is controlled ( $H_3$ ), regression analysis with the Process Macro was conducted. The Process Macro is a statistical model that allows for the testing of mediation between variables. If three variables are considered, the intervening or mediating variable is the mechanism through which the first variable "A" influences the third

variable "C" (Hayes, 2013). According to Baron and Kenny (1986), the following assumptions were met prior to conducting the tests:

- The independent variable (perceived crowding) variations significantly explain the variations in the mediator variable (positive emotions).
- The mediator variable variations significantly explain variations in the dependent variable (behavioural intention).
- When the relationship between the independent variable and the mediating variable as well as the impact of the mediator variable are controlled, any previous relationship between the independent and dependent variable is no longer significant. When the impact of the independent variable is reduced to zero, there is robust proof for one mediating variable.

# 8. Limitations

The use of scenarios in this study, although effective in illustrating a level of crowding, could be replaced with field experiments conducted in an actual restaurant or video footage of restaurants at varying levels crowding followed by a post face to face interview recording responses to the stimulus. This would adequately and effectively expose the respondent to the intended crowded environment. This study also limited the evaluations to those who go to their favourite sit down restaurant for a social occasion, excluding those who eat on the go or during a business occasion where evaluations of the level of crowding may differ depending on the purpose of the restaurant visit.

Even though the scales in this research used to measure all of the constructs had been adopted successfully in previous studies, this could be an area of improvement for future research by adopting more elaborate scales to measure positive emotions and behavioural intention. Additionally, it may have been useful to include negative emotions as a construct as done in previous studies to examine its relationship with the other constructs to confirm previous findings (Liu & Jang, 2009). Considering the impact of food and service quality regarding ones favourite restaurant in this study, future research should consider manipulating these variables to further enhance the depiction of restaurant environments.

Lastly, the research was limited to respondents in the Johannesburg area and cannot be generalised to restaurants in the rest of South Africa. As a suggestion for future research, conducting this study in additional areas to make geographical inferences could be worthwhile.

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# APPENDIX A

# Survey:

# Emotions and behavioural intention of restaurant customers – the mediation role of emotions

The reason I have approached you today is because I am conducting research to better understand consumer behaviour in a restaurant environment. The aim of this research is to gauge consumer responses to certain restaurant environments and the outcomes of these interactions. The online survey will comprise of a few sections – one of which includes a video depicting a scenario of crowding that will be accompanied by a vignette explaining and describing the scenario.

The following sections will consist of questions related to the scenario described. Therefore, I request your voluntary participation in this research through completing a five- to 10-minute online survey to assist me in gathering data for this study. Your contact information will not be requested and all information provided by you will be treated with the utmost confidentiality.

If you have any questions or concerns, please contact myself or my supervisor using the below information:

Researcher: Ronell Pather	Supervisor: Professor Danie Petzer
Email: naidooronell@gmail.com	Email: petzerd@gibs.co.za

# SECTION A – SCREENING QUESTIONS

Are you 18 years or older?

Yes	
No	

If you answered "Yes" to this question, please complete the survey.

If you answered 'No" to this question, you do not need to complete the survey.

How many times in a month do you visit your favourite family sit-down restaurant?

Once a month or more	
Less than once a month	

If your answer is "Once a month or more", please complete the survey.

If your answer is "Less than once a month", you do not need to complete the survey.

Please name the family restaurant you visit at least once a month or more.

# SECTION B – DEMOGRAPHIC INFORMATION

When were you born?



What is your highest level of education?

Some high school	
Matric/Grade 12 completed	
Diploma	
University degree (B-degree or honours)	
Postgraduate degree (master's or doctorate)	

What is your gender?

Female	
Male	
Prefer not to say	

Which ONE of the following options describes your employment status the best?

Self-employed	
Full-time employed by an organisation	
Part-time employed by an organisation	
Full-time student	
Housewife or househusband	
Retired	
Unemployed	
Other, please specify	

What is your email address?

# **SECTION C – SCENARIOS**

1

You are about to walk into your favourite restaurant and you notice that the restaurant is not as busy as usual. In fact, the restaurant is quite empty, and in no time a waiter shows you to a table. There, you realise that the seating in the restaurant is different and that the people around you seem to be seated further away from you than usual, giving the restaurant a quiet atmosphere. You feel like you are the only ones there. When you visit the restroom, you are the only one in the restroom area and it seems quite deserted. The quality of food and level of service were as expected, based on previous visits to this restaurant.

## 2

You are about to walk into your favourite restaurant and you notice that the restaurant is much busier than usual. In fact, the restaurant is quite full, and it takes a few minutes for a waiter to show you to a table. There, you realise that the seating in the restaurant is different and that the people around you seem to be seated closer to you than usual, giving the restaurant a vibey atmosphere. You feel like you are part of a place where things happen. When you visit the restroom, you are not the only one in the restroom area and the conversation is lively. The quality of food and level of service were as expected, based on previous visits to this restaurant.

# SECTION D – EMOTIONAL OUTCOMES

Looking at the list of emotions and using the scale provided, please indicate the extent to which you felt each of the below emotions while thinking about the scenario you have just read.

	Strongly disagree Strongly agree				
Statements	1	2	3	4	5
Perceived crowding					
The overall feeling I get from this					
restaurant is pleasure	1	2	3	4	5
The overall feeling I get from this					
restaurant is excitement	1	2	3	4	5
The overall feeling I get from this					
restaurant is contentment	1	2	3	4	5
The overall feeling I get from this					
restaurant is refreshment	1	2	3	4	5
The overall feeling I get from this					
restaurant is relaxation	1	2	3	4	5
The overall feeling I get from this					
restaurant is interest	1	2	3	4	5

Adapted from Tsaur et al. (2015).

# SECTION E – BEHAVIOURAL INTENTION

Thinking about the restaurant in the vignette you have just read, indicate your attitude towards the restaurant using the below scale – where 1 is "strongly disagree" and 5 is "strongly agree".

	Strongly disagree Strongly				agree
Statements	1	2	3	4	5
Behavioural intention					
I would like to give positive WOM					
regarding this restaurant in the future	1	2	3	4	5
I would like to come back to this					
restaurant in the future	1	2	3	4	5
I would like to recommend this					
restaurant to my friends in the future	1	2	3	4	5

Adapted from Tsaur et al. (2015).

# SECTION F – MANIPULATION CHECK

Remembering the scenario you read at the beginning of the survey, does the restaurant described seem crowded to you? Using the below scale (where 1 is "not crowded" and 7 is "very crowded"), indicate your attitude towards the restaurant.

	Not Crowded			>	Very		
Statements	1	2	3	4	5	6	7
Attitude towards crowding							
Remembering the scenario you read							
the restaurant described seem	1	2	3	А	5	6	7

# SECTION G – ATTITUDES TOWARDS PERCEIVED CROWDING

Please rate the below statements as per the following scale: 1 – "Very strongly agree"; 2 – "Agree"; 3 – "Neither agree nor disagree"; 4 – "Somewhat disagree"; 5 – "Disagree"; and 6 – "Very Strongly Disagree".

	Very strongly Agree								
Statements	1	2	3	4	5				
Perceived crowding									
I avoid crowded places whenever possible	1	2	3	4	5				
A crowded place doesn't really bother me	1	2	3	4	5				
If I see a place that is crowded, I won't even go inside	1	2	3	4	5				

Adapted from Noone and Mattila (2009a).