IMPACT OF CROWDING ON SHOPPING BEHAVIOUR

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Abstract : Retail crowding refers to a situation where a large number of shoppers are present in a retail environment, such as a store or shopping mall, at the same time. Retail crowding, or the perception of crowdedness within a retail environment, can have a significant impact on shopping behavior. This includes Time spent shopping: Crowding can increase the amount of time shoppers spend in a store. This is because navigating through a crowded space can be difficult, and shoppers may have to spend more time searching for the products they want, Purchase decisions: Crowding can influence shoppers' purchase decisions. When stores are crowded, shoppers may feel more pressure to make quick decisions and may be more likely to purchase items impulsively, Patronage intention: Crowding can also affect patronage intention or store loyalty. If a store is consistently crowded, shoppers may become frustrated with the shopping experience and seek out less crowded stores in the future and Shopping satisfaction: Finally, crowding can impact shoppers' overall enjoyment of the shopping experience. If a store is excessively crowded, shoppers may find it stressful or overwhelming, which can lead to a negative shopping experience. Through this paper the researcher attempts to establish the relationship of perceived crowding with 2 of the impact factors namely patronage intention and shopping satisfaction. After a comprehensive secondary research and a structured questionnaire survey on a representative sample of 176 people shopping in physical retail outlets, the researcher has been able to establish that if the perceived crowding is less it is usually associated with positive patronage intention and also positive shopping satisfaction.

IndexTerms – **Crowding, Shopping behavior, Retailing, Patronage Intention, Shopping Satisfaction**

INTRODUCTION

With increasing race towards competitiveness and earning profits, people are looking for a relaxed, less time consuming and comfortable shopping experiences, unlike earlier people are not willing to rush behind each other, they are even reluctant to enter a crowded place, waiting for the cues at the point of sale, or to explore the merchandise, people are seeking a piece of mind, Shopping across the globe in not a need anymore, it is a hobby or a way of income for them, they visit, try, buy and share their experiences also, with technology providing a fuel to comfortable living, people can track the rush on the roads, and prefer a different route, the same way people are happy to pay a higher price or ignore discounts to get maximum shopping satisfaction, less tension and less stress. On the other hand retailers are not leaving any stone unturned to attract more and more people in store through marketing and promotional efforts. This sometimes lead to crowded store and customer also may have the perception of crowding. Perception of crowding amongst customer may lead to both positive and negative result. However research says that majorly it is negative wherein the perception of crowding leads to negative behaviour from the customers. Most of the researches are international researches done in controlled environment and focused on finding out the impact of crowding on different customer behaviour. This establishes the need to find out the impact of crowding on shopping behaviour in Indian environment.

OBJECTIVE
To find out the impact of Perceived crowding on shopping behaviour
SUBOBJECTIVE
- To find out the impact of Perceived crowding on Patronage Intention\
- To find out the impact of Perceived crowding on Shopping Satisfaction

LITERATURE REVIEW
 As competition in retail has intensified, managers have had to move beyond a product focus to a focus on the customer experience (Puccinelli et al., 2009). With the proliferation of product offerings as well as retail outlets, there has been a revolution in retail with a view to looking beyond the augmented product (Kotler, 1974). That is, in addition to looking for ways to add value by adding product features (e.g., a customer service number on the packaging), retailers and manufacturers alike are increasingly crafting value-added retail experiences. The retail sector is one that has historically been dominated by manufacturers such as Procter & Gamble. It has come into its own by identifying ways to cultivate a distinctive customer experience. In recent years,

many firms have achieved substantial competitive advantage (e.g., Starbucks) via the creation of a more sensory, and increasingly multisensory, customer experience (Pine & Gilmore, 1999).

Customers perceive servicescapes holistically (Bitner, 1990; Mattila & Wirtz, 2001), so multiple store environment cues likely influence their perceptions of value and their subsequent behaviors (Baker, Parasuraman, Grewal, & Voss, 2002). Retailers need to do the same if they are to effectively manage their store environments. Store atmospherics seek to make retail environments more enjoyable for shoppers (Brand, 1963), thus encouraging them to stay longer, and, ultimately, to spend more, and/or return more frequently. Sensation transference (cf. Dube & Morin, 2001) is also important here. Specifically, the feelings that the customer develops within the atmosphere transfer to the products that they happen to evaluate in store (Vida, Obadia, & Kunz, 2007; cf. Gorn, 1982).

The influence of the shopping environment on consumers' feelings and behaviours is a research topic of great relevance to retailers. Knowing what environmental factors impact on the feeling states of shoppers can suggest appropriate marketing strategies to help create and maintain the positive shopping experiences. Pleasurable shopping experiences induced by environmental factors in turn are likely to encourage consumers to spend more time in stores and to spend more money than intended (Donovan, Rossiter, Marcoolyn, and Nesdale, 1994). Unsurprisingly, research on the effects of the environment on shopper behaviour has tended to focus on the design retail environments that produce positive consumer feelings and increase the likelihood of purchase (e.g., Kotler, 1974; Donovan and Rossiter, 1982).

As a means of differentiating itself with others, retailers through store atmospheric element such as flat screen videos of graphics, music, smells, and lighting excite the senses of shoppers. According to Levy and Weitz(2009)store environment is referred to as the attribute that aims to intensify the store environment with the combination of different cues such as lighting, colour, music, and scent. Chitra K Vijaya(2009)said atmospherics includes stores physical characteristics that are used to develop the retail unit image and draw customers. It describes the physical elements in a store's design that appeals to customers and encourages them to buy. Banerjee Sonali, Saha Sunetra(2012)concluded that smart brands and retailers will spend more effort in-store in terms of improving not only store interiors but also the overall shopping experience, even if they are high value-seeking ones.

In today's Post-modern Era shopping has become a social and leisure activity, reducing the number of cognitively planned purchases made by customers. Ambient are crucial tangible components of the service product that give cues to customers and create a perceptual image in the minds of customers. An enduring image in the minds of customers. a pleasing store ambiance is essential in encouraging customers to buy products. Many researchers and practitioners have examined the influence of ambient factors on customer patronage and their behavior, said to Gilboa and Rafaeli (2003). Bitner (1992) The ambient factors play an important role in forming a customer's impression.

Waiting

Waiting is an inescapable element, which is in many purchase situations a very important factor. Customers may have to wait for service for minutes, hours, days, or even months. Additionally, they can wait before, during, or after a purchase. If there is a line-up, there is a delay, or someone arrived early for an appointment, they can wait. Waiting for service is often a bad experience for clients (Scotland 1991). As a result, delivery time is becoming a crucial quality of service (Katz, Larson, and Larson 1991). Some people actually detest waiting so much that they're willing to pay others to do it for them (Geist 1984). For reasons like these, managers are constantly looking for ways to speed up service since they think that waiting will negatively impact service reviews. According to researchers, there are two methods for reducing service wait times: operations management and perceptions management (Katz, Larson, and Larson 1991).

Waiting can be extremely frustrating, time-consuming, and annoying. A consumer's response to the complicated issue of waiting is frequently emotional. Waiting is frequently mentally difficult because it forces us to forgo more fulfilling and useful ways to spend our time and because it could increase the cost of purchasing a good or service. As we grow conscious of the passing of time, waiting itself may become expensive. In other words, there are both extrinsic and intrinsic costs associated with waiting, such as the loss of a lucrative alternative (Schwartz, 1975).

Crowding

For both customers and retailers, crowded retail spaces are a rising issue. Crowding in stores is growing due to businesses' emphasis on price competition and the rise in the number of working women. Because of the tension and annoyance that crowded conditions can bring, shopping in a crowded retail setting can be a miserable experience for customers like the one mentioned above (Altman, 1975; Hui and Bateson, 1991). Retailers suffer from crowded stores as well. Shopping satisfaction, time spent in stores, and future patronage intentions can all be negatively impacted by crowding (Eroglu and Machleit, 1990; Harrell et al., 1980). (Wakefield and Blodgett, 1994). Businesses must seek out ways to reduce the crowding's negative consequences because it can be harmful to consumers and retailers.

Environmental psychology and marketing literature have both shown how crowding has an impact on people, usually for being bad for their physical and mental health. Numerous studies demonstrate the detrimental effects of crowding, including anger (Regoeczi 2003), social withdrawal (Evans, Rhee, Forbes, Allen, and Lepore 2000), and anxiety (Zeedyk-Ryan and Smith 1983). According to the marketing literature, crowding in a retail or service environment has an impact on customers' contentment, and time spent in the store (Machleit, Eroglu, and Mantel 2000), stress and tension (Harrell, Hutt, and Anderson 1980).

The crowding problem has been a major focus of the literature that has examined the impact of other customers as an environmental variable. Actual shopper density and perceived signage, cards, teletext messages, and wall decorations are the two parts of crowding in a retail setting. Table 2 crowding (Harrell and Hutt, 1976). A model of crowding perceptions created by Bateson and Hui in 1987 contends that some consumer control over the surrounding environment can mitigate the negative effects of crowding. According to Harrell, Hutt, and Anderson (1980), a consumer's pleasure with their shopping experience was influenced by the adaption techniques they employed at times of high perceived overcrowding. Task-oriented shoppers felt more crowding than nontask-oriented shoppers, according to Eroglu and Machleit's 1990 research, demonstrating that consumer incentives can affect crowding perceptions.

Perceived crowding

A person's unfavourable opinion of the density or encounter level they experienced is combined with descriptive information about that density or encounter level to generate their perception of crowding. People who describe a place as crowded have implicitly compared the effects they noticed to a visual reference. One of the most commonly researched features of outdoor activity is crowding (Fleishman, Feitelson, & Salomon, 2004; Graefe et al., 1990; Lime, 1996; Manning, 1985; Manning, Lime,

Friemund, & Pitt, 1996; Shelby & Heberlein, 1986; Stewart & Cole, 2001). Given the current rates of population expansion, crowding will probably continue to be a significant topic for research and management.

Crowding is characterised as a negative evaluation of density and entails the conclusion that there are too many visitors or encounters with them (Altman, 1975; Desor, 1972; Schmidt & Keating, 1979; Stokols, 1972). To underline the evaluative or subjective aspect of the concept, the term "perceived crowding" is frequently employed. The psychological construct of perceived crowding, which exists in people's thoughts, is typically measured using self-report methods.

Density and crowding

According to research, consumers' assessments of the shopping experience are negatively impacted by apparent crowding. Crowding has a detrimental effect on a number of shopping-related factors, including customer satisfaction (Eroglu and Machleit, 1990), browsing and comparison shopping (Grossbart, Hampton, Rammohan, and Lapidus, 1990), number of purchases, postponed shopping (Grossbart, Hampton, Rammohan, and Lapidus, 1990), going to another store (G (Wakefield and Blodgett, 1994).

The quantity of people or items in a particular location is referred to as its density (Drintewater and Gudjonsson 1989). It is shown to be an antecedent of crowding and plays a significant part in the evaluation of crowding (Eroglu and Machleit 1990; Sundstrom 1978; Baum, Davis, and Aiello 1978). While crowding is a reaction to or evaluation of the environment and is thought to be an antecedent of crowding, density is a physical characteristic of the environment (Eroglu and Machleit 1990; Stokols 1978; Sundstrom 1978). When a person evaluates the density condition, there is a demand for more space than there is supply, which is when there is crowding (Stokols 1972; Eroglu and Harrell 1986). According to one definition of crowding, it is the result of an evaluation of the physical environment, situational variables, personality traits, and coping mechanisms (Stokols and Altman 1987). Crowding has been linked to stress arousal, according to research (Worchel and Teddie 1976; Altman 1975; Valims and Baum 1973). Stress is brought on by crowded conditions as a result of having to deal with too many people at once (Sinha and Sinha 1989).

Customers are reported to experience crowding in the setting of retail because of spatial (such as having a lot of merchandise in a small space) and/or human (such as the number of customers) factors of density, which are referred to as "spatial crowding" and "human crowding," respectively (Machleit, Kellaris, and Eroglu 1994). Crowding has been shown to affect emotions (Hui and Bateson 1991), shopping satisfaction (Eroglu and Machleit 1990; Machleit, Eroglu, and Mantel 2000), time spent in the store (Harrell, Hutt, and Anderson 1980), interpersonal behaviour (Hui and Bateson 1990), and patronage intentions specifically in marketing (Wakefield and Bladgett 1994).

The Relationship between Crowding and Behavioural Responses

Perceived Crowding and Crowding Disturbance

An adverse emotional response to social density is referred to as "crowding," a socio-psychological evaluation concept (Gramann, 1982; Vaske, Shelby, Graefe, & Heberlein, 1986). When people are crowded, some coping strategies that are typically considered to be stress-reducing may be used by recreational users (i.e, behaviour that enables a person to cope with a situation without excessive stress).

Prior research mostly used visitors' perceptions of perceived congestion to draw their conclusions regarding the quality of a recreational experience and the behavioural effects of crowding (Shelby, Vaske, & Heberlein, 1989). The low correlations between contentment and perceived congestion may be due to the fact that such impressions are not conclusive proof of a negative impact on the quality of the recreational experience (Stewart & Cole, 2001). The experience may or may not be hampered by the sense of crowding.

The difference between a primary appraisal (i.e., an initial automatic mostly emotive judgement of a potentially unpleasant circumstance) and a secondary appraisal can be regarded as the difference between perceived crowding and crowding disturbance (Lazarus & Folkman, 1984). The latter is a more intentional and cognitive examination of what might be done in response to the initial evaluation. In this situation, we refer to the unfavourable primary evaluation as "perceived crowding." In the course of secondary assessment, a person may determine that the crowdedness is sufficiently upsetting to necessitate a reaction. We refer to this secondary evaluation as "crowding disturbance" since it includes both emotive and cognitive components. Therefore, disturbance caused by crowding has a dual affective and cognitive nature and, in essence, is the cognitive appraisal of a social context. Perceived crowding is essentially of an emotive nature.

Crowding perceptions are probably positively connected with crowding disturbance. This link is not always linear, though. A person's assessment of whether a particular amount of crowding is distressing might vary depending on a number of variables. Some visitors to a recreational experience may be bothered by encounters even when the perceived crowding is not very high and may not be bothered by encounters despite a high level of perceived crowding due to other factors (such as mood, individual physical conditions, weather, and sensitivity to the number or/and behaviour of those encountered). People who are more sensitive to interactions are also more likely to make behavioural changes, according to several studies on coping behaviour (Hammitt & Patterson, 1991; Kuentzel & Heberlein, 1992; Miller & McCool, 2003).

Perceived crowding and patronage intention

Store patronage intention refers to a customer's planned behavior or inclination to visit, purchase from, and continue to engage with a particular retail store. It is the likelihood or probability that a customer will choose to patronize a particular store rather than its competitors.

Store patronage intention can be influenced by various factors such as the store's location, product assortment, pricing, promotional activities, customer service, brand image, and reputation. Understanding a customer's store patronage intention can help retailers improve their marketing strategies, tailor their offerings to meet customer needs, and ultimately increase customer loyalty and sales.

Consumer behavior in a retail environment is influenced by their internal processes and emotions. This can be seen in their approach or avoidance behaviors, such as how much time they spend in the store, how much money they spend, and whether they plan to return or not. These behaviors are influenced by their perception of emotions like happiness and excitement. Additionally, consumers' perception of crowding in a store can affect their buying decisions and future patronage intentions. The impact of perceived crowding on patronage intention is linked to the emotional dimensions of pleasure and store evaluation.

Perceived crowding and Shopping Satisfaction

Store shopping satisfaction refers to the level of contentment or fulfillment a customer experiences after visiting a retail store and engaging in shopping activities, such as browsing products, making purchases, and interacting with store personnel. It is an overall evaluation of a customer's experience with a store, which includes factors such as product quality, variety, pricing, store ambiance, customer service, and convenience.

The concept of store shopping satisfaction is important for retailers because it is directly related to customer loyalty, repeat business, and positive word-of-mouth recommendations. Customers who are satisfied with their shopping experience are more likely to return to the store, make additional purchases, and recommend the store to others. Retailers can measure store shopping satisfaction through customer surveys, feedback forms, and social media analytics, and use this information to improve their store offerings and customer experience.

Perceived crowding can have a significant impact on the store shopping experience. When a store is perceived as crowded, customers may feel discomfort, stress, and frustration, which can negatively affect their shopping behavior and satisfaction.

The effects of perceived crowding on the store shopping experience can vary depending on the individual customer's personality, mood, and shopping motives.

RESEARCH METHODOLOGY

Secondary Research

To gain a better understanding of the impact of crowding on the retail environment, a thorough investigation was carried out through an extensive review of existing literature, including research reports, books, and journals focused on retailing and store environments. The goal of this literature review was to develop a comprehensive understanding of the theoretical framework surrounding retail stores, store environments, and the concept of crowding, including its influencing factors. Based on this literature review, hypotheses were formulated regarding consumer behavior, the perception of crowding, and the impact of the store environment.

Primary Research

The study collected primary data from 176 participants using an offline in-store survey, using a non-probability, convenient sampling method. The survey was done in the city of Ahmedabad by visiting major large format retail stores during crowded period like weekends and evening time. The data was collected in an Excel sheet and analyzed using SPSS software. The study employed a Likert scale ranging from 1 to 5 to measure the responses of participants. The study measured Perceived crowding, Patronage Intention and Shopping Satisfaction using variables and items adopted from Baker and Wakefield (2011).

The study employed two tests to analyze the data, including chi-square and Mann-Whitney U test. The chi-square test for independence, also called Pearson's chi-square test or the chi-square test of association, is used to discover if there is a relationship between two categorical variables. The Mann-Whitney U test is a nonparametric test used to compare two independent groups on a continuous or ordinal outcome variable.

Hypothesis

H1: Perception of store being less crowded has a positive effect on patronage intention
H2: Perception of store being less crowded has a positive effect on shopping satisfaction

Analysis & Result

Test of Hypothesis 1: Perceived Crowding and Patronage Intention

Chi Square test

Chi square test is used to analyse whether there is any positive or negative association between perceived crowding and patronage intention

Hypothesis (H1a): there is a significant association between perceived crowding and patronage intention.

PC1:Overall, the store seemed very crowded to me. * PI3:I would be willing to buy merchandise at this store in future Crosstabulation

		PI3:I would be willing to buy merchandise at this store in future					
		strongly disagree	disagree	neither disagree nor agree	agree	strongly agree	Total
PC1:Overall, the store seemed very crowded to me.	strongly disagree	1	0	0	17	10	28
	disagree	0	2	1	73	6	82
	neither disagree nor agree	0	2	5	6	0	13
	agree	3	25	5	7	1	41
	strongly agree	1	8	2	1	0	12
Total		5	37	13	104	17	176

Through this table it is understood that those who disagreed that store is crowded (meaning - store is not crowded) are willing to buy merchandise at the store in future. This means that a perception of store being less crowded leads to positive patronage intention.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	150.531a	16	.000
Likelihood Ratio	147.858	16	.000
Linear-by-Linear Association	91.736	1	.000
N of Valid Cases	176		

a. 15 cells (60.0%) have expected count less than 5. The minimum expected count is .34.

It can be seen here that $\chi(2) = 150.53$, p = .000. This tells us that there is statistically significant association between perceived crowding and patronage intention; that is, those who do not find the store crowded are willing to buy merchandise at the store in future versus those who find the store crowded.

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.925	.000
	Cramer's V	.462	.000
N of Valid Cases		176	

Phi and Cramer's V are both tests of the strength of association. It can be seen that the strength of association between the variables is very strong. Thus the null hypothesis is rejected and the hypothesis (H1a) is proved that there is there is a significant association between perceived crowding and patronage intention.

Mann Whitney test

Mann Whitney test was used to analyse whether patronage intention differs based on perception of crowding
The distribution for 2 groups that is people who found store crowded and people who did not find store crowded have different shape, therefore Mann whitney U test to compare mean ranks has been used.

Hypothesis (H1b): there is a significant difference between the mean ranks of the group which perceived the store to be not crowded and the group which perceived the store to be crowded with respect to patronage intention.

	PC1:Overall, the store seemed very crowded to me.	N	Mean Rank	Sum of Ranks
PI3:I would be willing to buy merchandise at this store in future	Disagree	82	77.71	6372.00
	Agree	41	30.59	1254.00
	Total	123		

This table indicates that which group can be considered as having higher willingness to buy merchandise at the store. The group with the highest mean rank can be considered as having higher willingness to buy. In this case the group which disagreed that store is crowded has the higher willingness to buy merchandise at the store.

Test Statistics

	PI3:I would be willing to buy merchandise at this store in future
Mann-Whitney U	393.000
Wilcoxon W	1254.000
Z	-8.178
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: PC1:Overall, the store seemed very crowded to me.

From this data, it can be concluded that willingness to buy merchandise in the group who disagreed that store is crowded is statistically significantly higher than the group who agreed that the store seemed crowded (U = 393, p = .000).

Test of Hypothesis 2: Perceived Crowding and Shopping Satisfaction
Chi square test
Hypothesis (H2a): there is a significant association between perceived crowding and shopping satisfaction
PC1:Overall, the store seemed very crowded to me. * S1:I am satisfied with my shopping experience at the store Crosstabulation

		S1:I am satisfied with my shopping experience at the store					
		strongly disagree	disagree	neither disagree nor agree	agree	strongly agree	Total
PC1:Overall, the store seemed very crowded to	strongly disagree	0	0	2	17	9	28
	disagree	2	3	2	71	4	82

me.	neither disagree nor agree	0	1	5	7	0	13
	Agree	2	19	3	14	3	41
	strongly agree	1	4	2	3	2	12
Total		5	27	14	112	18	176

Through this table it is understood that those who disagreed that store is crowded (store is not crowded) are satisfied with the shopping experience at the store. This means that a perception of store being less crowded leads to shopping satisfaction.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	95.960a	16	.000
Likelihood Ratio	86.387	16	.000
Linear-by-Linear Association	40.436	1	.000
N of Valid Cases	176		

a. 16 cells (64.0%) have expected count less than 5. The minimum expected count is .34.

It can be seen here that $\chi(2) = 95.96$, $p = .000$. This tells us that there is statistically significant association between perceived crowding and shopping satisfaction; that is, those who do not find the store crowded find the shopping experience satisfactory versus those who find the store crowded.

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi	.738	.000
	Cramer's V	.369	.000
N of Valid Cases		176	

Phi and Cramer's V are both tests of the strength of association. It can be seen that the strength of association between the variables is very strong. Thus the null hypothesis is rejected and the hypothesis (H2a) is proved that there is there is a significant association between perceived crowding and shopping satisfaction.

Mann Whitney test

Mann Whitney test was used to analyse whether shopping satisfaction differs based on perception of crowding.

The distribution for 2 groups that is people who found store crowded and people who did not find store crowded have different shape, therefore Mann whitney U test to compare mean ranks has been used.

Hypothesis (H2b): there is a significant difference between the mean ranks of the group which perceived the store to be not crowded and the group which perceived the store to be crowded with respect to shopping satisfaction.

	PC1:Overall, the store seemed very crowded to me.	N	Mean Rank	Sum of Ranks
S1:I am satisfied with my shopping experience at the store	Disagree	82	71.26	5843.50
	Agree	41	43.48	1782.50
	Total	123		

This table indicates that which group can be considered as having higher satisfaction with the shopping experience at the store. The group with the highest mean rank can be considered as having higher shopping satisfaction. In this case the group which disagreed that store is crowded has the higher satisfaction with the shopping experience at the store.

Test Statisticsa

	S1:I am satisfied with my shopping experience at the store
Mann-Whitney U	921.500
Wilcoxon W	1782.500
Z	-5.001
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: PC1:Overall, the store seemed very crowded to me.

From this data, it can be concluded that the satisfaction with the shopping experience at the store in the group who disagreed that store is crowded is statistically significantly higher than the group who agreed that the store seemed crowded (U = 921, p = .000).

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