DOI: https://doi.org/10.4038/sajbi.v4i1.63

Store Atmospherics towards Patronage Intentions of Supermarket Patrons in Sri Lanka

South Asian Journal of Business Insights
2024, 4(1) 41-59.
ISSN 2773-7012(print)
ISSN 2773-6997(online)

Perera H.S.C.
Faculty of Management and Finance, University of Ruhuna, Sri Lanka

Gunawardana T.S.L.W.*
Faculty of Management and Finance, University of Ruhuna, Sri Lanka

Chandra W.G.G.A.
Sri Lanka Institute of Advanced Technological Education, Sri Lanka

Abstract

The purpose of this paper is to investigate the impact of store atmospherics on the patronage intentions of supermarket patrons in Sri Lanka, due to the lack of application of the new typology of Berman and Evans. The data were collected over mall intercept by randomly administering structured questionnaires from 200 respondents who visited eight supermarkets in Southern Province, Sri Lanka. Multiple regression and factor analysis were performed to explore the impact of five atmospheric variables on patronage intentions and to explore the significance of atmospheric dimensions. The results of the regression analysis indicated that all store atmospheric variables have a positive impact on the patronage intentions of supermarket patrons in Sri Lanka. Moreover, it suggested that the human atmospheric variable (i.e., Supermarket employees) was the most significant atmospheric variable, while the point of purchase and the exterior atmospheric variable were the less significant variables towards patronage intentions. The study has outlined to examine the five atmospheric variables introduced by Berman and Evans (1995) and Turley and Milliman (2000), but this study utilized a couple of atmospheric dimensions presented in such classifications. The study unveiled that supermarket employees are the most influential variable for generating patronized supermarket customers. The findings based on the regression analysis provided that the impact of the point of purchase variable was lowest on retail patronage and retail shoppers are not paying much attention to such type of an atmospheric variable at present due to all the supermarket retailers practising the most common pricing strategies. Findings indicated that when shoppers are getting old, they are willing to visit the supermarket which displays low prices, prices clearly and noticeably and also have a friendly, polite, and helpful sales force.

Keywords: Patronage Intentions, Store Atmospherics, Supermarkets

* Corresponding Author - tslw2013@gmail.com

Introduction

Around forty-eight years back Kotler (1973) stated that the atmosphere was the most influential tool in the decision-making process of shoppers rather than supplying merchandise. Kotler (1973) opened new avenues in the retail atmosphere by introducing a new concept regarding the influence of the retail atmosphere on shopping behaviour. There, the research emphasises that consumers are more responding to a unique attractive retail atmosphere than tangible products or services in retail outlets. Therefore, this is a greater strategy for retail outlet marketers in the immense competition. Further many researchers argued that the impact of retail atmosphere on patronage behaviour and revealed that the influence of store atmospherics on patronage behaviour is strong and robust (Raajpoot, et al., 2008; Borges, et al., 2013; Ayadi and Cao, 2016; Bhattet al., 2020).

It was evident that the unique atmosphere was identified as a very crucial tool for generating repurchase behaviour and store selection decisions. It is also reflected by Baker and Grewal (1994) as the physical attractiveness of stores has a great influence on patronage intentions than the quality of merchandise and prices. Further, Baker (1986) stated that shoppers pay more attention not only to pricing and merchandise itself but also it is increased the provision of a pleasant and possibly exciting shopping atmosphere while making patronage decisions. Moreover, Ballantine et al., (2015) discussed that a gorgeous retail atmosphere congruent with their target market's self-image and how atmospheric cues can affect successive stages of the retail experience. Retailers can gain a competitive advantage by identifying the most salient atmospherics in the retail surrounding which develop perception and impression regarding the retail store (Fowler et al., 2007).

Further, Skandrani et al., (2011) pointed out that the store atmosphere and retailing strategy gained a growing interest among academicians and several researchers focused on environmental changes and their influences, especially on customer behaviour. Also, many pieces of research stressed the need to consider the retail store environment as multi-dimensional factors made with music, scents, colours, lights, design, and social dimensions represent by stores employees and the impact of store atmospherics effect on the customers' emotional, cognitive and behavioural responses (Skandrani et al., 2011; Hoffman and Turley, 2002; Turley and Milliman, 2000; Bhatt et al. 2020; Barros et al., 2019, Marques et al., 2016; Ettis, 2017; Elmashhara and Soares, 2020).

In the contemporary setting of Sri Lankan supermarket retailers have entered a new avenue by creating a stunning atmosphere with good shopping ambience which includes air conditioning, cleanliness atmosphere with excellent service provided by knowledgeable and hospitable employees (Wanninayake and Randiwela, 2007; Sanlier and Karakus, 2010). These changes show that most of the Sri Lankan consumers changing their lifestyles by moving towards to the reasonable prices expectation regarding reasonable prices and the correct weight of the merchandise, project social status and personal image, a hedonic lifestyle which is shopping experiences and trips becoming both functional and habitual (Wanninayake and Randiwela, 2007). Especially, Gajanayake et al., (2011) agreed with his study on how visual merchandising affects patronage intention in supermarkets within commercial capital in Sri Lanka concluded that there is a relationship between colour, product display, music, lighting, and cleanliness on patronage intention.

Though many types of the research argue on the effect of the store atmosphere on the behaviour of consumers (Hussain and Ali, 2015), empirical studies on the impact of store atmosphere on the behaviour of consumers are limited (Zeynep and Nilgun, 2011; Hussain and Ali, 2015). This scenario is very similar in the Sri Lankan context. Hence the understanding the influence of retail atmospherics on the behavioural intention of consumers is becoming significant in the competitive retail environment. Moreover, today retail service providers in Sri Lanka need to ensure that physical and human atmospheric influential factors on patronage intentions of consumers to get the competitive advantages in the supermarkets. To fulfil the aforementioned research gaps, this study has been designed to examine the impact of store atmospherics on patronage intention in supermarket patrons in Sri Lanka.

Literature Review

Most prior studies have raised interest in exploring the impact of atmospheric variables in terms of store attributes and mall attributes on various dependent variables such as shopping behaviour, buying behaviour, and mall involvement behaviour (Moweret al., 2012; Ayadi and Cao, 2016; Toldos et al., 2019; Ettis, 2017; Elmashhara and Soares, 2020), shopping value (Rayburn and Voss, 2013), shopping patronage behaviour (Raajpoot, et al., 2008; Baker et al., 2002; Grewal et al., 2003; Liu and Jang, 2009; Heung and Gu, 2012), and store impulse buying behaviour (Floh and Madlberger, 2013; Ayadi and Cao, 2016; Ettis, 2017; Toldos et al., 2019). Following the consumer behaviour and patronage behaviour literature streams, studies revealed that atmospheric variables generate positive feelings regarding stores, creating loyal customers, and inducing customers to choose and attach to the same store (Kumar and Kim, 2014; Heung and Gu, 2012; Binter, 1992; Baker et al., 2002; Heung and Gu, 2012; Ayadi and Cao, 2016). Store environment cues are affecting store patronage intentions (Baker et al., 2002; Marques et al., 2016; Elmashhara and Soares, 2020). Grewal et al., (2003) noted that the store atmosphere can be managed to attract customers to the store or to alter the perception of customers regarding the store.

Moreover, Mower et al., (2012) have undertaken research work to explore the impact of external atmospherics such as window display and land scraping on consumer behaviour towards retail apparel shops. Besides, Barros et al., (2019) explored the impact of mall attributes including store environment, lighting, music, design, layout, and social characteristics of employees influence consumers' positive emotional responses. Elmashhara and Soares (2020) studied the influence of general interior variables on shoppers' emotions and behaviour and concluded that colour schemes, the lighting of the mall, scents, and temperature directly impact shopper's satisfaction and desire to stay at the mall. Furthermore, Marques et al., (2016) have studied the importance of store atmosphere in the choice of hypermarkets and supermarkets and concluded that different atmospheric variables such as exterior, general interior, design, point of purchase decorations and human variables have different meanings following the store format. However, the research works on investigating the impact of atmospherics on patronage intentions is still limited (Turley and Milliman, 2000). Nevertheless, the literature provides mixed results for the effects of some antecedent variables on patronage intention outcomes (Kumar and Kim, 2014).

By comprehensively reviewing prior studies, it is hard to explore the atmospheric researches to present which examined how patronage intentions of retail consumers are being influenced by

all atmospheric variables introduced by Berman and Evans in 1995 which was further extended by Turley and Milliman in 2000. According to the classification of atmospheric variables was introduced by Berman and Evans (1995) atmospheric variables into four types (i.e., store exteriors, general store interiors, layout & design, and point of purchase & decoration). After that, Turley and Milliman (2000) and Marques et al., (2016) introduced the fifth atmospheric attribute (i.e., human variable) which includes employee characteristics, uniforms, crowding, privacy, and customer characteristics. This classification developed a novel avenue for further research to explore the impact of atmospheric variables on consumer or shopper behaviour (Mower et al., 2012). Besides, the prior research setting is also limited to a couple of contexts like restaurants, groceries, apparel boutiques, and Jewellery shops mostly, and also lacks research works based upon the data collection from shop-floor retail customers. Especially, Mower et al. (2012) have stressed the need for further research on different atmospheric variables by using diverse samples of customers to enhance the understanding of the effect of atmospheric on consumer responses in different retail formats. Further, by reviewing research works regarding the store atmospherics which are based on the retail setting of Sri Lanka, Wanninayake and Randiwela (2007) investigated the impact of four visual merchandising elements such as lighting, design layout, product display, and cleanliness on store choice behaviour in supermarket context of Sri Lanka. Moreover, Gajanayake et al., (2011) emphasized the association between visual merchandising and store choice or patronage behaviour. The findings of this study were confirmed studies made by Berman and Evans in 1995 and extended by Turley and Milliman in 2000.

Stores Atmospherics

In marketing literature, Kotler (1973) defined store atmospherics term as the effort to design a buying environment to produce specific emotional effects in the buyer that enhance his purchase probability. Marques et al., (2016) discussed that exterior, general interior, design variables, point of purchase decorations and human variables have a distinct meaning per the store format and differently affected to the behaviour.

Binter (1992) demonstrated that store atmospheric is the deliberate creation of an environment that supports to attract customers to the location and hopes to positively affect purchase behaviours. Moreover, Rayburn and Voss (2013) explained the atmosphere of a service setting comprises floor layout, music, olfactory, and customer interaction with product offerings to accentuate the shopping experience. Hoffman and Turley (2002) defined atmospherics as a combination of both tangible and intangible elements. Tangible atmospherics consist of building, carpeting, fixtures, and point of purchase decoration, etc. Intangible atmospherics defined in terms of colour, music, temperature, scents, etc. Thereby, Research on store atmospherics dimensions is critical range from exterior to interior, from tangible to intangible, from behaviours to emotions, and from physical to human. Table 1 illustrates the summary of the various classifications of the store's atmospherics dimensions in previous studies.

Table 1: Dimensions of stores atmospherics

No. of Dimensions	Classification of Dimensions	Author
Three	Visual, aural, olfactory, tactile, and taste	Kotler (1973)
Three	Social/ employees cues, design cues, and ambient cues	Baker (1986)
Three	Ambient condition, spatial layout & functionality, and signs, symbols & artifact	Binter (1992)
Four	Store exteriors, store interiors, layout & design, and point of purchase & decoration	Berman and Evans (1995)
Five	General exterior, general interior, layout and design, point of purchase and decoration, and human being variables	Turley and Milliman (2000)
Two	Tangible and Intangible	Hoffman and Turley(2002)
Four	Merchandise, personnel, accessibility, and promotion.	Alhemoud (2008)
Five	Employee behavior, design factor, product assortment, customer compatibility, and accessibility	Raagpoot et al., (2008)
Four	Interior design and décor, ambiance, spatial layout, and human	Liu & Jang (2009)
Three	The ambiance, design/layout, and social aspect	Mathews et al. (2009)
Five	Aesthetics, ambiance, spatial layout, employee factors, and window	Heung and Gu(2012)
Two	The ambiance, design, interiors, service, assortment, socializing, and entertainment	Khare (2012)
Six	Cleanliness, music, scent, temperature, lighting, color, display layout	Hussan and Ali (2015)
Five	General interial, design variables, point of purchase decorations, human variables	Marques, et al., (2016)
Two	Colour, flow experience	Ettis (2017)
Six	Environment, design, layout, music, lighting, social factors	Barros, et al., (2019)
Seven	Lighting, music, moved wonder around, overall product display, design of the store, sensory experience, affective experience	Bhatt, et al., (2020)
Eight	Flooring and carpeting, colour schemes, lightning, music, scents, temperature, cleanliness, physical chacracteristics	Elmashhara and Soares (2020)

Source: Developed for the study (2023)

Patronage Intentions

Patronage intentions were demonstrated as the likelihood of both intending to shop at a store, buy in-store more, and recommend it to others (Baker et al, 2002). The study undertaken by Grewal et al., (2003) also provided an identical demonstration of Patronage intentions like Baker et al., in 2002. Further, Raajpoot et al., (2008) described the patronage intentions of consumers in the restaurant setting and the probability of visiting the same restaurant again. Moreover, Alhemoud (2008) remarked on the patronage intention concept as the evaluation of supermarkets based on a set of attributes that consumers view as significant and make the decision to patronize a particular supermarket. The study of Liu and Jang (2009) identified patronage intention as a post-behavioural intention including Word of Mouth (WOM). Subsequently, Mathews et al., (2009) defined patronage intention of patrons as repeat visit intentions or revisit behaviour to service sites. This study further remarked how service sector atmosphere variables are more significant in determining the revisit intentions of customers. Heung and Gu (2012) stated the patronage concept as a component of behavioural intention which refers to consumers' return intention to the same restaurant setting and revealed that aesthetic and pleasing environments strongly affect customer patronizing. Burnkrant and Page, 1982 (as cited in Gajanayake et al., 2011, p.1138) confirmed that "Consumer patronage intention is driven by a combination of attitude toward the purchase behaviour and a set of normative beliefs and motivations toward the behaviour".

Store Atmospheric and Patronage Intentions

The environmental psychology literature stream has enriched customers' behavioural responses to environmental cues or stimuli. The study of Mehrabian and Russell (1974) introduced a well-recognized model: the M-R model which demonstrated the interaction between environment and individual responses to environmental stimuli. The researchers identified consumers' responses to environmental stimuli as either "Approach behaviour" or "Avoidance behaviour". Consumers show avoidance behaviour to unfavourable environmental conditions and the approach behaviour refers to the favourable environment comprising desire to stay in shopping malls, repeat purchase or patronage behaviour, communicating with others, exploring, and spending more. Turley and Milliman (2000) stated that atmospheric variables cause a cognitive effect within individuals and it leads to some behavioural responses.

The term atmospherics originated from the article made by Kotler in 1973 and other researchers (Baker, 1986; Berman and Evans, 1995; Turley and Milliman, 2000) were also interested in exploring the impact of atmospherics on the behavioural response of shoppers and received great scholarly attention in this regard. Extant marketing literature has posited the positive link between store atmospherics and patronage intention and limited diverse atmospherics dimensions such as exterior atmospherics (Mower et al., 2012; Marques et al., 2016), interior atmospherics were tested to explore such impact on patronage intention of shoppers in diverse settings. Thus this study has developed a conceptual framework based upon the positive link between store atmosphere and patronage intention which is indicated in extant marketing and environment psychological literature streams by employing the revised typology demonstrated by Turley and Milliman in 2000. Also, it was emphasized atmospheric variables such as exterior variables, human variables, and point of purchase are pressing factors of patronage intentions (Turley and Milliman, 2000: Mower et al., 2012; Marques et al., 2016). This study selected five atmospheric variables as independent variables (i.e.,

exterior, general interior, layout and design, point of purchase, and human) to explore the influence of such atmospheric variables on patronage intention based on the modified typology of Berman and Evans (1995) as illustrated in figure 1.

Exterior Atmospherics and Patronage Intentions

The limited number of prior studies had undertaken to investigate how exterior atmospherics of the store were affected on patronage intentions. The study of Mower et al., (2012) defined external atmospherics are the attributes that shoppers first encounter while commencing shopping like parking, location, etc... Further, Alhemoud (2008) also agreed that parking and accessibility of location are key exterior atmospherics that determines the patronage decision of supermarket shoppers in Kuwait. Also, Mower et al., (2012) examined the effect of exterior atmospherics specifically window display and landscaping on consumer behaviour in the retail setting of small apparel boutiques. It disclosed that the exterior retail environment is positively linked with patronage intentions towards apparel boutiques in America. The researchers in Sri Lanka also revealed that the convenient location of the store positively influences on patronization of shoppers (Raajpoot et al., 2008; Wanninayake and Randiwela, 2007). Accordingly, the following hypothesis is derived,

H1: Exterior store atmospheric variable has a positive impact on the patronage intention of supermarket shoppers

Interior Variables and Patronage Intentions

Today, the lives of shoppers are very hectic and they are working on tight schedules. Thus retailers' attention paid to in-store environments is vital to the busy and hectic lifestyle of shoppers. Retail designers are now spending capital in million dollars to craft relaxing and attractive shopping environments by employing merchandise, light, music, scents, flooring, carpeting, etc. The study of Turley and Milliman (2000) noted that variables such as flooring/carpeting, lighting, scents, sounds, temperature, cleanliness, wall textures, and colour as general interior variables. The study of Elmashhara and Soares (2020) stated that the interior atmospheric variables highly impact on the desire to stay at the mall. Moreover, Gajanayake et al., (2011) identified a positive relationship between in-store lighting and patronage intention of supermarkets in Sri Lanka. As they mentioned shoppers can explore more merchandise, and read labels in a well-illuminated supermarket than in a dimly lighted place. The study of Yalch and Spangenberg (2000) revealed that shoppers are willing to shop and stay a long time when playing less familiar music rather than familiar music in-store setting. With massive competition in the retail industry, better interior design has led to repetitive visits of shoppers (Raajpoot et al., 2008). Accordingly, the following hypothesis is formulated,

H2: Interior store atmospheric variable has a positive impact on patronage intentions of supermarket shoppers

Layout & Design Variables and Patronage Intentions

Layout and design variables consist of atmospheric elements such as fixtures, allocation of floor space, product groupings, traffic flow, department allocations, and allocation within departments (Turley and Milliman, 2000). In line with this, the study of Baker et al., (2002) stated that the store can facilitate consumer shopping by designing a better layout within the store. Retailers strive to create a barrier-less shopping environment by crafting their supermarket layout and design. With the hectic lifestyle of consumers today, they are willing to purchase products very quickly and expect to get in and out of the store within a short time. The study by Wilson (as cited in Gajanayake et al., 2011) noted that layout is very significant to saving the time of shoppers over reducing wasted steps and motions in store. Prior studies also revealed the significance of layout and design on patronage intentions (Baker et al., 2002; Gajanayake et al., 2011). Furthermore, Borges (as cited in Gajanayake et al., 2011) described designing store layout as a more comprehensive task in a retail store, and such design relies on product categories and it influences the spatial behaviour of shoppers and store traffic. Moreover, Barros et al., (2019) and Marqueset al., (2016) agreed that layout construct is the strongest influential variable on consumers' positive emotional retail environment. Consequently, the present study constructed the third hypothesis as follows,

H3: Layout and design atmospheric variable has a positive impact on patronage intentions of supermarket shoppers.

Point – of - Purchases Variables and Patronage Intentions

The one-stop-shopping concept is spreading fast with the hectic and busy lifestyle of shoppers. Now shoppers are willing to visit shops where enable to buy all products on one shelf frequently without searching and visiting other shops. Point–of–purchase atmospheric variables consist of product displays, point-of-purchase displays, posters, signs, cards, Tele-text messages, and price displays (Turley and Milliman, 2000). Thus, proper product display arrangement is embedding a one-stop shopping concept which led shoppers to repetitive visits. Gajanayake et al., (2011) disclosed that product display is a most premium atmospheric variable which affects on patronage intention of supermarket shoppers in Sri Lanka. Further, product display has been explained by Abratt and Goody (as cited in Gajanayake et al., 2011) as an in-store promotional technique that stimulates customers to buy more products. Accordingly, the following hypothesis is developed,

H4: Point–of-purchases atmospheric variable has a positive impact on patronage intentions of supermarket shoppers

Human Variables and Patronage Intentions

Turley and Milliman (2000) unveiled human atmospheric dimensions and the study emphasized that retail employees are material for developing store image in the mindset of shoppers due to the shop floor sales personals are directly communicate with shoppers and they are embedding quality of retail through characteristics such as friendliness, assistance, greeting customers, and wearing a uniform. The study of Baker et al., (2002) and Fowler et al.,

(2007) disclosed that sales personals cause to develop return intention to store and it is necessary to craft atmospheric cues in the retail environment. The friendliness quality of retail employees has been recognized as the most significant atmospheric variable and the unfriendly manner of salespersons, lack of attempts to help, and inability to answer shoppers' questions cause them to leave the retailers Fowler et al., (2007). The study by Alhemoud (2008) stated friendly and knowledgeable staff is valued by supermarket shoppers while patronizing. Mathews et al., (2009) and Heung and Gu, (2012) have found there is a significant impact of human variables on revisit or patronage intentions. Grewal et al., (2003) noted that service retail atmospheric issues may adversely impact on consumers' patronage shopping mall decisions. Too long checkout counters and lack of sales assistance may cause a bad experience and shoppers are reluctant to shop in such kinds of stores repetitively (Liu and Jang, 2009). Store personnel is vital for evaluating stores and it is significantly influenced by store patronage (Grewal et al., 2003; Raajpoot et al., 2008; Kumar and Kim, 2014). Accordingly, the following hypothesis is derived,

H5: Human (Employees) variable has a positive impact on patronage intentions of supermarkets shoppers

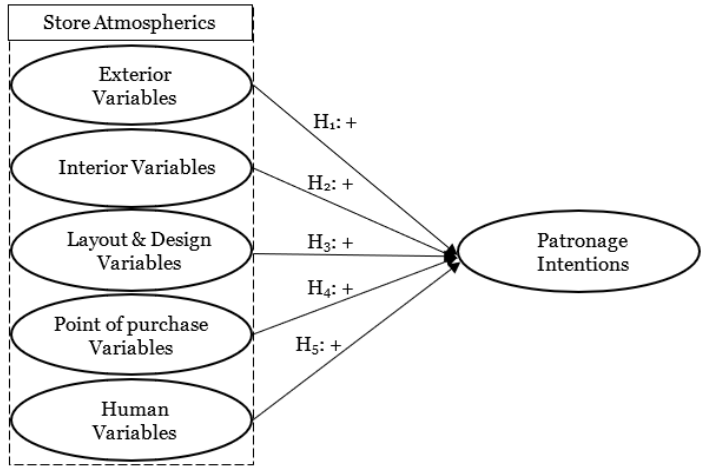

Figure 1: Conceptual framework

Material and Methods

The extant marketing and environment literature stream had depicted the utilization of diverse and eclectic atmospheric variables as independent variables to investigate the association with consumer patronizing at various research settings in the world. The present study relies on the modified atmospheric typology of Berman and Evans which was revised by Turley and Milliman in 2000. In this revised model, Turley and Milliman added the human variable as the fifth atmospheric stimuli. The developed conceptual model and hypotheses were tested over supermarket chains operate in Southern province, Sri Lanka. The Southern province represents around 12.2 % of the country's population which is including 2,477,285 people (Census report, 2019). Hence it is a rationale to select shop floor customers who shop in eight private

supermarkets located in the Southern province as the population to collect primary data for this research work. The study merely relied on the analysis of quantitative data which were collected over a questionnaire administered to shop floor customers who were buying grocery items from the supermarket to attain present research objectives and to test established hypotheses. Besides, qualitative data were collected over observation and interviews held with retail supermarket managers in this province to recognize their views regarding the atmospherics and how they developed a stunning atmosphere in their stores. The respondents of this study were selected by employing a cluster sampling technique and a probability random sampling method. Due to this, research was based upon the data collected from shop floor retail customers of three districts (i.e., Galle, Matara, and Hambantota) in Southern province, Sri Lanka. The total sample was 200 shop floor retail shoppers of private supermarkets and based upon the sample proportion, the sample size of each district was computed as shown in Table 2.

Table 2: Sample size of the study

District	Sample proportion	Sample size (shop floor customers)
Galle	1,063,334/2,477,285*100 = 42.92%	200*42.92 = 86
Matara	814,048/2,477,285*100 = 32.86%	200*32.86 = 66
Hambantota	599,903/2,477,285*100 = 24.22%	200*24.22 = 48

At the outset, 200 questionnaires were dispersed to randomly chosen shop floor customers in Southern province, Sri Lanka. However, only 188 respondents returned completed questionnaires. Out of those questionnaires, only 186 questionnaires were usable to the survey as there were two incomplete questionnaires. Meanwhile, a structured questionnaire used in the study, the data collection took place during December 2019 and January 2020. The six study constructs of the study were operationalized as multi-item constructs. The five items of the exterior atmospherics (i.e., including location and parking as dimensions) were adopted from Marques et al., 2016; and Mower et al., (2012). Ten items of the interior variables (i.e., including lighting, cleanliness, merchandise, and music as dimensions) were adopted from Baker et al., (1994); Alhemoud (2008); Bhatt et al. (2020); and Barros et al., (2019); Mortimer and Clarke, (2011); Heung and Gu, (2012); and Kumar and Kim, (2014). Five items of point of purchase (i.e., including product displays and price display as dimensions) were adopted from Kumar and Kim, (2014). Four items of layout and design (i.e., including placement of merchandise, and space design & allocation) variables were adopted from Alhemoud (2008); Heung and Gu, (2012); Kumar and Kim, (2014); and Barros et al., (2019), while four items of human atmospherics variables (i.e., employee characteristics and uniforms) were adopted from Baker et al., (2002); Grewal et al., (2003); Marques et al., (2016) and Heung and Gu, (2012). The variables of patronage intentions (i.e., including likelihood, willingness to purchase more, and word of mouth as dimensions) were adopted from Baker et al., (2002); Grewal et al., (2003) including five items. All the variables were addressed by using five points Likert Scale ranging from "1 = strongly disagree" to "5 = strongly agree". Statistical package for social science (SPSS) 20 was utilized for analysing primary data of this study.

Data Analysis

The discriminant validity of the latent variables was tested using Fornell and Larcker (1981) approach. Table 3 illustrates the discriminant validity of each latent variable. The diagonals of table 3 show the average variance extracted (AVE) from each variable. The other figures in table 3 show the square of correlations between variables. No non-diagonal figures exceed the AVE of the specific variable

Table 3: Discriminant validity of the latent variables

Latent Variables	1	2	3	4	5	6
Exterior	0.80					
General Interior	0.29	0.68				
Human	0.09	0.29	0.77			
Layout & Design	0.31	0.45	0.19	0.75		
Point of Purchase	0.04	0.22	0.24	0.10	0.66	
Patronage Intentions	0.21	0.31	0.30	0.27	0.14	0.69

Structural equation modelling (SEM) is used to examine the hypothesized influences in the conceptual framework of the study. SEM does not only allow to analyse a set of latent factors like dependent and independent variables in regression analysis (Segars and Grover, 1993) but also provides a comprehensive means to assess and modify theoretical models (Karahanna and Straub, 1999). Chi-Square statistic (X2) with the ratio of chi-square to degrees of freedom (x2/df) was used to examine how close the observed variance-covariance matrix is to the estimated matrix of the proposed model. SRMR, Exact fit criteria (d_ULS), NFI, and RMS theta were used to estimate the improvement in fit in the proposed model on the impact of store atmospherics on patronage intentions of supermarket patrons in Sri Lanka. Henseler et al., (2014) introduce the SRMR as a goodness of fit measure for PLS-SEM that can be used to avoid model misspecification and value should be less than 0.10 or 0.08. The confidence interval should be 95% or 99% of the exact d_ULS and d_G fit criteria to indicate that the model has a "good fit" (Dijkstra and Henseler, 2015). The Values of NFI should exist between 0 and 1 (Lohmöller (1989). The RMS_theta is the root mean squared residual covariance matrix of the outer model residuals (Lohmöller, 1989) and the value should below 0.12 (Henseler et al., 2014). Table 4 summarizes the model fit indices and shows the standardized path coefficients (β), standard errors (SE), t-values (t), and significance values (p) of path coefficients.

Table 4: Results of PLS path model estimation

	Patronage Intentions[b]
	Estimates (t-values)
Path	
Exterior	0.32 (5.21***)
Interior	0.23 (3.74***)
Layout & Design	0.26 (4.01***)
Point of purchase	0.18 (2.62**)
Human	0.42 (8.43***)
Model goodness-of-fit statistics	
X^2 (df)	607.390 (32)
p-value	0.001
SRMR	0.097
d_ULS	1.968
d_G	0.523
NFI	0.569
RMS Theta	0.198
R^2 Patronage Intentions	0.181

***$p < 0.001$; **$p < 0.01$
Source: Survey results (2023)

The results reveal that exterior atmospherics has a positive and statistically significant relationship with patronage intentions. This relationship is supported by data (β=0.32, t=5.21, p< 0.001) in harmony with the postulated theory. There are positive and statistically significant relationships between interior atmospherics (β=0.23, t=3.74, p< 0.001), layout & design (β=0.18, t=2.62, p< 0.01), point of purchase (β=0.26, t=4.01, p< 0.001), and human atmospherics (β=0.42, t=8.43, p< 0.001) with patronage intentions respectively. Factor Analysis (FA) was used to confirm the fit of the hypothesized factor structure to the sample data. In this study factor analysis was performed to assess the relative significance of the selected atmospherics to determine the patronage intention in the retail supermarket context of Southern province, Sri Lanka. Thus, FA was executed by applying Principal Component Analysis (PCA) with Promax Rotation on 42 items. Mower et al., (2012) and Juwaheer et al., (2013) demonstrated that variable with a factor loading of 0.40 was considered significant and items that are below 0.40 must be removed. Consequently, twelve items related to independent variables had to eliminate from the final analysis, since factor loading was less 0.40. Moreover, items related to merchandise, music, product display, and attractiveness of workers' uniforms were removed and consequently, factors such as merchandise, music, product display were

entirely removed from the final analysis. Table V presents an overview of the standardized factor loadings, t-values, composite reliabilities, and average variances extracted (AVEs). The analysis of the measurement model provides evidence of the robustness of the measures as indicated by their reliabilities.

The factor loadings of the latent variables are high and statistically significant. This confirms that the indicator variables and their respective underlying constructs are acceptable. The composite reliability values of the study constructs also reveal that the measurement model is reliable.

Table 5: Confirmatory factor analysis of constructs

Constructs and indicators	Standardize factor loadings	Composite reliability/AVE
Independent variables		
Exterior Atmospherics		0.93/0.80
Distance near home/office	0.87	
Convenience access to the supermarket	0.858	
Parking availability	0.797	
Convenience access to parking	0.867	
Interior Atmospherics		0.96/0.68
Well illumination	0.816	
Well examination	0.927	
Comfortable lightening	0.805	
Cleaning store & floor	0.765	
Hygienic practices	0.6	
Removal of damaged stocks	0.863	
Point of Purchase		0.90/0.66
Clear & noticeable price display	0.793	
Low price display	0.649	
Layout & Design		0.91/0.75
Ease of finding merchandise	0.722	
Logical merchandise arrangements	0.6	
Ease of moving	0.995	
Spacious & well design floor	0.612	

Human Atmospherics		0.93/0.77
Helpful behavior	0.696	
Friendly behavior	0.721	
Polite behavior	0.971	
Neat & well dressed	0.631	
Dependent Variable		
Patronage Intention		0.78/0.69
Very often	0.71	
First choice	0.876	
Buy more	0.893	
Recommended to friends & others	0.972	
Express positive words	0.708	

Source: Survey results (2023)

Results and Discussion

In today's highly competitive supermarket shopping arena, supermarket retailers and developers must have a good understanding of the influential variables of supermarket atmospherics on patronage intentions in the retail supermarket setting of Sri Lanka. After Kotler (1973), researchers were interested in exploring the relationship between certain atmospherics with patronage intentions, shopping value, and mall involvement behaviour. Recently researchers were also willing to examine the relationship and impact of certain atmospherics such as lighting, scent, music, merchandise, price, product display, etc. with and on patronage intentions. However, it is hard to find studies regarding patronage intentions which were focused on the atmospheric classification introduced by Berman and Evans in 1995. Thus, to fill such void, present researchers constructed the conceptual framework and developed hypotheses to test the impact of atmospheric variables on patronage intentions.

From the theoretical perspective, the most significant contribution of this study was its demonstration of the influence of supermarket atmospheric variables on patronage intentions. Thus, researcher is suggesting that atmospheric variables which comprise the exterior, general interior, layout & design, point–of–purchase and human aspect in terms of employees have an impact on patronage intentions. Moreover, this study was one of the first attempts to examine the impact of atmospheric variables demonstrated by Berman and Evans in 1995 and Turley and Milliman in the year 2000. Thus, the study provided a more comprehensive view to understand the impact of supermarket atmospheric variables on patronage behaviour. This study also elaborated on the variations of five atmospheric variables with respect to the demographic characteristics of retail shoppers.

The results of this study provide new insights for supermarket managers and developers to better understand the significance of the role that supermarket atmospheric variables play with

respect to patronage intentions. The present study unveiled that supermarket employees are the most influential variable for generating patronized supermarket customers. Supermarket retailers, therefore, must pay great attention to shop floor workers to upgrade their soft skills, behaviour, and attitudes through training and education. Employees should be trained to behave professionally and friendly manner with a neat and well-dressed appearance at all times. In line with the studies of Ryu and Jang (as cited in Liu and Jang, 2009), Turley and Milliman (2000) reflected that the behaviour and appearance of a major element generates perception regarding supermarkets which leads to generating loyal patrons.

Nevertheless, this study has depicted another determinant of supermarket patronage as a layout and design atmospheric variable. The findings agreed with the results of Baker et al., (2002); Barros et al., (2019); and Marques et al., (2016) who mentioned that the major role of retailers is to facilitate consumer shopping well. That is retail shoppers are willing to revisit supermarkets that are supporting to get in and out within a short time (Uusitalo, 2001). Therefore, it is essential to train and develop retail managers to enhance knowledge regarding merchandise placements including the logical arrangement of merchandise, ease of finding merchandise and upgrading knowledge regarding space allocation and design to generate a more convenient layout over ease of moving and walking through aisles, cashier counter layouts and sanitary facilities, etc. (Martenson, 2007). Moreover, the general interior atmospheric variable is also recognized as an influential variable to generate patronized retail shoppers. Thus, retail managers must consider developing the interior environment of the supermarket to attract and retain shoppers with them. These findings are in line with the findings of Elmashhara and Soares (2020); Bhatt et al., (2020); and Barros et al., (2019). As well as the findings regarding the exterior atmospheric variable were the slightly affecting variable on retail patronage, due to most of the supermarket retailers now maintaining an exterior atmosphere well over adequate parking, located proximate to private and government offices or the middle of the city and it can access conveniently and these findings are consistent with the finding of Marques et al., (2016). The findings based on the regression analysis provided that the impact of the point of purchase variable was lowest on retail patronage and retail shoppers are not paying much attention to such type of an atmospheric variable at present due to all the supermarket retailers practising the most common pricing strategies like the everyday low price, displaying price reduction on supermarket window or in neon signboards well, discounted product, loyalty cards and so forth. Thus, it is not leading to generate patronage intentions in shoppers' minds to other atmospherics today.

Based on the findings regarding the difference of atmospheric variables with demographic characteristics of retail shoppers, none of the demographic characteristics is sensitive to the exterior atmospheric variables. In addition, findings indicated that there are some variations in other atmospheric variables with demographic characteristics. Male shoppers are willing to patronize the supermarket which has designed supermarket layout well. They want to collect their merchandise more quickly than females. As well as they also expect support from sales employees and if shop floor workers are more friendly polite and helpful, males are willing to patronize to such a type of supermarket. But females are willing to patronage supermarkets which have better interior atmospherics including cleanliness of shop floor and shelves and well illuminated with easy merchandise examination. Married retail shoppers have shown the significance of both layouts of the supermarket and point-of-purchase regarding patronage intentions equally. But unmarried shoppers are more sensitive to general interior atmospherics.

Retail shoppers between the 20-29 and 30-39 age groups are more sensitive to point–of–purchase and general interior atmosphere. But shoppers belonging to the age group of 40 – 45 and above 60 years are highly considering politeness, helpfulness, and friendly behaviour of shop floor workers. The point-of-purchase is significant for shoppers in between the 30-39 and 50-59 age groups. However, findings indicated that when shoppers are getting old they are willing to visit a supermarket which is displaying low prices, and prices clearly and noticeably, and also has a friendly, polite, and helpful sales force. Middle-aged retail shoppers heavily pay attention to the point-of-purchase and interior supermarket atmospherics.

Limitations and Future Research

The present study has outlined to examine whether patronage intention is influenced by supermarket atmospherics by utilizing the five atmospheric variables introduced by Berman and Evans in 1995 and Turley and Milliman in 2000, thus this study utilized a couple of dimensions (atmospherics) presented in such classifications. Hence future studies can be outlined to further examine the impact of atmospheric variables in different dimensions, especially including customer perspective to human variables, atmospheric dimensions related to layout and design, and general interior variables. Second, this study selected private supermarket chains as a research setting. But recently government supermarkets like Sathosa started to create a stunning atmosphere in their outlets. Thus, future researchers can select government supermarkets as a research setting and make a comparison of the impact of supermarket atmospherics on patronage intentions in private and government supermarket settings as well. Moreover, this study was based on the limited large-scale supermarket chains operated in the Southern province and ignored the medium and small-scale supermarkets. Thus, researcher suggests undertaking future research in those settings too.

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