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Investigating the influence of in-store environments on customer satisfaction: empirical insights derived from sports equipment retail establishments

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Abstract: The objective of this study is to examine the relationship between in-store environment and consumer satisfaction. To accomplish this goal, the research integrates existing literature on shopping experience, store environment and customer satisfaction. It proposes an innovative conceptual framework that combines the different aspects of in-store environment factors and customer satisfaction into a unified framework. A quantitative approach was used, collecting data through a survey from visitors of sports equipment stores. The results of the path analysis indicate that the in-store environment factors (such as the design, ambient, social, trialability) have a positive impact on customer satisfaction.

Key words: In-store environment, retail, shopping experience, customer satisfaction, sport store.

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1. Introduction

Providing an impactful and memorable Customer Shopping Experience (CSE) lies at the heart of the retail experience economy. To achieve this, retailers follow specific strategic directions, aiming to establish an experiential customer journey. They create captivating store environments, utilizing atmospheric elements and incorporating multiple touchpoints within their stores [1], such as smartphones, monitors, and digital video walls related to their products. These efforts aim to amaze, stimulate the senses, and involve, and excite customers.

While traditional retail atmospherics focused on the in-store environment [2]–[4], it is essential to broaden the perspective to encompass the entire customer journey. The customer experience extends beyond the physical store and includes various touchpoints like the retailer's website, app, and shipping materials [3]. Recognizing this, the DAST framework (design-ambient-social-trialability) offers a comprehensive understanding of retail atmospherics. Design encompasses visual elements across different touchpoints, including store layout, website design, and the style of promotional materials. Ambient factors refer to background conditions, such as lighting or image brightness. The social aspect considers the presence of other customers, store employees, and online reviews. Trialability relates to the ease of trying new products or services, both in-store and online, often facilitated by innovative technologies [5].

Nevertheless, limited scholarly attention has been paid attention to the topic of in-store CSE in the context of sports, retail, and service management [6]. Some studies have explored the sports store environment, encompassing both physical and digital aspects[7], such as the servicescape [4]. Other studies have investigated store atmospherics, specifically focusing on the role of music [8]. Additionally, certain studies have examined sports shopping behavior by developing measurement scales for sports CSE and exploring its associations with overall satisfaction and brand repurchase intentions [9]. Themed flagship brand stores have also been considered, which offer an enhanced and enjoyable brand experience by combining entertainment and shopping [10]. However, despite these efforts, research on the in-store CSE in the sports context is still in its nascent stages, with limited and fragmented scholarly knowledge from both theoretical and practical perspectives [6].

By adopting the DAST framework, retailers can shape the customer experience by considering various touchpoints throughout the customer journey. This expanded approach to retail atmospherics encompasses both in-store and out-of-store experiences, which are controlled or influenced by the retailer. The framework accentuates the importance of trialability as a critical dimension of retail atmospherics. By integrating research on store environment cues [2]–[4], [11] and sensory experiences [12], [13], the framework examines the impact of DAST factors on cognitive and affective reactions, ultimately influencing consumer shopping behavior. Overall, a comprehensive understanding and effective utilization of these factors can enable retailers to create a cohesive and captivating customer experience that drives customer satisfaction and fosters long-term loyalty[6].

This research aims to investigate the impact of in-store factors on customer satisfaction in a sports equipment store. The study utilizes the design, ambient, social, and trialability model (DAST) to comprehend the connection between in-store factors and customer satisfaction within the realm of shopping.

2. Theorical background and research hypothesis

2.1. Design, ambient, social, trialability (DAST) model

2.1.1. Design Factor

Design factors in retail encompass both functional and aesthetic elements [2]. Functional design elements include the layout, comfort, and signage, while aesthetic design elements refer to color, scale, texture/pattern, style, accessories, and merchandise presentation [2]. Retailers often prefer consistent designs across their stores to minimize costs and planning efforts. For instance, planograms are frequently used to determine the placement of products on shelves or displays [5] .

Visual design elements play a significant role in capturing customers' attention [5]. The store layout, signage, and website organization are visually perceived elements that strongly influence human perception and cognition [13], [14]. However, it's important to note that the impact of visual design factors is limited to a person's visual field, spanning 130 degrees vertically and 180 degrees horizontally [15]. In contrast, auditory design elements can be perceived outside of the visual field, adding to the overall sensory experience. Combining different sensory elements can enhance the impact of a design element, as research suggests that incorporating corresponding sounds improves memory performance accuracy [16].

Research investigating functional design elements has yielded interesting insights. The study of Brüggen et al. (2011) on a fast-food chain's store remodeling revealed increased spending in the short term, which returned to baseline levels after six months.

Comfort also plays a role, as participants perceived a retailer as more rugged when the seating was hard compared to soft seating options [18]. Regarding visual senses, the inclusion of digital displays enhanced sales in hypermarkets but had minimal impacts in supercenters, supermarkets, and convenience stores [19]. Floor markers in supermarkets were found to influence customers' pace, with closer lines creating the illusion of longer aisles, slowing down their pace [20].

Aesthetic design elements have also been the focus of various studies. An assortment organization based on complementarity resulted in higher purchase rates and expenditures compared to a substitute-based organization [21]. Vertical displays were found to encourage browsing and purchasing [22]. Manipulating the arrangement of healthy and unhealthy items in a display influenced preferences for healthier items [23]. Color, as another influential aesthetic element, can evoke different emotional responses. Warm colors tended to arouse customers in checkout lines but may result in less satisfaction than cool colors [24]. Retailers should consider these findings when designing their stores to shape customer perceptions and reactions effectively [25].

2.1.2. Ambient Factor

The ambiance includes various background elements such as lighting, music, smells, and temperature, which often operate at a subconscious level for consumers [3]). Although people may not consciously notice these ambient factors unless they are unpleasant or absent, they can significantly impact the shopping experience by stimulating the visual, auditory, olfactory, and tactile senses. Furthermore, these elements can interact with each other, as observed by Spangenberg, Grohmann, and Sprott [26], who found that the combination of Christmas scents and music increased sales.

Research on ambient elements has predominantly focused on lighting and brightness. Halsted [27] explains that humans perceive brightness when light from a source reaches the retina, and this perception affects their subjective description of the environment. The brightness and color of the store can independently or interactively influence consumers' emotions [28]. Factors such as the intensity of ambient lighting and the number of people present in the store can impact consumer pleasure [11]. The brightness of products is relative to the store's background environment can also affect consumer preferences [29]. Similarly, music has been found to influence sales revenue, with a slower tempo and minor mode music resulting in increased sales in supermarkets and department stores [30], [31]. Overall, music enhances pleasure, satisfaction, and behavioral intentions during shopping experiences [25].

The impact of scents in stores has also been extensively studied. Biswas and Szocs [32] discovered that when consumers are exposed to indulgent food scents for more than 2 minutes, they tend to choose healthier items over unhealthy ones. Conversely, if the scent is available for less than 30 seconds, the effect is reversed. Ambient scents that create perceptions of warm or cool temperatures can influence consumer choices, spending, and the perceived density of the retail space [33]. Scents have a positive influence on customers' pleasure, satisfaction, and behavioral intentions. Temperature is another factor that has been investigated, with warm temperatures leading to higher product valuations and influencing willingness to pay in auctions and negotiations [34], [35]. Interestingly, warm temperatures increase willingness to pay in auctions but decrease it in negotiations**.**

2.1.3. Social Factor

The social aspect of the shopping experience involves factors like service personnel and other shoppers [2], [3]. Studies show that the number and behavior of service personnel, as well as the presence of other shoppers, impact customers' perception of service quality and their shopping behavior. Interacting with friends or strangers in the store can affect the time spent, purchases made, and emotional experience [36]–[38]. However, an excessive number of shoppers can decrease sales [38], [39], while negative touch experiences and attractive individuals touching products have contrasting effects [40], [41]. Social factors engage multiple senses, including visual, auditory, olfactory, and touch, and are closely intertwined with store design and ambiance [40], [41].

Advancements in technology are transforming the social factor in shopping. Customers can connect with friends and family remotely for feedback and opinions, while additional personnel can be virtually present to assist. Retailers incorporate social feedback through consumer reviews and ratings displayed on shelf tags. Furthermore, robotic technologies offer new possibilities for simulating social interactions during shopping. Altogether, the social factor in shopping encompasses various elements related to people and technology, influencing customers' perceptions, emotions, and behavior throughout their shopping experience [42].

2.1.4. Trialability Factor

Trialability refers to the ability of consumers to experience a product before making a purchase. Initially, Baker [2] did not include this concept in the description of store environments, as physical stores typically display a variety of products for customers to see, touch, and interact with. Retailers and manufacturers often provide samples or trial sizes to allow consumers to try the product before committing to a purchase, either within the store or at home. Offering in-store samples can also prompt immediate purchases of the product. The availability of trialability options has expanded, allowing

customers to test face creams, smell perfumes, sample food, and assess the sound quality of headphones, incorporating sensory elements such as sight, sound, smell, touch, and taste. Previous research on atmospherics has not fully integrated sampling and trialability into theoretical frameworks, but our proposed model emphasizes their importance and the role of sensory modalities in trialability experiences [5].

In contrast, researchers have investigated the effects of sampling on consumer preferences. Biswas, Grewal, and Roggeveen [43] found that when individuals sample two desirable experiential products, they tend to prefer the product sampled second. However, when the sampling involves two non-experiential products, the preference leans towards the first one. Furthermore, Wilcox, Roggeveen, and Grewal [44] discovered that the timing of when customers receive product information and sample the product influences their response. If favorable information is presented before the sampling opportunity, consumers evaluate the product more positively. Conversely, if this favorable information is provided after the sampling experience, they express more negative evaluations. These findings highlight the significance of sampling in shaping consumer preferences and demonstrate the impact of information timing on consumer evaluations [5].

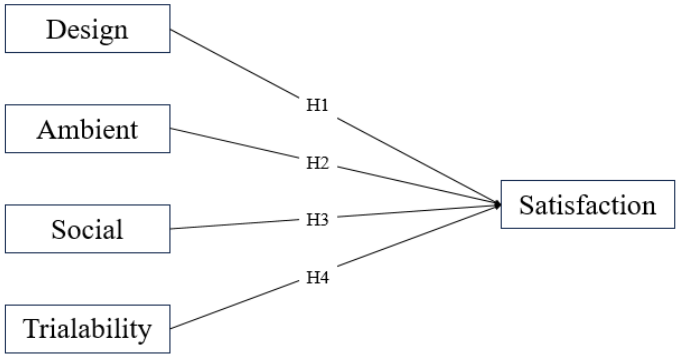
2.2. Customer satisfaction

Ensuring customer satisfaction is a primary goal for businesses, as they recognize the value of retaining existing customers over acquiring new ones. Experts in management and marketing emphasize the significance of customer satisfaction for a business's success [45], [46]. The concept of customer satisfaction is crucial in marketing literature as it establishes a connection between the purchasing process, consumption, and post-purchase behavior like attitude changes, repeat purchases, and brand loyalty. Scholars focus on the relationship between satisfaction, loyalty, and financial outcomes, highlighting the importance of satisfying customers for long-term success [47].

Various definitions of customer satisfaction exist, with no consensus among researchers. Oliver [48] describes satisfaction as the consumer's response to the fulfillment of their expectations, while Anderson and Srinivasan [49] view it as an ongoing evaluation of the surprise experienced during the acquisition or consumption of a product. According to the paradigm of disconfirmation, satisfaction is assessed by comparing the supplier's performance with the customer's expectations [50], [51]. Kotler and Armstrong [52] define customer satisfaction as the individual's perception of a product's performance compared to their expectations, while Zeithaml and Bitner [53] describe it as the evaluation of whether a product or service meets the customer's needs and expectations. The University of Michigan's American Customer Satisfaction Index tracks customer satisfaction across various industries, emphasizing its importance in gauging fulfillment and contentment with a product or service [54].

Extensive research has demonstrated the positive effects of customer satisfaction on business outcomes. Satisfaction contributes to customer loyalty [49], encourages positive word-of-mouth recommendations [55], leads to repurchase intentions[56] , and ultimately improves market share and profitability [57]. Building on this literature review, this study formulates a set of hypotheses presented in Figure 1. The hypotheses revolve around different aspects of in-store environment factors, including design, ambient social, and trialability.

Fig - 1: Conceptual model of the study



2.3. Hypotheses

H1. Customer satisfaction is significantly influenced by the design factor.

H2. Customer satisfaction is significantly affected by the ambient factor.

H3. Customer satisfaction is significantly influenced by social factor.

H4. Customer satisfaction is significantly impacted by trialability factor.

3. Methodology

3.1. Research design

The research hypotheses were evaluated using a structural equation model (SEM). A survey was employed as a quantitative approach for data collection. Path analysis, a statistical method, was utilized to analyze the results. This specific statistical method was chosen due to its capability to estimate the magnitude of connections among the variables and provide insights into causal relationships [58].

3.2. Measurement development

All of the construct measures employed in this research are derived from established and validated scales in the literature and are adjusted to the Moroccan context for the study. To measure the items, we used the five-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5), made by combining existing scales in the literature and adapting them to our context (Table 1). In addition, as stated by Revilla, Saris, and Krosnik [59], five-point scales produce higher quality data than scales with more points.

The constructs of DAST model (design, ambient, social, and trialability) were measured using the scales of Roggeveen et al. [5] and the items generated from the study of Bonfanti and Yfantidou [6]. customer satisfaction with their experiences was measured by adapting items from Mishra et al. [60].

Construct	Items	Authors
Design	I think that the store design is comfortable.	[5], [6]
	The store design is very helpful to find the items very quickly	
	The colors and merchandising used in the design are pleasing to the eye.	
Ambient	I think that the store light is excellent.	[5], [6]
	I think that the music played in the store is very relevant.	
	I think that the store has a distinct and inviting creating a unique olfactory experience.	
	I think that the store temperature is creating a comfortable environment for customers.	
Social	I felt comfortable approaching and interacting with the store staff.	[5], [6]
	I had meaningful conversations with other customers while shopping.	
	I felt a sense of camaraderie among customers during my visit.	
	I felt encouraged to strike up conversations with other customers.	
Trialability	The store's trial options make it convenient for me to evaluate the suitability of products before committing to a purchase.	[5], [6]
	The store had a trial area where I could test the product out. It gave me the confidence to make a decision.	
	The store's trialability factor enables me to experience and assess the functionality and quality of products firsthand	
Satisfaction	In general, I was happy with the shopping experience.	[60]
	In general, I was pleased with the quality of the service this retailer provided.	
	In general, my choice to visit this retailer was a wise one.	

Source: Authors' elaboration.

3.3. Sampling and data collection

The study focused on customers who had engaged in tourism activities with a travel agency. To ensure the survey's effectiveness, a preliminary test was conducted with a group of 40 individuals to ensure its simplicity and comprehensibility. For the actual study, a convenient sampling method was employed, distributing a questionnaire online. This method is commonly used in market research due to its advantages of cost-effectiveness and convenience.

The final survey was made available online for a period of seven weeks. To maintain data quality, we adopted a screening question recommended by Lee and Kim [61]. This question, “Have you visited a sports equipment store”, served as a criterion to filter out respondents who had not previously visited a store. Only those who answered “Yes” were allowed to proceed with the rest of the survey. Out of the 308 responses received, a number of them were excluded from the analysis due to incomplete or missing data, resulting in a sample size of 250 for this study. The response rate was calculated as 81.17%.

3.4. Data analysis

In order to analyze the collected data, IBM SPSS v25 was utilized in this study for conducting exploratory analysis through Principal Components Analysis (PCA). PCA enables researchers to assess

the characteristics of the measurement instruments employed in the study and reduce the number of items. This method is commonly employed when dealing with extensive data sets. Researchers often recommend PCA as an initial purification step to identify latent measures of measurement scales [62]. The measurement and structural model of this study were evaluated using a structural equation model (SEM) on Amos v23. The data analysis was conducted in two distinct stages: firstly, the reliability and validity of the data were tested, and secondly, the research hypotheses were examined.

4. Findings

4.1. Demographic Information

The demographic profile of the participants is presented as follows: Among the 250 respondents, males accounted for 45.2% (113), while females constituted 54.8% (137). The largest segment of participants, comprising 61.2%, fell within the age bracket of 18 to 24 years. A smaller proportion, amounting to 4.8 %, belonged to the age group of more than 45 years. In terms of educational achievement, approximately 28% of the participants possessed a License or bachelor degree, and 32% had master's degree. As for socio-professional status, the majority of respondents were students, making up 56% of the sample. The remaining participants were categorized as employees (36%), officials (5.6%), and freelancers (1.6%). In terms of visited stores we have Decathlon is in first place with 42% market share, followed by Adidas at 28% in second place. Nike holds the third position with 20%. Planet Sport occupies the fourth spot with 6% market share. City Sport and other brands have smaller percentages, placing them lower in the ranking (see Table 2).

Table 2: Demographic characteristics of the respondents (n=250).

Item	frequency	percentage
Sexe		
male	113	45,2
female	137	54,8
Age		
18-24	153	61,2
25-34	55	22
35-44	30	12
45 and more	12	4,8
Education		
Baccalaureate	101	40,4
License/bachelor	69	27,6
Masters	80	32
Occupation		
Student	140	56
Employee	92	36,8
Official	14	5,6
Freelancer	4	1,6
Most visited store		
Adidas	70	28
Nike	50	20
Decathlon	105	42
Planet sport	15	6
City sport	7	2.8
Other	3	1.2

4.2. Measurement model

To evaluate the measurement model and the proposed connections, our data analysis commenced with an exploratory factor analysis (EFA), followed by a confirmatory factor analysis (CFA). Afterward, the IBM

SPSS Amos statistical software was employed to examine the research hypotheses.

4.2.1. Fit between the measurement model and the index

The purpose of the EFA analysis was to ensure that the constructs in the study were unidimensional and internally consistent. The items for each construct were adapted from existing literature to suit the study's context. The analysis confirmed that the measurement scales for participation behavior, satisfaction, and loyalty had a unidimensional structure, as indicated by KMO values exceeding 0.6.

Next, a CFA analysis was conducted to assess the assumed relationships between the observed indicators and their underlying latent constructs. This analysis aimed to refine the measurement model and generate satisfactory goodness fit indexes. The scales demonstrated good reliability, as evidenced by Cronbach's alpha values exceeding the recommended threshold of 0.7 [63]. The internal consistency values ranged from 0.726 to 0.879.

Additionally, the composite reliability (CR) values for all constructs surpassed the recommended threshold of 0.7 [64], ranging from 0.711 to 0.799 (refer to Table 3).

Table 3: Mean, standard deviation, Cronbach's alpha, composite reliability and average variance extracted

Component	Mean	ST.Dev	Cronbach's alpha	CR	AVE	Square Root of the AVE
Design			**0.726**	**0.799**	**0.737**	**0.858**
I think that the store design is comfortable.	4.288	1.040				
The store design is very helpful to find the items very quickly	4.139	0.854				
The colors and merchandising used in the design are pleasing to the eye.	4.461	0.916				
Ambient			**0.816**	**0.711**	**0.829**	**0.910**
I think that the store light is excellent.	4.387	0.861				
I think that the music played in the store is very relevant.	4.238	0.757				
I think that the store has a distinct and inviting creating a unique olfactory experience.	4.483	0.793				
I think that the store temperature is creating a comfortable environment for customers.	4.449	0.888				
Social			**0.879**	**0.849**	**0.958**	**0.979**
I felt comfortable approaching and interacting with the store staff.	4.390	0.861				
I had meaningful conversations with other customers while shopping.	4.192	0.723				
I felt a sense of camaraderie among customers during my visit.	4.486	0.774				

I felt encouraged to strike up conversations with other customers.	4.402	0.818				
Trialability			**0.840**	**0.755**	**0.939**	**0.969**
The store's trial options make it convenient for me to evaluate the suitability of products before committing to a purchase.	4.514	0.749				
The store had a trial area where I could test the product out. It gave me the confidence to make a decision.	4.251	0.698				
The store's trialability factor enables me to experience and assess the functionality and quality of products firsthand	4.548	0.687				
Satisfaction			**0.879**	**0.738**	**0.933**	**0.966**
In general, I was happy with the shopping experience.	4.387	0.749				
In general, I was pleased with the quality of the service this retailer provided.	4.325	0.720				
In general, my choice to visit this retailer was a wise one.	4.276	0.665				

4.2.2. Convergent and discriminant validity

To assess convergent validity, the study examined the average variance extracted (AVE) for each construct and the contribution of each item to the factor. The results, as shown in the table, indicated that the AVE values for each construct exceeded the minimum recommended threshold of 0.50 [65]. This finding confirms the convergent validity of all the constructs.

The discriminant validity of each construct was determined by comparing the square root of its AVE with its correlation values. Discriminant validity was attained since no square root of the AVE correlated less than one with the other components [64].

4.3. Structural model

4.3.1. Structural model fitting index and correlation

To test the measurement model and its hypothesized relationships, we used various goodness of fit metrics, including the following (Table 4): degree of freedom (DF), adjusted goodness of fit index (AGFI), the goodness of fit index (GFI), root mean squared error of approximation

(RMSEA), comparative fit index (CFI), Tucker & Lewis index (TLI), and root mean residual (RMR). The model was supported by the following results: 2/df = 189.106 (5), with values of AGFI = 0.923, GFI =0.950 (GFI >0.9). The RMSEA value was 0.021, indicating a good fit, as values below 0.05 are considered indicative of a good fit. CFI = 0.993, which is extremely close to having a perfect match (1.0), and TLI = 0.990, which is a decent fit.

Following that, a correlation analysis was done to better understand the links between the components (Table 5). Pearson's index was constructed to determine the imfportance of correlations between variables. At the 0.01 probability level, all relationships were statistically significant (r >.05).

The strongest correlation was found between "social factor" and" trialability" (0.747). The weakest correlations were found between "design factor" and "ambient" (0.299) and "design factor" and "social factor" (0.408). Furthermore, the association between "satisfaction" and "loyalty" (0.174) was modest.

Table 4: Goodness-of-fit measures.

χ 2	189.106
DF	165
AGFI	0.923
GFI	0.950
REMSEA	0.021
CFI	0.993
TLI	0.990
RMR	0.023

Table 5: Correlation analysis

	Design	Ambient	Social	Trialability	Satisfaction
Design	1				
Ambient	0.299	1			
Social	0.408	0.580	1		
Trialability	0.422	0.603	0.747	1	
Satisfaction	0.640	0.460	0.536	0.668	1

4.3.2. Hypothesis testing

The measurement model was turned into a structural model to evaluate the hypotheses suggested in this study. Figure 2 depicts the link between "design", "ambient", "social ", "trialability", and "satisfaction".

In the final phase of the research, hypothesis testing was conducted using Amos and SPSS (refer to Table 6). The regression analysis results revealed several significant and positive paths between constructs. Firstly, the path from the "design" construct to the "satisfaction" construct was found to be significant and positive (β = 0.546, t =6.521), supporting H1. Similarly, the path from the "ambient" construct to "satisfaction" construct was also significant and positive (β = 0.458, t = 3.397), confirming H2. Additionally, the path from the "social" construct to the "satisfaction" construct was significant and positive (β = 0.999, t = 4.063), supporting H3. Furthermore, the path from the "trialability" construct to the "satisfaction" construct was significant and positive (β = 1.871, t = 5.752), validating H4.

Table 6: Hypotheses testing

Hypothesized paths			B	Standard Error	t-value	Results
Design	→	Satisfaction	0.546***	0.084	6.521	Supported
Ambient	→	Satisfaction	0.458***	0.135	3.397	Supported
Social	→	Satisfaction	0.999***	0.246	4.036	Supported
Trialability	→	Satisfaction	1.871***	0.325	5.752	Supported

5. Discussion and conclusion

The purpose of this study was to evaluate the DAST model to determine the influence on customer satisfaction in shopping context. The new study adds significantly to our understanding of store atmosphere and its impact on customer outcomes. This study provides particular theoretical and management implications based on the empirical data shown above.

5.1. Theoretical implications

Prior researches [6], [66], [67] has emphasized the significant impact of store atmosphere on customer satisfaction. Within the scope of our study, we specifically examined the outcomes of store atmosphere (DAST model) within a physical environment. The objective of this research was to experimentally ascertain the influence of various store factors and present them within a comprehensive conceptual model. The validity of the measurement model was reinforced through empirical data, and the analysis substantiates the robust performance of the structural model. The findings of this study indicate that the factors related to store such as design, ambient, social and trialability all have a positive impact on customer satisfaction with their shopping experience. These findings are similar to findings from

in-store environments related literature [6], [66]–[68], which claim that store's factors have a considerable influence on customer satisfaction.

Furthermore our study provides a model which include all the components of the DAST model proposed by Roggeveen [5] and testing them empirically on customer satisfaction with their shopping experience.

5.2. Managerial implications

The findings of this study indicate that sports equipment retailers should allocate resources towards creating an engaging store environment through immersive design, sensory elements, and fostering social relationships. These factors play a crucial role in enhancing the Customer Store Experience (CSE). Specifically, retailers are advised to invest in functional elements to establish an appealing and thematic store layout, aesthetically pleasing features to engage customers' senses, and surprise elements in the background to attract and captivate visitors [5], [69], [70]. The study highlights that store design plays a crucial role in creating a tangible and immersive experience for customers. Additionally, the study emphasizes the importance of having knowledgeable and passionate staff who can provide exceptional social experience to customers, with their expertise becomes a competitive advantage that is difficult for competitors to replicate.

The study also emphasizes the significance of offering trialability and real experience sharing in stores. Retailers are encouraged to invest in creating in-store live experiences for customers to interact with products before making a purchase. By allowing customers to touch and experience the products in physical stores, retailers can provide more relevant choices, immediate gratification, thereby enhancing customer satisfaction [71].

6. Limitations and directions for future research

While this study offers considerable input to the study of shopping experience and in-store environment in e- commerce context, it has several limitations that should be recognized.

First, the study may have limitations in terms of the sample size and representativeness of the population. For instance, the sample could be biased towards a particular age group or geographic location, which could limit the generalizability of the findings to other populations.

Second, our model is tested only physical store. Therefore, we would like the model to be tested on other environments such as brands websites. While this study identified the direct relationship between store environment and customer satisfaction, it would be valuable to investigate the underlying mechanisms or mediating factors that explain this relationship. For example, exploring the role of customer emotions,

cognitive processes, and perceptions in mediating the impact of store environment on satisfaction could shed light on the psychological processes at play. In addition,

this study focused primarily on the immediate impact of store environment on customer satisfaction. Future research could explore the long-term effects and sustainability of customer satisfaction over time.

Examining how store environment influences customer loyalty and repeat purchases would provide a more comprehensive understanding of its impact. Finally, With the rapid advancements in technology, there is a need to explore the influence of digital and interactive elements within the store environment on customer satisfaction. Investigating the impact of features like virtual reality, augmented reality, and personalized digital experiences on satisfaction would be a relevant area for future research.

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