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The Role of Multisensory Environmental Stimuli in Enhancing Hyper Customers in Store Experience

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Abstract. In recent years, by population expansion and consequently expansion in service industries, competition has grown in retailing industry more than ever. Retailers can overcome competition in retailing industry by creating attractive, enjoyable, and even more exciting store environment. The purpose of this study is to help marketers, managers and retailers to create an enjoyable and memorable experience for their customers by employing the right multi-sensory environmental stimuli. This study is descriptive in terms of aim, and is applied in terms of path, survey research and of the correlative type.The sample size of this study was 384 customers of chain stores which were selected by simple random sampling method. In analysing the data, inferential statistics topics including structural equation modelling that includes confirmatory factor analysis and path analysis was used.

Keywords: Store Environment; Visual Atmosphere; Auditory Atmosphere; Tactile Atmosphere; Olfactory Atmosphere; Taste Atmosphere

1. Introduction

According to literature and considering research vacancies in multisensory marketing in store environment in all around the world and in Iran, the present study considers the role of multisensory environmental stimuli included visual atmosphere (visual environment), auditory atmosphere (auditory environment), olfactory atmosphere (olfactory environment), tactile atmosphere (tactile environment) and taste atmosphere (taste environment)on customers` in-store experience in Tehran. Therefore; the basic question of the study is as following: What is the role of multisensory stimuli (visual atmosphere, auditory environment, olfactory atmosphere, tactile atmosphere and taste atmosphere) on improving in-store experience?

2. Literature review

The environmental agents of stores are looking for more enjoyable retail environments for shoppers to encourage them to stay longer in the store and pay much more money or to return for several times. Here, it is important to transfer emotions. Particularly, emotions developed in the atmosphere and environment of a store are transferred to products considered to be evaluated in the store (Spence, 2014). The lighting and colour scheme can impact an individual`s character and excitement (Evans, 2002). According to this, visual dimensions of designing store included lighting should be considered more by retail shoppers and brands. In neurology, it was supposed for a long time that in terms of understanding visual cues are dominated more than other sensory cues. Studies have distinguished physical properties and customer`s tendency to determinants of the impact of music and volume. It is easy to control (and to change) music. Therefore; this agent of store environment has been studied more than any other one (Kotler, 1974). Often the press stories consider retail settings and the impact imposed by it via adding fragrance. However; the experimental job body have been remained in the elementary phases. (Mandler, 1975; Ward, Davies, &Kooijman, 2003).Tactile atmosphere can be defined in terms of sensory-discriminative qualities of softness, smoothness and warmth (Kotler, 1974). The success of Gap Closing can be attributed to this matter that it has provided more suitable and comfortable conditions to touch the

goods (Underhill, 1999). There are different tables in the store full of clothes and customers can touch them easily. Kotler (1974) did not consider taste atmosphere in relation with the atmosphere of a store. The mentality of taste creates a natural complication to apply it in the atmosphere of store. These results emphasize on the basic complicated processes in taste role. Food retailers consider tasting and testing of products as a significant part of their offered product, so that shoppers may test many available products. (Spence et al., 2014).

In store experience happens as a result of situational interaction between subject and object. In interaction is not perspective, the identical properties of environment (except employees) can be observed to can be felt as much as possible by individuals and create an internal reaction to the subject. (Evans, 2003). The situation of utilitarian fit is the best outcome for utilitarian value. In this situation, there is a harmony between cognitive and understanding dimensions so that emotional stimulation does not prevent from an analytical response and an individual can approach to the environment via an "active" consideration. In other words; expectations from a little stimulation and high domination come true and cause achievement to utilitarian value (Evans, 2003). In hedonic fit, multisensory imaginations by harmonized cohesive stimulation with expectations are formed as a result of a "passive" consideration. The emotional outcome in terms of high stimulation and low domination set the best bet to achieve utilitarian value (Evans, 2003). Rational control is defined by the lack of harmony between a cognitive background and internal reaction. This provides a condition in which an individual approaches to an environment via an "active" consideration but internal responses are not analytical and comprehensive. This can include a condition in which an individual is not surprised as the situation is expected and it may be experienced earlier in the same way. Therefore; high domination and low emotional stimulation can be decreased in an individual to be experienced (Evans, 2003). The conditions of an emotional submissiveness provide an emotional outcome which is in contrast to the situation of rational control. As an individual approaches to the environment via an "active" consideration included applying an active consideration as a means to achieve a goal, s/he receives some stimulations increasing his analytical

responses (Evanz, 2003). A good and positive experience is created in a condition that store managers can carry out the dimensions of sensory marketing well. If five dimensions of sensory marketing are accomplished, good outcomes are resulted and if store managers carry out one or two dimensions separately, a good result will not be achieved. Thus by considering related literature, the following hypotheses can be proposed. The visual dimension makes a positive and significant impact on customer`s cognitive experience. The visual dimension makes a positive and significant impact on customer`s emotional experience. The visual dimension makes a positive and significant impact on customer`s behavioural experience. The taste dimension makes a positive and significant impact on customer`s cognitive experience. The taste dimension makes a positive and significant impact on customer`s emotional experience. The taste dimension makes a positive and significant impact on customer`s behavioural experience. The olfactory dimension makes a positive and significant impact on customer`s cognitive experience. The olfactory dimension makes a positive and significant impact on customer`s emotional experience. The olfactory dimension makes a positive and significant impact on customer`s behavioural experience. The tactile dimension makes a positive and significant impact on customer`s cognitive experience. The tactile dimension makes a positive and significant impact on customer`s emotional experience.

The tactile dimension makes a positive and significant impact on customer`s behavioural experience. The auditory dimension makes a positive and significant impact on customer`s cognitive experience. The auditory dimension makes a positive and significant impact on customer`s emotional experience. The auditory dimension makes a positive and significant impact on customer`s behavioural experience.

3. Method

The present study is a descriptive survey correlated research in terms of applied purpose and accomplishment. Taking notes, interview and questionnaire were applied to collect data and information needed for the present study. Therefore; library and field research methodologies were

used to collect data. The statistical society of the present study was composed of customers of chain stores.

Table 1. The statistical society and temporal and spatial domination realm of the research

Store	Branch of studied store	Number of completed questionnaires	Number of questionnaire
Shahrvand	Beihaghi	105	105-1
Hyper star	Bakeri	100	205-105
Hyper mi	Ekbatan	110	315-205
Refah	Valiasr intersection	115	430-315

By considering the statistical society and carrying out via hands and not by internet or post, Izraeel table was applied (Mirzaee, 2010). A simple random sample was applied and 4 chain stores included Shahrvan, Hyper Star, Hypermi and Refah were selected randomly among all stores, next samples were selected from these stores equally.

Table 2. The number of samples acquired from chain stores

Store	Visits in a week	Distance of sample	Sample of stores
Shahrvand	2	3	105
Hyper star	1	3	100
Hyper mi	4	3	110
Refah	3	3	115
total			422

Inferential statistical subjects included Structural Equation Modeling which included Confirmatory Factor Analysis and Path Analysis was applied to analyse data. These software applied to analyse data are of a software package SPSS version 19 and software package "Amos" version 18 authorized by window.

4. Findings

As the indices of fit present, Confirmatory Factor Analysis are fit thus there is no need to be corrected.

Table 3. The indices fit of measurement modelling

Indices of fitness	optimum	Index acquired from the study
	1-3	2.076
CFI	0.9	0.90
GFI	0.9	0.923
AGFI	0.9	0.959
RMSEA	0.08	0.065

Confirmatory Factor Analysis was applied to decide reliability and validity of sensory marketing variant. As it is observed, all variant questions of sensory marketing are of a factor loading higher than 0.5 which is accepted for questions of all variants in Forner and larker opinion (1981).

Table 4. The factor loading and significance of questions

Question	Dimensions	Critical amount	Significance	
Question 1	Visual dimension	--------	--------	0.613
Question 2			*****	0.624
Question 3			*****	0.692
Question 4			*****	0.754
Question 5			*****	0.662
Question 6			*****	0.612
Question 7			*****	0.663
Question 1	Tactile dimension	--------	--------	0.627
Question 2			*****	0.614
Question 3			*****	0.627
Question 4			*****	0.680
Question 5			*****	0.653
Question 6			*****	0.564
Question 7			*****	0.614
Question 8			*****	0.582
Question 9			*****	0.642
Question 1	Olfactory dimension	--------	--------	0.585
Question 2			*****	0.671
Question 3			*****	0.652
Question 4			*****	0.564
Question 1	Auditory dimension	--------	--------	0.462
Question 2			*****	0.672
Question 3			*****	0.674
Question 1	Taste dimension	--------	--------	0.701
Question 2			*****	0.592

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As the indices of fitness present, the conformity factor analysis of customer`s experience is of enough sufficiency. Therefore; there is no need to be corrected.

Table 5. The indices of fitness of measurement model

Indices of fitness	Desired limit	Index acquired from the study
	1-3	1.864
CFI	0.9	0.906
GFI	0.9	0.897
AGFI	0.9	0.861
RMSEA	0.08	0.069

The confirmatory factor analysis was applied in order to determine validity and reliability of sensory marketing factor. As it is observed, all questions own factor loadings higher than 0.5 which is an optimum amount to all questions in Forner and Larker`s view (1981).

Table 6.The factor loading and significance of questions

Question	Dimensions	Critical amount	Significance	
Question 1	Visual dimension	--------	--------	0.613
Question 2			*****	0.624
Question 3			*****	0.692
Question 4			*****	0.754
Question 5			*****	0.662
Question 6			*****	0.612
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Question	Dimensions	Critical amount	Significance	
Question 3			*****	0.674
Question 1 Question 2	Taste dimension	--------	-------- *****	0.701 0.592

A most strong and suitable methods of analysis in studies of behavioural sciences is to analyse multi-variants.as these issues are multi-variants and it is not possible to analyse them via two-variant methods (in a phase an independent variant is considered with a dependent one), so the structural equation modelling was applied in the present study to confirm The path is analysed to determine the impact among the variants of conceptual model in the study. The initial structural model has been presented according to figure.2and are corresponding to the results achieved from the calculations of IMOS 18 software and indices are presented as following. The results of fit indices in table 7 indicate that the structural model has got a good fit.

Table 7. The indices fit of structural model

Indices of fit	Optimum	Index acquired from the study
	1-3	1.976
CFI	0.9	0.901
GFI	0.9	0.896
AGFI	0.9	0.895
RMSEA	0.08	0.070

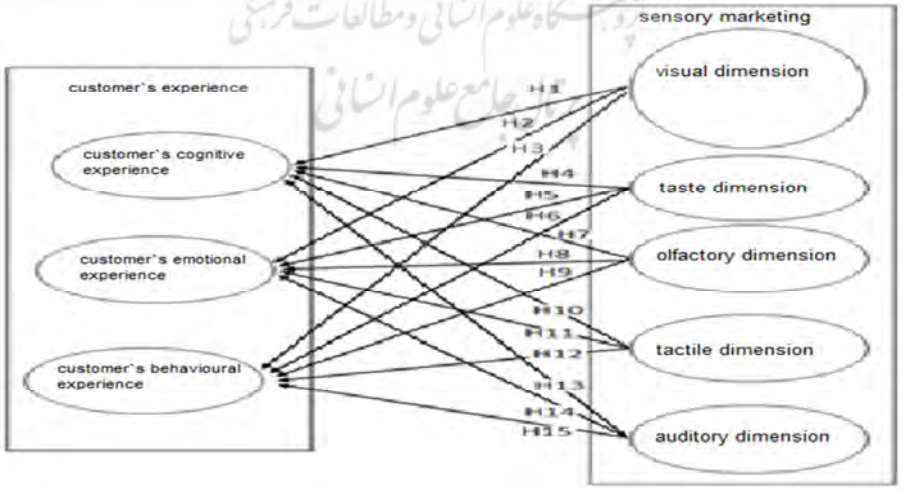

Fig. 1. Conceptual model of study

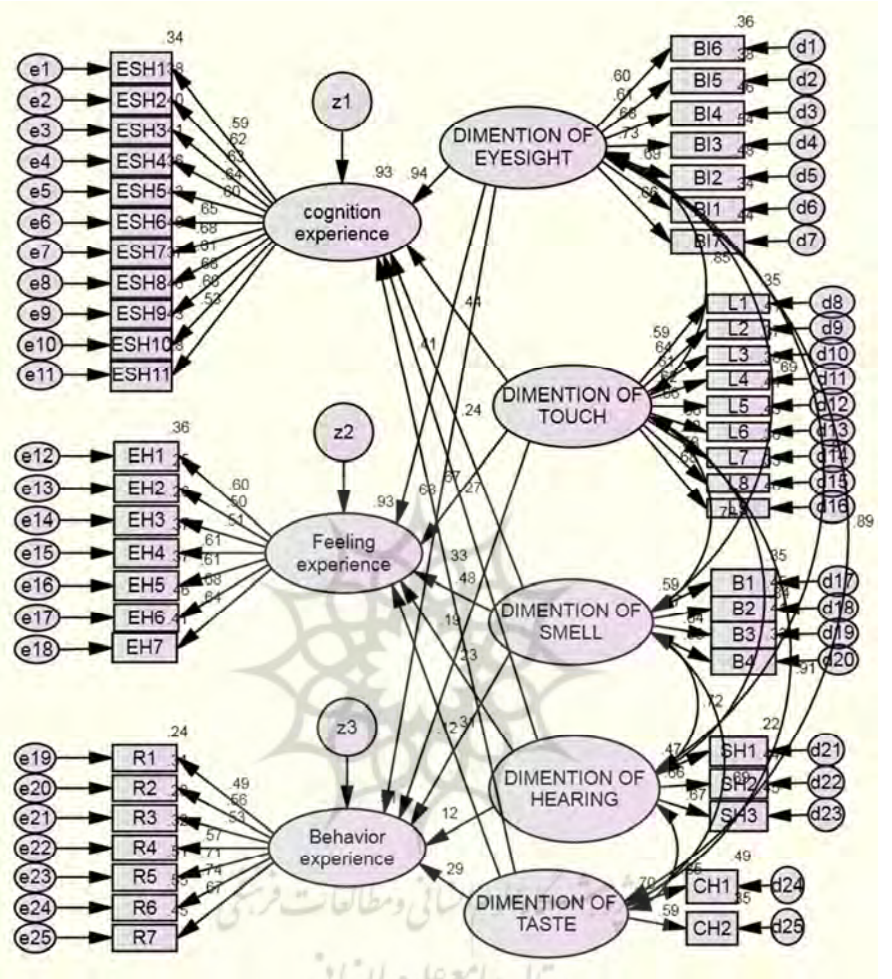

Fig. 2. The standard structural model

The results of study hypotheses are observed in table 8. According to the results, all hypotheses were confirmed and indicate that the conceptual model has cleared all its hypotheses well. In following, the coefficient of dependent variants indicates that the variance of a dependent variant has been cleared by independent variants to what extent.

Table 8. The results of research hypotheses

Independent variant	Dependent variant		Significance	Impact coefficient	Result
Visual dimension	Cognitive experience	5.357	****	0.939	Confirmation of hypothesis
Visual dimension	Emotional experience	5.422	****	0.406	Confirmation of hypothesis
Visual dimension	Behavioural experience	5.396	****	0.684	Confirmation of hypothesis
Tactile dimension	Cognitive experience	3.243	****	0.437	Confirmation of hypothesis
Tactile dimension	Emotional experience	3.636	****	0.669	Confirmation of hypothesis
Tactile dimension	Behavioural experience	2.125	****	0.192	Confirmation of hypothesis
Olfactory dimension	Cognitive experience	2.829	****	0.236	Confirmation of hypothesis
Olfactory dimension	Emotional experience	5.138	****	0.476	Confirmation of hypothesis
Olfactory dimension	Behavioural experience	2.422	****	0.118	Confirmation of hypothesis
Auditory dimension	Cognitive experience	3.211	****	0.272	Confirmation of hypothesis
Auditory dimension	Emotional experience	3.123	****	0.231	Confirmation of hypothesis
Auditory dimension	Behavioural experience	2.172	****	0.123	Confirmation of hypothesis
Taste dimension	Cognitive experience	4.829	****	0.334	Confirmation of hypothesis
Taste dimension	Emotional experience	2.711	****	0.122	Confirmation of hypothesis
Taste dimension	Behavioural experience	2.672	****	0.292	Confirmation of hypothesis

5. Conclusions

Maybe lighting is the most visual method which the shopper can be involved with. The neutral method to use colour is the most suitable way to present goods. Neutral, black, white, crème, brown and grey shadows are useful to design a store as there is no danger to present goods in an unsuitable way or to compete with the decoration of the store. If it is tried to present the colours of brands, neutral colours

should be mixed in stands and chambers. The impact of applying lighting is similar to apply it in the presented products. When the manager of a store decides to manifest particular parts of a store from other ones, such lighting with different colours can play an active role in creating an enjoyable space in customers` minds.

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