

# **FRAMEWORK FOR MUSIC AS STORE ATMOSPHERICS TO INDUCE BUYING: A STUDY OF DELHI MALL CUSTOMERS**

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## **Abstract**

Music is a hidden stimulus for retailers. Not much has been researched on Indian luxury stores. This paper attempts to study the composition of music on perception of buyers at luxury stores. A research on customer's buying intention was done to study their perception of music in the luxury store formats. This study uses exploratory factor analysis to find the significant different factors which constitute music to be played so as to induce buying in a luxury store. The composition of music depends upon music attractiveness, age of the customer and a desire to listen to the music.

**Key Words:** Store Music, Music Attractiveness, Music Desire, Atmospherics.

## Literature review

Is there a store which does not play music? Furthermore, if it is a luxury store, it cannot exist without such a thing. Music is the tongue of a store. The store sings and we listen. The merchandise of the store cannot be negated for good music. Similarly, lighting, store layout, and the store staff all contribute towards the store servicecape, or store atmospherics. Kotler (1973) introduced the idea of atmospherics into the literature. He notes that in-store environments have an effect on customers' perceptions, leading to their subsequent behaviors. He predicts that they will become the chief form of competition. According to Kotler (1973), customers perceive the atmospheric environment of a store through sensory cues, including visual (lighting, colour), aural (music), tactile (cleanliness), and olfactory (scent) senses. The study of these facility-based effects is called by several names, such as atmospherics, shelf-space studies, environmental psychology, and servicescapes. A wide range of outcomes have been examined as consequences of atmospheric variables. Some of the most common dependent variables are sales, purchase behavior, time spent in the store, and approach-avoidance behaviors (Turley and Milliman 2000).

Sensory cues have always worked wonders on human beings. They have been used by restaurants, perfume sellers, lighting stalls, and others to attract customers. Now it is being used by retailers to compete with each other. Light and music is a widely accepted tool for giving a good shopping experience to customers. Most garment retailers play music in their stores while their mannequins are accent-lighted for fabric colour rendition.

Lighting is mainly measured by parameters such as illuminance, brightness ratio, and colour rendering index. A grocery store would require higher illuminance as compared to a bookstore. The brightness ratio is uniform for a grocery store, but contrast in a jewelry store. Colour rendering index is important for garment stores. Retailers change the store layout intermittently to create novelty. There is little documentation of atmospherics in an Indian context.

Atmospheric cues consist of ambiance, design, and social factors (Baker 1986). Research has already demonstrated the robust effects of context or "atmospherics" in service and retail settings (Park, Iyer, and Smith, 1989, Dube, Chebat, and Morin, 1995). Baker et al findings support a conceptualisation of store image as a cognition formed by the combined influence of environmental cues.

Cues which lead to store atmospherics are the overall ambiance as expected by the customers. Social factors such as income can also lead to certain expectations by the customer. The combined effect of environmental factors, such as design and personnel, represent a synergistic combination of cues to judgment. This study examines how the antecedent store ambient and design factors might act together to affect persuasion outcomes of individual store visits.

<b>Category</b>	<b>Definition</b>	<b>Environmental Cues</b>
<b>Ambient Factors</b>	Background conditions that exist below the level of our immediate awareness	Air quality Temperature Humidity Circulation/Ventilation Noise (level/pitch) Scent Cleanliness
<b>Design Factors</b> (exterior/interior)	Stimuli that exist at the forefront of our awareness	<i>Aesthetic</i> Architecture Colour Scale Materials Texture, Pattern Shape Accessories <i>Functional</i> Layout Comfort Signage
<b>Social Factors</b>	People in the environment	<i>Audience (Other customers)</i> Number Appearance Behaviour <i>Service Personnel</i> Number Appearance Behaviour

**Table 1**

Mazursky and Jacoby (1986) found that perception of store interiors were useful in predicting shoppers' perceived quality of merchandise sold by vendor. Furthermore, store atmosphere has been found to be a key component of overall store image (Berry 1969). Physical surroundings contain meaning for those who use and inhabit them. As an important influence on behavior, there have been several attempts to develop classification frameworks for environmental variables. In environmental psychology, Hall (1966) described three types of environmental cues: fixed feature elements, such as walls and floors; semi fixed feature elements, such as furniture type and arrangement and window displays, and; non-fixed feature elements, such as ambiance and people in the environment. A store environment contains numerous non-product cues that aim to create a buying environment designed to produce specific emotional effects in the buyer to enhance his or her purchase mobility. Those cues are termed as atmospheric stimulus cues.

Baker (1987) suggested that environmental components can be categorised into ambient, design and social factors. Ambient factors refer to the non-visual elements of space that tend to impact consumer's subconsciousness (temperature, music, and lighting). Design factors are the stimuli that represent the visual elements of space that tend to exist more at the forefront of consumer awareness (colour, layout, architectural elements). Social factors involve the presence of employees and customers in the environment.

According to Bell et al. (1990), a good environment will not only improve productivity, but will also affect employee satisfaction at work. Satisfied employees are normally loyal to the company and perform well. Other factors also have effects on employee satisfaction, such as: job security, salary, and colleagues (Crouch & Nimran, 1989; Herzberg, Mausner & Syderman, 1959 in Bell et al.). When the quality of the work environment is below the standard, there will be greater employee dissatisfaction and discomfort at work. A good environment will bring with it higher productivity (with respect to work flow, safety and health, as well as job satisfaction).

Several studies have found that music, colour and crowding have effects on consumer's responses and behaviours. To enhance the development of atmospheric research, classification schemes have been proposed in an attempt to categorize all elements in a physical store environment. Bitner (1992) proposed three dimensions of environmental features constituting the servicescape, including: (1) ambient conditions; (2) spatial layout and functionality, and; (3) signs, symbols and artifacts.

The ability to modify in store behaviour through creation of an atmosphere has been acknowledged by many retail executives and retail organisations (Turley Chebat 2002). In this regard, retailing seems to be undergoing a shift from focusing on breadth and depth and quality of merchandise, to creating a pleasant shopping experience (Sherman, Mathur, Smith 1997). Academic research clearly underscores the nature of influence the retail environment can have on consumer perceptions and behaviour. In a review of some 60 experiments that manipulated a portion of a store's complex atmosphere, Turley and Millman (2000) remark that each of these studies found some statistically significant relationship between atmospherics and shopping behaviour. Based on this review, they conclude that the effect of the retail environment on consumer behaviour is both strong and robust and that it can be shaped to increase the likelihood of eliciting particular behaviour from shoppers. They also notice that the research in this area includes variety and diversity in both dependent and independent variable.

Most retail atmospheric research has been done by taking one environment cue at a time. However, it has been shown that atmospheric variables can interact with each other, yet, it has been shown that atmospheric variables can interact with each other, producing expected and unexpected results. The idea of looking at a basket of environment cues is recent, and not deeply explored (Wakefield Baker 1998, Grewal and Voss 2002).

A recent trend in atmospheric research is to test multiple atmospheric variables simultaneously so that the interaction effects between the variables can be explored (Wakefield and Baker 1998). This approach has more external validity, because consumers never encounter individual atmospheric variables. They process environmental cues holistically (Babin and Suter 2003) within the context of several other environmental cues presenting themselves simultaneously. Researchers are beginning to examine retail density and crowding in conjunction with other atmospheric variables. Eroglu, Machleit, and Chebat (2005) examine the main and interactive effects of retail density and music tempo. With regard to density, they find a main effect on the total dollars spent. Consumers spend more money when there are higher levels of retail density. They also find an interactive effect of music tempo and retail density on hedonic and utilitarian shopping value. Both types of value are highest in conditions of moderate incongruity, or fast music with high density and slow music with low density. Similarly, Michon et al. (2005), jointly examine retail density and ambient odors. They find that ambient odors have a positive effect on consumers' perceptions of the mall environment and emotions only during times of medium retail density. This effect disappears under conditions of low or high retail density. Finally, Mattila and Wirtz (2008) report that the joint effects of perceived crowding and salesperson friendliness increase the likelihood of impulse purchasing.

Turley and Milliman (2000) provide a thorough review of the atmospheric variables, using a modified version of Berman and Evan's (1995) categorization as a framework. They extend the original four categories to include a human dimension. The first category, external variables, includes variables such as the storefront, marquee, entrances, and display windows, building architecture, the surrounding area, and parking. Very little research exists in this category. In contrast, the second category, general interior variables, receives more attention in the literature than any other category. The general interior variables category includes variables such as flooring/carpeting, lighting, scents, music and other sounds, temperature, cleanliness, wall textures, and colour usage. The third category, layout and design, includes variables such as fixtures, allocation of floor space, product groupings, traffic flow, department locations, and allocations within departments. The fourth category, point-of-purchase and decoration, includes variables such as product displays, point-of-purchase displays, posters, signs, cards, teletext messages, and wall decorations. Finally, the fifth category is human variables, which includes variables such as customer crowding or density, privacy, customer characteristics, personnel/employee characteristics, and employee uniforms. This category can be sub categorized into two areas of research: the influence of other shoppers, and the influence of retail employees on shopping behaviour. While research in the human variables category is somewhat limited, most of the attention focuses on the impact of other customers on shopping behaviour, with an emphasis on shopper density and perceived crowding. Research on the impact of retail salespeople as an atmospheric variable is extremely limited.

Store atmospherics describe the special sensory qualities of retail spaces that are often designed to evoke particular consumer responses. Lighting is a significant

component of store atmospherics. A more appealing store with better-illuminated merchandise may entice shoppers to visit the store, linger, and hopefully make a purchase (Summers 2001).

Although researchers focus on many different topics within the atmospherics literature, one atmospheric variable that is especially relevant to the current work is music as an atmospheric influence.

### **Studies in Store Music**

Music is a dominant atmospheric factor. It is easily visible and its effect can be measured with great accuracy. The amount of literature on the effects of music on consumer behaviour is relatively limited, but has steadily grown over the last two decades. Bruner II (1990) provides a review of the literature up to the beginning of the 1990s and continued interest in the topic is demonstrated by more recent work by authors such as North and Hargreaves (1996 a, b, c), Areni and Kim (1993), and Kellaris and Altsech (1992).

The two main domains in which the effects of music have been explored are advertising (Tom, 1990; Alpert and Alpert, 1989; Gorn, 1982) and service environments (Areni and Kim, 1993; Yalch and Spangenberg, 1990; Milliman, 1986; 1982). Of the research that focuses on service environments, the majority has investigated the effects of music in retail stores or shopping malls.

Bruner II (1990) notes that "Music is not a generic sonic mass, but rather a complex chemistry of controllable elements" (p 95). Music can vary along various dimensions, including timbre (the texture of the music, which incorporates volume), rhythm (the pattern of accents given to notes), and tempo (the speed or rate at which the rhythm progresses). The effect of music on behaviour has been suggested to operate via its effect on cognitive and emotional processes (Seidman, 1981). Much of the research that has considered the effects of music on individuals' emotional states draws on Berlyn's (1971) arousal hypothesis that preference, and thus pleasure for aesthetic stimuli such as music, is related to the arousal potential of the stimuli. Highly arousing music is defined as loud, erratic, and difficult to predict with a quick tempo, while music with low arousal qualities is soft, monotonous, very predictable, and with a slow tempo (Berlyn, 1971).

One of the more consistent findings of the research into the effects of particular components of music on behaviour, is that music that is more arousing leads to individuals spending less time on activities. Smith and Cunrow (1966) revealed that when loud music was played in a supermarket, customers spent less time shopping, and Milliman (1982) demonstrated that music tempo affects the speed with which consumers moved around a store. Milliman (1986) later showed that the tempo of music in a restaurant affected the time that people spent in the restaurant, such that individuals dining under the fast music condition spent less time at their tables than individuals dining under the slow tempo condition. Similar evidence of the effects of music tempo includes research by Robaley et al. (1985), who found that it affected

the number of bites taken per minute in a university cafeteria and McElrea and Standing (1992), who recorded that music tempo influenced the speed with which drinks were consumed at a bar.

Background music is enticing in luxury category, and tempting in garment stores. It varies with the demographics as well. Elder people find decision making difficult, whereas younger ones tend to appreciate background music. It is cacophony if played too loud. Familiar music, relative to unfamiliar music, may cause individuals to spend less time shopping, but to perceive themselves as spending more time. Consumers are more likely to visit new service environments that play music that they like (Broekemier, Marquardt, Gentry 2008). Retail managers believe, and observations confirm that consumers tend to buy more when they shop for a longer time. If managers seek to influence shopping times by creating a familiar atmosphere, the results of this study show that they may not get the intended effect. Although individuals reported shopping longer when listening to familiar music, they actually shopped longer when listening to unfamiliar music. (Yalch and Spangenberg 2000).

Music influences a customer's mood. Slow tempo music relaxes the customer and causes them to linger in the store longer, whereas fast tempo music may be better for stores and restaurants that need rapid turnover. Music is not just about speed or the type of music must match the store. A barbeque-themed restaurant would attract more customers with ghazal music, rather than with pop music. This paper tries to dissect music and understand which factors of music influence the buying behaviour of customers in a luxury retail store.

## **Research Methodology**

The study was located at the popular department stores in Delhi NCR, with the customers as the subjects. 318 valid responses were collected from participants in the Delhi NCR region. Participants were instructed to complete a questionnaire, in which they recorded their perceptions of music store atmospherics for a luxury store. The mode of contact was store intercept. The questionnaire which was adopted in this study required the respondents to rank perception attributes pertaining to music for a luxury stores on a Likert scale ranging from 1 to 5 (strongly disagree to strongly agree).

### ***Pretesting of questionnaire and measures***

A pilot survey was conducted on a sample of 30 respondents in the actual store environment. The results from the pilot test were used to adjust the scent intensity and the music volume. In addition, feedback from the pretest sample was incorporated into the wording of the questions and the survey layout.

The intent of the questionnaires was to generate a store atmospherics for ambient scent perception profile for economy and luxury stores, based on users' responses to questions about their experiences in these environments.

### Data Analysis

A total of 324 customers were asked to participate in the survey. 6 were invalid responses. Nearly 75% of the respondents were female, and close to 65% were young people in the age group of 20-35. Taken together, these sample characteristics closely match the retail store's primary target markets.

#### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.642
Bartlett's Test of Sphericity	Approx. Chi-Square	606.559
	df	36
	Sig.	.000

**Table 2**

#### Communalities

	Initial	Extraction
Li5	1.000	.668
Li10	1.000	.710
Li12	1.000	.651
Li16	1.000	.585
Li19	1.000	.663
Li31	1.000	.566
Li2	1.000	.531
Li11	1.000	.674
Li8	1.000	.444

**Table 3**

Extraction Method: Principal Component Analysis



**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.431	27.012	27.012	2.431	27.012	27.012	2.297	25.518	25.518
2	1.876	20.847	47.859	1.876	20.847	47.859	1.840	20.439	45.957
3	1.184	13.156	61.015	1.184	13.156	61.015	1.355	15.058	61.015
4	.913	10.141	71.156						
5	.755	8.393	79.549						
6	.576	6.401	85.950						
7	.511	5.674	91.625						
8	.452	5.017	96.642						
9	.302	3.358	100.000						

Extraction Method: Principal Component Analysis.

**Component Matrix<sup>a</sup>**

	Component		
	1	2	3
Li11	.756	-.306	.093
Li10	.732	-.329	-.256
Li2	.691	.229	.030
Li12	.638	.492	-.042
Li8	.485	.150	-.431
Li31	-.147	-.736	.048
Li5	.041	.681	.450
Li16	-.331	.591	-.356
Li19	.265	-.051	.768

Extraction Method: Principal Component Analysis.

**Table 4**

**Rotated Component Matrix<sup>a</sup>**

	Component		
	1	2	3
Li10	.788	-.288	.083
Li11	.695	-.174	.401
Li2	.634	.314	.173
Li12	.598	.541	.016
Li8	.594	.094	-.287
Li5	-.134	.773	.229
Li31	-.128	-.712	.208
Li19	.001	.182	.794
Li16	-.217	.433	-.591

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

**Component Transformation Matrix**

Component	1	2	3
1	.944	.126	.304
2	-.037	.958	-.283
3	-.327	.256	.909

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

**Table 5**

Bartlett’s test of sphericity and Kaiser– Meyer– Olkin (KMO) measures of sampling adequacy were used to examine the appropriateness of factor analysis. The approximate chi-square statistic is 606, with 36 degrees of freedom, which is significant at 0.05 level. The KMO statistic (0.642) is also large (greater than 0.05). Considering these outcomes, factor analysis may be considered as an appropriate technique for further analysis of data.

Three factors have emerged on the basis of Varimax Rotation with Kaiser Normalization, with factor loadings greater than 0.5. 27.02 per cent of variance is explained by Factor 1; 20.85 per cent of variance is explained by Factor 2, and; 13.16

per cent of variance is explained by Factor 3. All three factors together contribute to 61 per cent of variance (Refer to Table 4).

Principal Components Analysis (PCA) was the extraction method with varimax rotation being used. The number of factors to be retained was based on a priori, scree plot, and the variables having eigen values higher than 0.4 were loaded on latent factors.

The results of this study support the belief that shopping time is affected by a music environmental factor, such as attraction of music, extends stay, and segments of age.

Analysis of data involved factor analysis of the eleven items related to music. Factor analysis has been used in previous studies to derive the final values of the atmospheric variables, such as desire to stay in the store, age segmentation, and attractiveness of music.

Reliability for the factors was done using the Cronbach's Alpha. Testing each factor's reliability assures adequate freedom from random factor. Factor analysis of the eleven items related to music resulted in three factors for luxury stores.

<b>Factors</b>	<b>Items</b>	<b>Factor Score</b>
Music Attractiveness	I believe that music reinforces the image of the store	3.309
	I feel at ease when the music being played is of my choice	
	I leave the store when music being played is not of my choice	
	Right kind of music being played is important for me	
	I would like to listen to music that is popular in my generation	
Age Segmentation	I don't like the current music being played	1.385
	I don't like old music being played	
Desire to listen to music	I would spend more time in a store if I like the music	1.485
	I sometimes stick around in a store to listen to the music	

**Table 6**

## **Conclusion**

Music is an important store atmospheric.

*Composition of Music:* This study reveals that music is composed of three factors: music attractiveness, age of the customer, and a desire to listen to the music. This means that shopping malls can offer a unique and differentiated shopping experience to their shoppers by carefully selecting facilities and services under each factor. This selection would depend upon customer preferences and competitive environment.

*Differential Impact of factors:* All factors do not act equally on the effect of music. The factor score ranges from 3.385 to 1.385. It is true that attractiveness of music is very important in determining the impact of music. It is also dependent on the customer's desire to listen and their past association with such music.

## **Limitations of Study and Managerial Implications**

The first limitation involves the use of only a few retail stores in the field experiment. The context of this study were retail stores in Delhi NCR, and hence, it can be argued that this type of a retail environment might be unique to a metro town setup. Consequently, the extent to which our findings can be generalized across different types of service providers or retail stores needs to be established. The second limitation concerns the use of a single type of ambient cue. Combining other atmospherics, such as scent, colour schemes and layout, with scent might provide additional insight into how consumers perceive atmospherics.

This study provides evidence that improving a store's ambient conditions enhances consumers' evaluations and behaviours in the shopping experience. Strategically manipulating the environment's arousing qualities via scents can help luxury retailers to differentiate their stores from otherwise similar competitors. Moreover, appropriate music might encourage shoppers to engage in impulse buying. However, great care is needed to ensure that the effects of different environmental stimuli match. As this study has shown, consumers respond more positively towards the environment, when the stimuli match to provide a coherent ambience.

Because the novelty and stimulation of a particular scent might wear off relatively fast, retail stores that rely on heavy frequent visit patterns might not be prime candidates for this type of environmental manipulation.

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