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THE EFFECTS OF BACKGROUND MUSIC DIMENSIONS ON CUSTOMER ATTITUDE TOWARDS RETAIL STORE

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Abstract

As a key ambient factor in retail environment, music can refresh and create pleasurable memories and experiences for the shoppers. However, bringing up standardized findings in each study is not applicable. It is important to identify which musical characteristics positively affect the customers, allowing them to spend more time and money for shopping in retail stores. The content of those factors and the findings of past studies are emphasized due to national and international literatures. The purpose of this research is to identify the effects of background music dimensions (tempo and loudness) on customer attitude towards small-scale sporting goods retail stores. In accordance with this aim, subsequent to an in depth literature review, a conceptual framework was comprised and tested by means of statistical analysis of primary data collected by a questionnaire from 247 customers, shopping from a sporting goods store at Istanbul city center. Two conditions related tempo (fast / slow) and loudness (loud / soft) were organized as independent variables. A questionnaire respecting attitude towards store was applied to be responded by customers exposed to background music in the store. Experimental groups of 'fast tempo and high loudness' and 'slow tempo and low loudness' do not have a statistically significant effect on attitude towards the store. Hereby, correlation analysis is the major statistical method in the research. The findings define that the effects of tempo and loudness on customer attitude towards small-scale sporting goods store on a busy street are differentiated according to tempo and loudness groups.

Keywords: Background music, attitude, tempo, loudness, retail.

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1. Introduction

Retailers can prefer to take advantage of music to enhance their atmosphere and influence customer behaviour in the shopping environment. Many store atmosphere variables (such as odour and colour) that interact with music can dominate consumer perception, attitude, waiting time in the store or repatronage intentions (De Nisco & Warnaby, 2013). Senses such as vision, hearing and olfaction stimulate people to understand the world. They also affect a particular consumer behaviour in a positive or negative way. Thus, sensory appeals that determine human behaviours or attitudes can be addressed consistently in the different market segments of the retail environment. Target market segments interacting with consumer senses provide competitive advantage (Farias, Aguiar, & Melo, 2013). There is a significant effort in the retail sector to identify and use store background music. As a consequence, the appropriate atmosphere conditions are accommodated to satisfy target customers. At this point, store service setting can be decisive in the relationship between in-store music and customers' responses (Roschk, Loureiro, & Breitsohl, 2016).

The physical properties determine the design dimension of the store. Architecture, layout and display are important factors in terms of the store attractiveness. The social dimension of the store is related to customers and store personnel. Ambient dimension includes atmospheric variables and defines background stimuli (Kotler, 1973). Prominent variables are music, lighting and service layout (Blazquez, 2014). The determinants of the store atmosphere can influence customers' behaviours. This discovery led to drastic changes in sensory marketing techniques. Today, manufacturers and retailers try to develop new methods to affect the sensory experience of the consumer (Spence, Puccinelli, Grewal, & Roggeveen, 2014).

2. Literature Review and Theoretical Framework

2.1. Background Music

Music and other atmospheric variables have attracted attention in the retail / service literature since Kotler (1973). Music can drive consumers' interest in the store (Borges, Herter, & Chebat, 2015). An atmospheric variable is an element that affects individuals' perceptions and ultimately their total experience in a given time and environment (Milliman & Fugate, 1993). Retailers use atmospheric variables to address consumer sentiment and strengthen brand image. Music is an important factor to build an impressive in-store experience for consumers and directly linked to the individuals' feelings (Morrison & Beverland, 2003). Music is an alternative to enrich shopping experience (Roschk et al., 2016). Kotler (1973) revealed the presence of atmospheric variables that affect shopping behaviour in the Journal of Retailing. Among other atmospheric variables, the apparent importance given to music is due to its dynamic nature. According to Schmitt (1999), music is highly influential on customers' sensory experiences. Background music is one of the primary elements in the retail environment (Alpert & Alpert, 1990). Organizations can use background music to match positioning, brand image, store design, and overall satisfaction from the store. Various types of background music can be used to differentiate service areas (Morrison & Beverland, 2003). Younger respondents enjoy pop music at a medium tempo and middle-aged respondents prefer pop and Turkish classical music at a slow tempo (Yildirim, Cagatay, & Hidayetoglu, 2015). Furthermore, volume expectations are differentiated according to age groups and

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gender. Designers and store owners can use atmosphere variables to extend the waiting time of consumer and increase sales.

Music is an important variable to create an attractive store experience (Burghelea, Plaias, & El-Murad, 2015). The background music evaluated very positively by customers strengthens positive perception towards the environment (Yamasaki, Yamada, & Laukka, 2015). Positive in-store experience can lead to increased sales. Moreover, background music can reduce the negative psychological state of customers and provide a pleasant shopping experience (Herrington & Capella, 1996). Customers are more impressed by the repetition of familiar music (Petruzzellis, Chebat, & Palumbo, 2014). The food industry can try to achieve market goals by complementing food stimulants or cuisine with appropriate musical variables (Fiegel, Meullenet, Harrington, Humble, & Seo, 2014). For instance, companies that market chocolate products can use jazz-like music to increase interest in their products. However, music research in the literature has disregarded the impacts of other noises within the store environment generally, but different noises influence customers' perceptions and behaviours (Hynes & Manson, 2016).

2.2. Musical Tempo and Loudness Effects on Attitude

Retailers believe that store atmosphere variables affect customer behaviours, attitudes and shopping results. Among the different atmospheric elements, the dimensions of music play a significant role in influencing customer responses. Tempo and volume are important factors that target a specific customer base in the retail environment. A musical work has a physical dimension (volume, tempo or rhythm), an emotional dimension, and a preferential dimension according to customers' expectations (Bruner, 1990). Cognitive perceptions are influenced by environmental factors such as music. Emotions determine consumers' approaches to product or service quality. Conceptual sequences shaped by music and other atmospheric variables determine cognitive process. The formation and spread of cognitive perception show that music congruity has a weaker effect for unfamiliar products compared to those for familiar products (North, Sheridan, & Areni, 2016). The reflection of music as an environmental element takes place through emotional reactions. The emotional attitude of an individual will be decisive in the formation of reality. Thus, an individual's emotional approach to situations will affect behavioural process. The emotional context shaped by music would be conducive to the acquisition of knowledge generated by this experience (Xu & Sundar, 2014). Energetic music stimulates emotions and soft music brings tranquility. Fast tempo is more arousing than slow tempo (Spence et al., 2014; Zhu & Meyers-Levy, 2005). The tempo of instrumental background music can increase customer density within the store. Thus, slow tempo music can lead to increase sales by 38% compared to fast tempo music (Milliman, 1982). The fast tempo of music allows customers to spend more enjoyable time in the store. This finding shows that fast tempo is more effective than slow tempo (Soh, Jayaraman, Choo, & Kiumarsi, 2015). Oakes (2000) classified the background music variables in the store environment as musical dimensions (tempo, volume and genre) and their effects on consumer behaviour. Particular musical tempo affects emotions diversely. For instance, low tempo music provides positive support to the environmental psychology model (Mehrabian & Russell, 1974; Donovan & Rossiter, 1982) and servicescapes theory (Bitner, 1992).

Musical tempo is a dimension to monitor the number of beats per minute (BPM) by using digital sound technology. Standard levels for tempo and volume have not been established in previous studies,

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they are varied in terms of research environment. Therefore, forthcoming analyses are supported to define an optimal level of musical tempo and volume (Michel, Baumann, & Gayer, 2017). In the study, slow tempo versions were within a band of 90-130 BPM, whilst fast tempo versions were within a band of 131-180 BPM. Different tempo versions of original music pieces were applied to manipulate tempo by using digital technology. Volume is a basic dimension of music. It can be easily controlled by managers in retail environment. The number of studies investigating the volume effect on consumer emotions is not sufficient. However, volume is negatively correlated with shopping time (Milliman, 1982; Yalch & Spangenberg, 1990). Customers can prefer to spend less time in the store if the background music is too loud (Milliman, 1982). Volume can be adjusted to a standard level using headphones in laboratory research (Oakes & North, 2006). In a retail environment, customers can be at different distances to the audio source. Thus, measuring the effect of volume on customer sensations requires great attention. Ramlee and Said (2014) show that high volume of music attracts people to visit a store, but creates disturbing feelings in restaurants. Background music as an element of ambient atmosphere is an important and easily manageable parameter in restaurants (Harrington, Ottenbacher, & Treuter, 2015). According to Herrington and Capella (1996), tempo and volume of background music do not significantly affect shopping time or customer spending. In the study, low loudness versions were preferable within a band of 60 - 65 dB, whilst high loudness limits were 66 -75 dB. Sound levels were checked by using a digital decibel meter and were manipulated by pre-setting volume controls on amplifiers which powered the loudspeakers in retail settings. The purpose of this study is to reveal the relationship between experimental groups (Fast Tempo, Low Loudness; Slow Tempo, High Loudness; Fast Tempo, High Loudness; Slow Tempo, Low Loudness) and attitude towards store.

H_{1a}: Background music tempo of ‘fast tempo and low loudness group’ has a statistically significant effect on attitude towards the store.

H_{1b}: Background music loudness of ‘fast tempo and low loudness group’ has a statistically significant effect on attitude towards the store.

H_{2a}: Background music tempo of ‘slow tempo and high loudness group’ has a statistically significant effect on attitude towards the store.

H_{2b}: Background music loudness of ‘slow tempo and high loudness group’ has a statistically significant effect on attitude towards the store.

H_{3a}: Background music tempo of ‘fast tempo and high loudness group’ has a statistically significant effect on attitude towards the store.

H_{3b}:Background music loudness of ‘fast tempo and high loudness group’ has a statistically significant effect on attitude towards the store.

H_{4a}: Background music tempo of ‘slow tempo, low loudness group’ has a statistically significant effect on attitude towards the store.

H_{4b}: Background music loudness of ‘slow tempo, low loudness group’ has a statistically significant effect on attitude towards the store.

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3. Research Method

3.1. Sample and Data Collection

Building on the work of Yalch and Spangenberg, 1990 retail stores were chosen as the research settings. The retail setting of the study was 'Ak-tac Spor' as a small-scale store in Istanbul. The store sells sports brands and similar product groups. The acoustic of environment ensured that audio errors would be minimised.

An experiment (tempo and loudness) was conducted by using 2 (fast tempo/slow tempo) X 2 (high loudness/ low loudness) factorial design to test hypotheses. Four conditions were designed as 'fast tempo and low loudness', 'slow tempo and high loudness', 'fast tempo and high loudness' and 'slow tempo and low loudness'. These components of music are easily controlled by managers in retail settings. Music experiments were conducted on weekends due to high density in 'Ak-tac Spor' for six weeks. Air temperature affects customer traffic for stores on the streets noticeably. During the experiment, air temperature was recorded periodically and considered to determine the days of experiment.

The sample of the experiment consists of 247 Turkish participants (Table 1).

Table 01. Descriptive Statistics of Participants

Items	Group	Total (n=247)		D_1 (n=65)		D_2 (n=55)		D_3 (n=59)		D_4 (n=68)	
		N	%	N	%	N	%	n	%	n	%
Gender	Female	133	53,8	22	33,8	30	54,5	24	40,7	24	35,3
	Male	114	46,2	43	66,2	25	45,4	35	59,3	44	64,7
Age	25 -	93	37,6	29	44,6	14	25,5	23	39	36	53
	26-35	71	28,7	29	44,6	6	11	21	35,6	20	29,4
	36-45	31	12,6	7	10,8	8	14,5	11	18,6	4	5,9
	46 and +	52	21,1	0	0,0	27	49,1	4	6,8	8	11,8

[a] Note: D_1:Fast Tempo, Low Loudness Group ; D_2: Slow Tempo, High Loudness Group ; D_3:Fast Tempo, High Loudness Group ; D_4:Slow Tempo, Low Loudness Group

The participants finalized shopping intention at Ak-Tac Spor and accepted to respond to survey. 114 participants (46.2 %) of the survey are men and 133 participants (53.8 %) are women. Mean age is 33.5 years. Simple random sampling was chosen as sampling method. Experimental groups have similar characteristics. Attitude towards store as dependent variable was measured on a five-item, semantic differential scale with anchors "bad/good";"unfavourable/favourable";"negative/positive"; "dislike/like" and "outdated/modern" (Spangenberg, Crowley, & Henderson, 1996). Cronbach's Alpha score is 0.811 for 'attitude towards store' questions. 7- point tempo scale (1= slow; 7= fast) and 7- point loudness scale (1=soft; 7= loud) were followed for the evaluations of musical tempo and loudness as independent variables in the study (Kellaris & Rice, 1993) and cronbach's alpha was found 0.832. The obtained data were analysed with SPSS 23.0 and hypotheses were tested with correlation analyses.

Descriptive statistical methods (average, standard deviation, frequency, percent, minimum, maximum) and correlation analyses were utilized to evaluate research data. Conformity of normal distribution of quantitative data was tested by Skewness and Kurtosis. Statistical significance was accepted as $p<0.05$.

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3.2. Compositions

Upbeat electronic music arrangements with vocal are preferable in sporting goods retail stores in Istanbul. Hence, slow or fast tempo expectations were influenced by favourite upbeat and energetic sounds. This also ensured that customers in the store were not exposed to irritating repetitions of the same compositions. Both musical genre and retail store size were influential to set loudness parameters. The compositions at a variety of tempo and loudness used in this experiment were pretested with 69 participants to classify compositions according to tempo (fast/slow) and loudness (high/low) preferences. Studio records of original music pieces are important for both dimensions. Especially, loudness of records may not be standardized. Thus, pretest ensured that loudness and tempo for each music pieces were set properly and participants were unfamiliar with melodies. These dimensions (tempo and loudness) were checked by using digital technology periodically whilst stores were crowded in the days of experiments to avoid confounding results. Table 2 lists the types of background music preferences in sporting goods retail stores.

Table 02. Background Music Types

Preferable Background Music Types
Energy Pop
Energetic Pop-Rock
Club House and Dance
Fitness and Workout

Original background music pieces were calibrated by RTP Media (Corporate Radio Broadcasting Company).

4. Findings

Spearman's rho correlation coefficients of 'Fast Tempo and Low Loudness Group' are given between variables in Table 3.

Table 03. Correlation Analysis Results (Fast Tempo, Low Loudness Group)

Variables	$\overline{X}$	Standard deviation	1.	2.	3.
1. Attitude	2,37	,06	1		
2. Loudness	1,88	1,02	,332	1	
3. Tempo	2,72	1,07	,530*	-,026	1

[b] Note: *: Significant at the 0.05 level

It is seen that the relationship between background music tempo (r=0,530) and attitude towards store is statistically significant. Correlation is significant positively at the 0.05 level . According to this result, H_{1a} is supported. However, the relationship between background music loudness (r=0,332) and attitude towards store is not significant. Thus, H_{1b} is not supported. Spearman's rho correlation coefficients of 'Slow Tempo and High Loudness Group' are given between variables in Table 4.

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Table 04. Correlation Analysis Results (Slow Tempo, High Loudness Group)

Variables	$\overline{X}$	Standard Deviation	1.	2.	3.
1. Attitude	2,35	,14	1		
2. Loudness	4,05	,23	-,605**	1	
3. Tempo	2,54	,91	-,335*	,490**	1

[c] Note: **: Significant at the 0.01 level [d] Note: *: Significant at the 0.05 level.

The relationship between background music tempo (r=-0,335) and attitude towards store is statistically significant. Correlation is significant negatively at the 0.05 level. This result supports H_{2a}. According to the findings, the attitudes of the participants towards the store are are getting stronger as the background music tempo is getting slower. The relationship between background music loudness (r=-0,605) and attitude towards store is statistically significant. Correlation is significant negatively at the 0.01 level. The result supports H_{2b}. Accordingly, as the loudness is getting higher the attitude in the store is affected opposite. Spearman's rho correlation coefficients of 'Fast Tempo and High Loudness Group' are given between variables in Table 5.

Table 05. Correlation Analysis Results (Fast Tempo, High Loudness Group)

Variables	$\overline{X}$	Standard Deviation	1.	2.	3.
1. Attitude	2,30	,21	1		
2. Loudness	3,87	,83	,203	1	
3. Tempo	4,10	,71	,110	,679**	1

[e] Note: **: Significant at the 0.01 level

According to the results, the relationship between background music tempo (r=0,110) and attitude towards store is not significant statistically. It is seen that the result is the same for the relationship between loudness (r=0,203) and attitude towards store. H_{3a} and H_{3b} are not supported.
Spearman's rho correlation coefficients of 'Slow Tempo and Low Loudness Group' are given between variables in Table 6.

Table 06. Correlation Analysis Results (Slow Tempo, Low Loudness Group)

Variables	$\overline{X}$	Std. Dev.	1.	2.	3.
1. Attitude	2,28	,33	1		
2. Loudness	1,80	1,11	,012	1	
3. Tempo	1,95	1,33	-,080	,670**	1

[f] Note: **: Significant at the 0.01 level.

According to the results, the relationship between background music tempo (r=-0,080) and attitude towards store is not significant statistically. Furthermore, statistically significant relation doesn't exist between loudness (r=0,012) and attitude . H_{4a} and H_{4b} are not supported.

In Figure 1, 'Research Model and Correlation Analysis Display' is attached.

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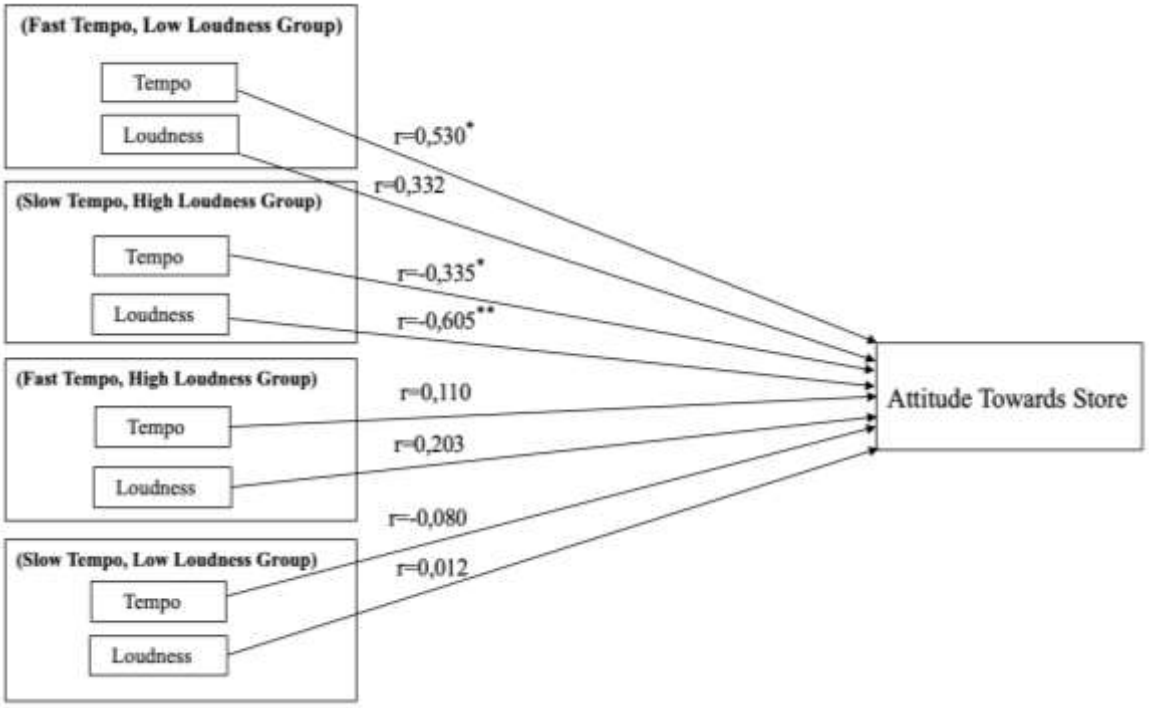

Figure 01. Research Model and Correlation Analysis Display

5. Conclusion and Discussions

According to the findings obtained from the research that measured the effects of background music tempo and loudness experimental groups on the attitude of the customers towards the store, the effects of tempo and loudness are differentiated. Tempo of the background music has a positive effect on the customer's attitude towards the store for 'Fast Tempo and Low Loudness Group'. Thus, the customers' positive attitudes towards the store are strengthened whilst tempo is faster. The majority of 'Fast Tempo and Slow Loudness Group' consists of participants between the ages of 25-35 and they prefer fast tempo throughout shopping process according to the findings. Music is an important element in brand communication, identity or architecture. Sound and music play a role in understanding the brand and the message to be given. The relationship between brand characteristics and music is powerful according to the literature. Furthermore, background music dimensions to affect customers' attitudes and behaviours are frequently studied. Many studies conducted in different fields report that tempo has a higher mobilizing effect. Thus, high tempo contributes positively to customers' store evaluation. The result is consistent with many previous studies. However, it is seen that there is a negative correlation between 'Slow Tempo, High Loudness Group' and attitude towards store. The majority of 'Slow Tempo, High Loudness Group' consists of participants over 45. Slow tempo and high loudness evoke negative feelings in this group. Older participants do not appreciate tempo and loudness levels. Music dimensions have different effects on the experimental groups. Culture and demographic characteristics are the determinants of the findings.

According to previous studies, the loudness level poses a positive effect when adjusted as requested. High loudness versions within a band of 60 - 65 dB evoke positive reactions in 'Slow Tempo, High Loudness' group. It is a really striking result. The reactions of the store customer in the 'Slow

Tempo, High Loudness. Group' are completely varied. Research findings state that music can be used to influence customer attitude in practice. Store managers can evaluate tempo and volume levels of background music in order to strengthen the positive attitudes of customers and increase the number of customers continuously. The effect of music on potential customers is shaped by the enjoyment of individuals, social, cultural and economic factors in the society and music familiarity. For example, customer profile and brand identity will be critical to decide music genre and different music dimensions. Thus, store managers should analyse atmosphere variables meticulously to make an accurate decision.

Music interacts with other atmospheric components such as lighting, odour, or colour. This interaction can have a positive or negative effect on the attitudes and behaviours of the customers towards store. Hereby, fresh studies can contribute to different results. Demographic characteristics of the participants and the qualifications of the research area can determine the effects of music on sales and consumer attitude. For example, the choice of sports retailers located in shopping malls can differentiate the results of the research.

Music studies with different research designs illuminate the effects of music dimensions (tempo, loudness, rhythm, mode) in store area and customer attitudes, behaviours or perceptions towards store. Further music studies with different structural variables will contribute to the increase of the qualified findings related to the reaction of consumers to music.

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