



## Customer satisfaction mediates the relationship between in-store music and stores' brand equity

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How to cite: Cui, Y., & Cao, R. (2024). Customer satisfaction mediates the relationship between in-store music and stores' brand equity. *Social Behavior and Personality: An international journal*, 52(7), e13210

One option for improving store appeal is leveraging the power of in-store music. This study explored the relationship between in-store music and stores' brand equity, with a particular focus on the mediating effect of customer satisfaction. We administered a paper-based survey to a sample of 268 customers of four Korean apparel stores situated in the northeast region of China, where Korean music was utilized to attract customers. Data analysis was conducted using structural equation modeling. The findings revealed a positive and direct association between a favorable perception of in-store music and stores' brand equity. Moreover, customer satisfaction played a significant mediating role in this relationship. These findings, which shed light on how in-store music can enhance customer satisfaction and promote stores' brand equity, will be particularly useful for retailers.

### Keywords

in-store music, store atmosphere, customer satisfaction, brand equity, retail store, Korean music

### Article Highlights

- We developed a model linking in-store music to stores' brand equity via the mediator of customer satisfaction.
- A favorable perception of in-store music was found to be positively related to stores' brand equity.
- Customer satisfaction partially mediated the relationship between in-store music and stores' brand equity.

The significance of branding has risen to the forefront for firms due to heightened competition, globalization, and the recognition of brands as valuable intangible assets (Aaker, 1991; Keller, 2013). This growing importance is evidenced by the extensive literature focusing on the conceptualization of *brand equity* (Aaker, 1991; Keller, 2013), which represents the value that consumers attribute to a brand, encompassing their accumulated knowledge, perceptions, experiences, and responses over time. As an essential indicator of brand vitality (Keller, 2013), the effective management of the brand experience plays a key role in building brand equity.

Chinese retailers are currently encountering a challenging marketing landscape characterized by intensified competition. It has become imperative for retail brands to differentiate themselves from competitors and establish distinctive consumer responses, making the development of brand equity a strategic imperative (Ailawadi & Keller, 2004). Scholars have directed their attention toward identifying the factors that influence retail brand equity (Swoboda et al., 2016).

An appealing store atmosphere is recognized as a crucial factor influencing the consumer experience (Sachdeva & Goel, 2015). Among the various aspects of store atmosphere, *music* is considered an effective method for influencing customer responses (Jain & Bagdare, 2011). In-store music is one of the most widely researched topics in consumer behavior. Research has found that in-store music is positively related to customer loyalty to a store's brand, and customer emotion functions as a mediator of this association (Y. Meng & Yang, 2023; Xu & Yang, 2023). However, the impact of in-store music on intangible assets, such as brand equity, has not been thoroughly examined in the consumer behavior literature. Wang (2023) made a preliminary exploration of the relationship between in-store music and stores' brand equity, and found a positive link between the two variables, but the mechanisms underlying this relationship remain unexplored.

*Customer satisfaction* is defined as customers' evaluation process in response to the retail experience (Oliver, 1999). Retailers' ability to meet or exceed customer expectations leads to customer satisfaction. Consequently, satisfaction can be seen as the result of evaluating the value customers gain from the in-store shopping experience (Terblanche & Boshoff, 2001). Iglesias et al. (2019) noted that sensory brand experience indirectly affects brand equity via customer satisfaction. Kumar and Kumar (2020) argued that human senses can influence brand equity. The sensory experience of customers in retail stores heavily relies on store atmosphere, such as in-store music (Chen & Hsieh, 2011). Therefore, it can be inferred that in-store music may impact a store's brand equity both directly and indirectly through customer satisfaction.

Thus, this study examined the relationships between in-store music, stores' brand equity, and customer satisfaction. To the best of our knowledge, this is the first study of the relationships among these constructs. The proposed research framework is presented in Figure 1.

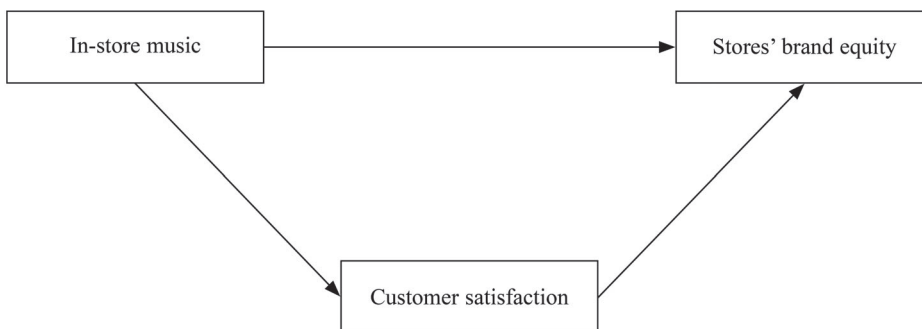


Figure 1. *Research Model*

## The Current Study

*Store atmosphere* is defined as the enjoyable and pleasant attributes associated with customers' shopping experiences in stores (Grewal et al., 2003). Pleasant music can create a positive shopping environment, giving customers a sense of engagement and trust (D. Meng et al., 2023). Kaushik and Soch (2021) found that in a sample of mall shoppers, customer brand trust was positively related to customer brand engagement, which, in turn, strengthened brand equity. Music can stimulate cognitive processing in customers, influencing their decision making (Lin et al., 2023). When customers form positive attitudes toward store music, they show loyalty to the store (Y. Meng & Yang, 2023), leading to a positive impact on brand equity (Aaker, 1991; Yoo et al., 2000). Additionally, in-store music serves as an audio cue that creates an association between customers and the store's brand (Beverland et al., 2006), enhancing brand recall and recognition when customers encounter the music outside the store environment, which increases the store's brand equity (Keller, 2013). Thus, we formed the following hypothesis:

**Hypothesis 1:** A favorable perception of in-store music will be positively correlated with stores' brand equity.

Music has the ability to evoke emotions and influence mood states (Juslin & Sloboda, 2013; Y. Meng & Yang, 2023). Pleasurable and appropriate music played in a store can create a positive emotional response in customers, leading to an increased sense of enjoyment and satisfaction during their shopping experience (Y. Meng & Yang, 2023; Michel et al., 2017). Meanwhile, the positive perception of in-store music leads customers to perceive their waiting or browsing time as shorter (Garlin & Owen, 2006). Customers who feel that their time is well-managed and not wasted are likely to be satisfied with their shopping experience (Tom & Lucey, 1997).

When customers are highly satisfied with a store, they readily recall its name, hold favorable associations toward it, and have positive perceptions of its quality, leading to enhanced brand equity (Pappu & Quester, 2006). Moreover, satisfied customers may share their positive experiences with others through word-of-mouth communication, which can greatly influence potential customers' perception of and attitude toward the store (von Wangenheim & Bayón, 2007). When satisfied customers recommend a store based on their positive experiences, this has the potential to strengthen brand associations because the information shared through face-to-face interactions tends to be perceived as more credible compared to less-vivid forms of communication (Herr et al., 1991). Customer satisfaction also contributes to trust in and loyalty to a store (Chinomona & Dubihlela, 2014).

We expected that customers with a favorable perception of in-store music would be highly satisfied with the store, leading to a positive impact on its brand equity. Thus, we formed the following hypothesis:

**Hypothesis 2:** Customer satisfaction will mediate the relationship between in-store music and stores' brand equity.

## Method

### Participants and Procedure

This study utilized a mall-intercept survey approach to gather data from customers at three shopping malls in Yanji, China. We purposefully selected four Korean apparel stores to mitigate gender biases, as they offer clothing and accessories for both men and women. These stores usually play Korean music to attract customers. The participants consisted of shoppers who had recently exited one of the aforementioned retailers within the mall premises. Regardless of whether a purchase was made, each shopper was approached by one of the interviewers immediately after their departure from the store and invited to take part in the survey. The aim of the study was clarified to the participants, and their anonymity and confidentiality were ensured. Upon obtaining their informed consent, the interviewers distributed the survey to the shoppers.

After removing incomplete responses, we included 268 surveys in the data analysis, resulting in an overall efficiency rate of 89.33%. The demographic characteristics of the respondents are presented in Table 1.

**Table 1. Demographic Information of Respondents**

Characteristics		<i>N</i>	%
Gender	Male	83	30.97
	Female	185	69.03
Age (years)	20–30	98	36.57
	31–40	111	41.42
	41+	59	22.01
Level of education	High school	67	25.00
	College	160	59.70
	Graduate school	41	15.30
Vocation	Public sector	71	26.49
	Private sector	142	52.99
	Self-employed	31	11.57
	Other	23	8.95

## Measures

We adopted existing scales, modified to fit the retail-store context. Items were rated on a 7-point Likert-type scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*.

### *In-Store Music*

The measure of in-store music ( $\alpha = .86$ ) was adapted from Yang et al.'s (2022) three-item scale. A sample item is "This store has pleasant music."

### *Customer Satisfaction*

The four-item measure of customer satisfaction ( $\alpha = .90$ ) was adapted from Turhan (2014). A sample item is "The products that I bought from this store fully meet my needs."

### *Stores' Brand Equity*

The measure of stores' brand equity ( $\alpha = .92$ ) was adapted from Yoo et al.'s (2000) four-item scale. A sample item is "Even if there is another store as good as this one, I prefer to shop in this store."

## Results

### Reliability and Validity

We conducted standard reliability, validity, and unidimensionality tests of the measures. First, the internal consistency of the constructs was assessed using Cronbach's alpha. The alpha coefficients for the variables ranged between .82 and .95, indicating a satisfactory level of reliability. We conducted a confirmatory factor analysis to examine the validity of the measures, resulting in standardized factor loadings exceeding .70 for all indicators, thus demonstrating acceptable convergent validity for each construct. Composite reliability and average variance extracted (AVE) values were also evaluated, meeting the required thresholds of .70 and .50, respectively. Additionally, the AVE for one construct surpassed the squared correlation with any other construct, affirming the discriminant validity of the measures. Detailed information regarding all measures, including descriptive statistics, correlations, and discriminant validity analyses, can be found in Table 2.

**Table 2. Descriptive Statistics and Correlation Analysis Results**

Variable	<i>M</i>	<i>SD</i>	1	2	3
1. In-store music	5.43	1.00	.82		
2. Customer satisfaction	5.01	0.93	.51**	.83	
3. Stores' brand equity	5.05	1.02	.60**	.59**	.86

Note.  $N = 268$ . Square root values for average variance extracted are shown on the diagonal.

\*\*  $p < .01$ .

### Hypothesis Testing

To test the hypotheses, this study employed structural equation modeling with a bootstrapping procedure (5,000 resamples). Results showed the fit of the model was satisfactory,  $\chi^2 = 97.77$ ,  $\chi^2/df = 2.39$ , root-mean-square error of approximation = .07, goodness-of-fit index = .94, comparative fit index = .97, Tucker–Lewis index = .96, normed fit index = .96. In terms of the hypotheses, the results showed that in-store music had a positive relationship with stores' brand equity,  $\beta = .41$ ,  $p < .01$ , 95% confidence interval (CI) [0.28, 0.53], supporting Hypothesis 1. Likewise, the results



revealed positive relationships between in-store music and customer satisfaction,  $\beta = .51, p < .01, 95\% \text{ CI } [0.40, 0.61]$ , and between customer satisfaction and stores' brand equity,  $\beta = .39, p < .01, 95\% \text{ CI } [0.26, 0.50]$ . Moreover, the bootstrapping procedure showed that the indirect effect of in-store music on stores' brand equity through customer satisfaction was positive,  $\beta = .20, p < .01, 95\% \text{ CI } [0.13, 0.28]$ , supporting Hypothesis 2. These findings suggest that customer satisfaction partially mediated the relationship between in-store music and stores' brand equity.

## Discussion

The primary objective of this study was to examine the role of customer satisfaction as a mediator of the association between in-store music and brand equity within the context of retail stores. The findings offered support for the proposed research framework depicted in Figure 1 and corroborated the hypothesized directional linkages among the variables in the model. We found a positive relationship between favorable perceptions of in-store music and stores' brand equity, with customer satisfaction serving as a partial mediator of this relationship.

### Theoretical and Managerial Implications

This research makes several theoretical contributions. First, the results of testing the first hypothesis supported the notion that a positive perception of in-store music is associated with increased brand equity for stores, which is consistent with Wang (2023). This finding contributes to understanding of how in-store music shapes consumers' overall brand experience, suggesting that music acts as an experiential component that positively influences consumers' perception of a store's brand equity. This aligns with prior research on brand experience, highlighting the significance of emotional and sensory factors in shaping consumer-brand relationships (Iglesias et al., 2019). Additionally, the study findings reinforce the importance of considering multisensory elements in marketing strategies. By incorporating in-store music, retailers can create a holistic and immersive brand experience. This resonates with the emerging field of multisensory marketing, which emphasizes the influence of multiple sensory channels on consumer behavior and brand perception (Kumar & Kumar, 2020).

Second, the results of testing the second hypothesis provided substantial support for customer satisfaction as a mediator of the relationship between in-store music and stores' brand equity. This finding highlights the importance of creating positive and engaging experiences for customers through in-store music (Y. Meng & Yang, 2023; Michel et al., 2017). By influencing customer satisfaction, in-store music contributes to the overall brand experience and enhances brand equity. The current study expands existing research on the underlying mechanisms through which in-store music leads to important customer outcomes (Y. Meng & Yang, 2023; Xu & Yang, 2023). Our findings support the significant role of customer satisfaction as a mediating factor. This suggests that if stores focus on creating satisfied customers through music cues, they can enhance the equity value of their brands. Therefore, it can be concluded that customer satisfaction plays a mediating role in the impact of in-store music on stores' brand equity, although it is not a fully mediated pathway.

This study has significant practical implications, suggesting that a favorable perception of in-store music may have a positive effect on stores' brand equity and customer satisfaction. To achieve these outcomes, managers should conduct thorough analyses of their customers' demographics, preferences, and buying behavior to facilitate the selection of appropriate music genres and styles that resonate with customers. Additionally, managers should carefully curate a playlist that aligns with the store's brand and appeals to the target audience. Regularly rotating the playlist will also help maintain its freshness.

### Limitations and Future Research Directions

Data collection for this study was restricted to four apparel stores in China that specialize in Korean clothing. Therefore, the generalizability of the findings may be limited. Conducting studies across a broader range of stores would provide a more diverse context for testing the replicability of our findings. Furthermore, when consumers shop in

retail stores, they are affected not only by in-store music, but also by other aspects of the store environment, such as aroma. We recommend exploring the impact of different multisensory stimuli on stores' brand equity.

## Acknowledgments

The data that support the findings of this study are available on request from the corresponding author.

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