The Impact of Background Music Rhythm on Impulsive Buying: Moderating Effect of Shopping Attitude

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Abstract. This study investigates the effect of background music rhythm on impulsive buying in a real shopping center by combining questionnaire and manipulating background music rhythm. Meanwhile, the moderating effect of consumers’ shopping attitude is also investigated. In this study, 455 customers shopping in malls are selected randomly, 409 data are valid (103 males, 306 females). The results shown that consumers more likely to have impulsive buying, when the background music rhythm is faster. Consumers’ shopping attitude moderated the effect of background music rhythm on impulsive buying, hedonic consumers declined to have more impulsive buying behavior under faster background music rhythm. While consumer with utilitarian attitude had similar number and amount of impulse spending between different background music rhythm. This study had implications for improving consumption in shopping center and using background music to influence consumer behavior.

Introduction

The total spending of consumers in shopping malls mostly derives from impulsive buying behavior [1]. Manager wishes to stimulate consumers’ impulsive buying behavior by using marketing strategies. Therefore, this study paid attention to impulsive buying behavior, as well as the factors that influence the consumer to have impulsive buying behavior, especially background music rhythm and consumers’ shopping attitude.

Background Music Rhythm and Impulse Buying Behavior

Music refers to a complex set of expressive sound collection. It contains some key elements: rhythm, pitch, melody and harmony [2]. Some shopping malls and other public places apply background music to influence consumers' senses and encourage consumers to produce a specific consumer behavior.

Impulsive buying behavior is defined as "an unexpected experience of a sudden impulse and action in a fun way which is a mode based on impulse, without a careful consideration of the ensuing consequences. But the action can bring immediate gratification" [3]. Researchers investigated impulsive buying behavior from three aspects: emotions, cognition and behavioral reactions [3].

According to preview studies, Background music not only stimulate impulse buying independently, but also interact with other factors to affect impulse buying behavior [4]. Background music, coordinating with other factors, has such effects like reducing consumers’ time perception of purchase and waiting [5], affecting consumers’ perception of the entire environment [6], increasing sales [7], influencing consumers’ impulsive buying tendency [7], changing consumers’ experiencing attitude [7] and promoting consumers’ interaction with the environment [7]. All in all, background
music is able to influence consumers’ perception and stimulate consumers’ positive emotion, so that consumers can enjoy the shopping experience and be more likely to have impulsive buying behavior.

In sum, background music is able to affect consumer behavior through direct or indirect way [2] [8] [9] [10]. Previous studies found that as part of background music, the background music rhythm will affect the consumers in a retail store [8]. Milliman investigated the effect under three conditions, such as, slow music rhythm condition, fast music rhythm condition and no music condition [8]. Milliman confirmed in the study that the consumers will walk faster and spend less under fast music rhythm condition [8]. In addition, music rhythm can affect the consumers’ emotional reactions, that’s, slow music rhythm can make consumers feel relax. It is a positive mood that could lead customers to stay in the store for a longer time, resulting in impulsive buying behavior [7]. Thus, customers walk faster in the store under fast music rhythm. It is easier to produce impatience, which may reduce the chance of impulsive buying behavior. However, consumers stay longer under slow music rhythm, resulting in greater chance for unplanned purchase. Accordingly, we propose the following hypothesis:

H1: background music rhythm affected consumers’ impulsive buying behavior. Compared with the fast music rhythm condition, consumers have more impulsive buying behavior under slow music rhythm condition.

Shopping Attitude

Recent studies do not imply that background music affect consumers’ impulse buying behavior. Badgaiyan and Verma were using questionnaire survey method to investigate factors impacting on impulsive buying tendency and behavior [12]. The factors including exogenous and endogenous factors, such as background music. It turned out that the background music did not predict impulsive buying tendency as well as impulsive buying behavior [12]. It assumed that there were other factors that play a very important role between the background music and impulsive buying behavior.

One of powerful endogenous factors to influence consumers is their shopping attitude. Batra and Ahtola first pointed out that "there are two kinds of shopping attitude: 1 focus on consumer experience and personal feelings, that’s, hedonism (Hedonic); 2 from the utilitarian point of view, it has a nature to complete tasks, namely utilitarianism (Utilitarian) " [13] [14].

With the deepening of research, consumers’ shopping attitude are not only simply affect consumer behavior, but also playing a role in regulating the background music rhythm and the impulsive buying behavior. Ding and Lin indicated that compared to the slow music rhythm, fast music rhythm is more likely to cause changes in consumers’ emotion [15]. Compared with utilitarian consumers, hedonic consumers are easier affected by the background music, light, and other facilities, that is, hedonic consumers feel the effect created by atmosphere may be more intense and effective [16].

In the shopping process, utilitarian consumers pay more attention to completing the shopping task and concern less about the environment and other information. They lack emotional investment, but focus on whether the results of the consumer can meet the functional purposes. However, hedonic consumers are more perceptual and emotional. They seek emotional experience and the enjoyment of the whole consumption process [17] [18]. So we assumed the following hypothesis:

H2: Consumers’ shopping attitudes plays a moderating role in the effect of background music on impulsive buying behavior. Specifically, for hedonic consumers, background music rhythm influences their impulsive buying behavior, however, for utilitarian consumers, background music rhythm has little effect on their impulsive buying behavior.

Methodology

Participants

455 consumers shopping in Chaoyang Joy City Shopping Center participated in this study, 46 participants did not complete the questionnaire and were removed, leaving a final sample of 409
(efficiency of 89.9%). Among these 409 participants ($M_{age} = 30.52, SD = 10.07$), there are 98 males and 311 females. 54.5% of them have college degree at least.

Materials

According to the previous classification criteria of background music rhythm, music with speeds of 94 beats per minute or above is fast music rhythm and music with speeds of 72 beats per minute and below is slow music rhythm [19]. Meanwhile, in order to eliminate alternative explanations, instrumental music and foreign vocal music were selected in this study, the final official experiments includes: 13 fast instrumental music, 12 fast foreign vocal music, 14 slow instrumental music, 13 slow foreign vocal music.

Scale

Shopping Attitude Scale. Consumers’ hedonic and utilitarian attitudes were measured by a total of 16 items and 7-point scale [14]. In this study, the coefficient alpha for both hedonic and utilitarian attitude subscales were greater than 0.85, they were of high reliability.

Impulsive Buying Behavior Questionnaire. Consumers were asked to fill 6 blanks about amount and money that they spend on planned and actual purchase, in addition, amount and money that they actual purchase are belong to they planned to purchase in the first place, the rest of the actual purchase are consumers’ impulsive buying behavior. Therefore, impulsive buying behavior are divided into two parts, part 1 is the amount of products derived from impulsive buying, that is, impulsive buying number, part 2 is the money that spent for impulsive buying, that is, impulsive buying money.

Procedure

The selected background music was playing on Tuesday and Wednesday 10:00 to 22:00 in a real mall. Totally, it was playing two weeks in a row (holidays, large promotions, and other high traffic time were not included). Each time only one of four groups would be selected, and the play sequence between and within the group is random to eliminate the sequential effect. From 17:00 to 19:00, investigators would invite consumers who about to leave the mall to participate in surveys at every exit, participants would receive a gift at the end of the investigation.

Result

Manipulation Checks

Background music rhythm perceived by consumers were significantly different under distinctive background music rhythm: $M_{fast} = 2.87$ vs. $M_{slow} = 2.53$, $t (403) = 3.39$, $p < 0.001$. This shown that the manipulation of background music rhythm was effective.

Hypothesis Test

By independent samples t-test, results shown that consumers spent more money: $t (408) = 2.13$, $p < 0.05$, bought more unplanned products: $t (408) = 2.45$, $p < 0.05$, under fast music rhythm condition. That is, when the rhythm was faster, more consumers produced impulsive buying behavior, see Table 1.

The Score of Shopping Attitude Scale were standardized, and the consumers with Z score greater than 0 were selected as hedonic consumers, in contrast, the consumers with Z score lower than 0 were selected as utilitarian consumers. And consumers were divided into two groups: 292 consumers were hedonic consumers, 117 consumers were utilitarian consumers.
Table 1. Descriptive Statistics Under Different Music Rhythm.

<table>
<thead>
<tr>
<th>Impulsive Buying</th>
<th>Slow $M \pm SD$</th>
<th>Fast $M \pm SD$</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>2.01±2.36</td>
<td>2.68±3.17</td>
<td>2.45*</td>
</tr>
<tr>
<td>Money</td>
<td>349.33±620.04</td>
<td>604.48±1606.6</td>
<td>2.13*</td>
</tr>
</tbody>
</table>

* $p < 0.05$

Consumers’ shopping attitude moderated the effect of background music rhythm on impulsive buying behavior. For hedonic consumers, consumers declined to purchase more unplanned products under fast music rhythm condition: $t\ (291) = 2.04, \ p = 0.04$, and the difference of impulsive buying money was insignificant. As for utilitarian consumers, background music rhythm didn’t impact the number and money of impulsive buying, see Table 2.

Table 2. Descriptive Statistics of Different Shopping Attitude under Different Music Rhythm.

<table>
<thead>
<tr>
<th>Shopping Attitudes</th>
<th>Impulsive Buying</th>
<th>Slow $M \pm SD$</th>
<th>Fast $M \pm SD$</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hedonic attitude</td>
<td>Number</td>
<td>2.27±2.44</td>
<td>2.99±3.47</td>
<td>2.04</td>
</tr>
<tr>
<td></td>
<td>Money</td>
<td>330.01±550.26</td>
<td>581.07±1801.44</td>
<td>1.58</td>
</tr>
<tr>
<td>Utilitarian attitude</td>
<td>Number</td>
<td>1.26±1.93</td>
<td>1.92±2.07</td>
<td>1.72</td>
</tr>
<tr>
<td></td>
<td>Money</td>
<td>404.53±790.41</td>
<td>665.81±928.48</td>
<td>1.55</td>
</tr>
</tbody>
</table>

* $p < 0.05$

Discussion

The results of this study show that background music rhythm could affect consumers’ impulsive buying behavior. Consumers would spend more money to purchase more products under fast music rhythm condition, the result was the exact opposite of hypothesis in H1, that the background music did affect the consumers’ impulsive buying behavior under fast music rhythm condition instead of slow music rhythm condition. As moderator, consumers’ shopping attitudes play an important role between background music rhythm and impulsive buying behavior. Compared to the slow music rhythm condition, hedonic consumers were more likely to generate impulsive buying behavior in fast music rhythm condition. However, background music rhythm had no significant effect on utilitarian consumers’ impulsive buying behavior. This supports the hypothesis in H2.

We noted that the results were the exact opposite of hypothesis in H1, the difference found in the results may primarily due to the difference between this study and preview study, such as, samples, locations, regional differentiation and so on. It requires further study.

However, the moderate effect of consumers’ shopping attitude we found in this study may provide an explanation for consumers producing more impulsive buying behavior under fast music rhythm condition. In the shopping process, utilitarian consumers pay more attention to complete shopping tasks, but concern less about environment and any other information. They lack emotional investment and focus on whether the consumption results can meet the functional purposes. However, hedonic consumers are more perceptual and emotional. They seek the enjoyment in the whole process of consumption [17] [18]. Therefore, hedonic consumers are more likely to generate impulse buying in the fast music rhythm condition. Ding and Lin indicated that hedonic consumers more susceptible to background music [15]. In this study, consumers with hedonic shopping attitude generated more impulsive buying behavior in fast music rhythm, which is possibly because hedonists are easier to be influenced by faster music rhythm and generate consumer behavior.

In this study, an exploration of the effect of exogenous factor, background music rhythm, and endogenous factor, consumer attitude, on consumer impulsive buying behavior was investigated in the real shopping environment. It has a certain external validity. Practically, this study is of a certain
reference value to mall managers in selecting the appropriate background music rhythm as well as to increasing the turnover.

However, the results of this study should be demonstrated cautiously for many reasons. Firstly, methodological limitations are related to self-selection bias in such field study, limitations also come from some uncontrollable factors that emerged in this study. Finally, though it investigated the effect of background music rhythm and consumers’ shopping attitude on impulsive buying behavior, it lacks an exploration of its working mechanism. The previous discovery is that emotions are important antecedent variables of impulsive buying behavior [15]. However, future researches could be made to explore whether emotional factors are intervening variables among them or not.

Summary
Background music rhythm impacts on impulsive buying behavior- the faster the background music rhythm is, the more consumer impulsive buying behavior will produce. As moderator, consumer shopping attitude interact with background music rhythm influences impulsive buying behavior, hedonic consumers are more likely to generate impulsive buying behavior under fast background music rhythm condition.

References


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