Through Which Mechanisms Does Ambient Scent Affect Purchase Intention in Retail Settings?

Silke Bambauer-Sachse, University of Fribourg, Switzerland

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ABSTRACT

In this paper, the effect of ambient scent on purchase intention is examined in a retail setting. The theoretical arguments suggest and the empirical analysis confirms that this effect is mediated by variables such as mood, ambiance evaluation, salesperson evaluation, and assortment evaluation.

INTRODUCTION

Ambient scents are often considered as extraneous environmental cues (Bosmans 2006) evoke more powerful reactions than does addressing the other senses (Hirsch 1992). Although individuals may have difficulty recognizing a scent, scent identification is not a necessary condition for scent effects to occur (Ellen and Bone 1998). Thus, scents can have effects on consumers even if they do not pay attention to scents as they do with regard to other environmental stimuli (Ward, Davies, and Kooijman 2007). Consequently, effects of ambient scents are interesting from a consumer research perspective.

This study consists of a detailed examination of the mechanisms by which ambient scent effects occur in a real retail environment. Thus, it is the objective of this study to integrate the variables derived from previous research that might play a role in the considered context into one research model and to examine the specific relations between these variables in terms of rather direct or indirect ambient scent effects. The variables derived from previous studies are: mood, ambiance evaluation, salesperson evaluation, assortment evaluation, and purchase intention. In order to create a research model containing these variables, two research streams are brought together: research on ambient scent effects and research on mood effects. Following the argument of Morrin and Ratneswar (2003) that unpleasant scents have little practical relevance in marketing efforts, this study focuses on pleasant scents. Furthermore, the product category studied here represents a high involvement product category because especially the purchase of high involvement products often requires the recommendation of a salesperson. Thus, choosing such a product category for the empirical study made it possible to examine effects of ambient scent on the evaluation of the salesperson.

The study presented here goes beyond previous research because previous studies only examined single effects of ambient scent, but did not consider the broader context of possible other effects. Furthermore, although there is a comparatively large body of research on effects of product scents (Gulas and Bloch 1995), much less research was conducted on effects of ambient scents on consumer response variables such as product evaluations (Bosmans 2006) or purchase intentions. In addition, the study presented here fills three further gaps of previous research. First, the study was conducted in a real retail store whereas most of the previous studies were conducted in a laboratory setting (e.g., Morrin and Ratneswar 2000; Spangenberg, Crowley, and Henderson 1996). Second, this study is based on a real customer sample whereas previous studies often used student convenient samples (e.g., Morrin and Ratneswar 2000). Third, many previous studies looked at direct effects of ambient scent on purchase intention without examining these effects and underlying processes in detail. This study will do so by analyzing the role of relevant mediator variables.

In addition, by providing insights in the processes underlying the effects of ambient scent on purchase intention, this study helps retailers to better understand the mechanisms by which they are able to motivate customers to purchase (Davies, Kooijman, and Ward 2003).

EMPIRICAL BACKGROUND

Despite the large number of studies on scents, the number of studies that examine effects of ambient scents in a consumer research context is limited. The existing studies often look at direct links between ambient scent and consumer response variables such as product evaluation and purchase intention, but do not examine several effect paths in detail. Table 1 gives a chronological overview of the objectives and most important findings of studies on effects of ambient scent on consumer response variables.

The studies summarized in table 1 point out variables that play a role in the context of ambient scent effects. The variables that were analyzed in different studies and that repeatedly proved to be important are ambient evaluation, assortment evaluation, mood, and purchase intention. Although single studies examined some of these variables, studies that integrate all of these variables in a holistic framework and analyze their effects simultaneously do not exist. This paper will fill this gap and present a model containing these variables that is developed by bringing together the partial relations that were identified in previous studies.

With regard to the variable mood it is important to note that although Morrin and Ratneswar (2000) did not find an effect of ambient scent on mood, this variable will still be considered in the study presented below. A possible explanation why Morrin and Ratneswar (2000) did not find effects might be associated with the fact that they conducted a laboratory experiment. In a laboratory experiment mood induction might be less authentic and thus, mood might have weaker effects than in a real purchase situation.

The studies presented in table 1 also suggest that ambient scent might have effects on consumer memory. However, in a real purchase situation where a retail store is scented, scent-induced memory does not play a role because the purchase decision is usually made before memory effects can occur.

In addition to the variables derived from research on ambient scent effects, another variable that has not been mentioned yet in this stream of research but that has proved to play an important role in the context of the effectiveness of sales conversations (DeShields, Kara, and Kaynak 1996; Gierl and Bambauer 2006; Woodside and Davenport 1974) and thus might be relevant for a study conducted in a real retail store, is the evaluation of the salesperson.

DEVELOPMENT OF THE RESEARCH HYPOTHESES

Below, the partial relations that can be derived from previous research will be looked at in detail and be brought together in order to build up a holistic framework that contains assumptions on direct and indirect relations between the considered variables.

Effect of Ambient Scent through Ambiance Evaluation on the Evaluation of the Salesperson

Prior research found that ambient scents work as affective and contextual cues that affect consumers’ subsequent evaluations.
Through Which Mechanisms Does Ambient Scent Affect Purchase Intention in Retail Settings?

Table 1

<table>
<thead>
<tr>
<th>Study</th>
<th>Objective</th>
<th>Major findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitchell, Kahn, and Knasko (1995)</td>
<td>examining how the congruency of ambient scent affects brand choice, decision processes, and memory</td>
<td>when ambient scent is congruent, people spend more time processing the data, are more holistic in their processing, and are more likely to go beyond the information given, relying more on inferences and self-references.</td>
</tr>
<tr>
<td>Spangenberg, Crowley, and Henderson (1996)</td>
<td>investigating whether the presence of an inoffensive ambient scent versus no ambient scent affects intentions to visit the store, purchase intentions, evaluations of the store, the store environment, the merchandise in general</td>
<td>the presence of an ambient scent consistently enhanced evaluations, behaviors, and the subjective experience for retail shoppers.</td>
</tr>
<tr>
<td>Morrin and Ratneshwar (2000)</td>
<td>examining the impact of ambient scent on mood, evaluation, attention, and memory for familiar and unfamiliar brands</td>
<td>the presence of a pleasant ambient scent led to additional processing efforts and superior re-call of the unfamiliar brands (rather than for familiar brands); no effect of ambient scent on mood.</td>
</tr>
<tr>
<td>Fiore, Yah, and Yoh (2000)</td>
<td>studying the impact of ambient scent on attitude toward the product and purchase intention</td>
<td>positive effects of ambient scent on attitude and purchase intention.</td>
</tr>
<tr>
<td>Mattila and Wirtz (2001)</td>
<td>examining effects of ambient scent on consumers’ perceptions of retail environments</td>
<td>scent led to descriptively (but not significantly) more positive evaluations of the store environment than no scent.</td>
</tr>
<tr>
<td>Morrin and Ratneshwar (2003)</td>
<td>investigating effects of ambient scent on brand memory</td>
<td>positive effect of ambient scent on brand memory only at the brand encoding stage, but not at the brand retrieval stage.</td>
</tr>
<tr>
<td>Chebat and Michon (2003)</td>
<td>examining the impact of ambient scent in shopping malls on perceptions of the shopping environment and product quality</td>
<td>a light and pleasing ambient scent positively affects consumers’ perceptions of the shopping environment and of product quality.</td>
</tr>
<tr>
<td>Spangenberg, Grohmann, and Sprott (2005)</td>
<td>studying interaction effects between scent and music on consumer evaluations of the store and the merchandise</td>
<td>consistency between ambient scent and music produces more favorable shop and merchandise evaluations.</td>
</tr>
<tr>
<td>Bosmans (2006)</td>
<td>analyzing the impact of ambient scent on product evaluation</td>
<td>significant positive effect of ambient scent on product evaluation.</td>
</tr>
<tr>
<td>Spangenberg, Sprott, Grohmann, and Tracy (2006)</td>
<td>exploring congruity between gender-based product offerings and perceived femininity/masculinity of ambient scents</td>
<td>positive effects of ambient scent on store and merchandise evaluation if the ambient scent is congruent with gender-based products.</td>
</tr>
<tr>
<td>Ward, Davies, and Kooiiman (2007)</td>
<td>examining effects of ambient scent on perceptions of the retail environment and mood</td>
<td>positive effects of ambient scent on perceptions of the retail environment and mood.</td>
</tr>
<tr>
<td>Krishna, Lwin, and Morrin (2009)</td>
<td>exploring the relative effectiveness of product scent versus ambient scent at improving memory for product information</td>
<td>product scent is more effective than ambient scent at enhancing memory for product-related information.</td>
</tr>
</tbody>
</table>

(Aggleton and Waskett 1999; Bosmans 2006; Cann and Ross 1989). More specifically, ambient scents have direct effects on customers’ perception of the environment (Bone and Ellen 1999; Chebat and Michon, 2003). Thus, it can be assumed that pleasant ambient scents have positive effects on customers’ evaluations of the store ambiance. This argument leads to the first hypothesis:

**Hypothesis 1:** The evaluation of the store ambiance is more positive in the ambient scent condition than in the no scent condition.

Furthermore, based on the finding of Sharma and Stafford (2000) that a “prestige store ambiance” leads to significantly higher salesperson credibility than a “discount store ambiance”, it can be argued that a positive evaluation of the store ambiance that is caused by a pleasant ambient scent has positive effects on the evaluation of the trustworthiness and the competence of the salesperson working in this store. Thus:

**Hypothesis 2:** The more positive customers’ evaluation of the store ambiance, the more positive is their evaluation of the salesperson.

Note that the causality assumed in H2 specifically refers to the effect of store ambiance on the evaluation of a salesperson’s trustworthiness and competence and is due to the following order effect. A customer entering a store forms an impression of the store ambiance first and then starts an interaction with a salesperson. After having talked to the salesperson, the customer is able to evaluate the salesperson’s trustworthiness and competence (Bitner 1992). On the contrary, effects of the evaluation of a salesperson on the perception of store ambiance might occur if perceptions rather refer to the salesperson’s appearance (e.g., well-dressed). Such effects are not considered here.
Effect of Ambient Scent through Mood on the Evaluation of the Salesperson

Studies conducted in several fields of research found positive effects of a pleasant ambient scent on mood (social sciences: Baron and Thomley 1994; chemistry: Knasko 1992; medical science: Lehmer, Eckerberger, Walla, Pötsch, and Deeecke 2000). The qualitative findings of a study on effects of ambient scent in retail environments (Ward et al. 2007) also support the notion that a pleasant ambient scent can produce a more positive mood (compared to the no scent condition). These considerations lead to the next hypothesis:

Hypothesis 3: Mood is more positive in the ambient scent condition than in the no scent condition.

In their study on mood effects in personal sales conversations, Gierl and Bambauer (2006) showed that mood is positively related to the evaluation of a salesperson. Thus, a comparatively positive mood is supposed to lead to a comparatively positive evaluation of the salesperson. Two theoretical approaches can be used to explain such an effect. According to the affect priming mechanism (Fazio, Sanbonmatsu, Powell, and Kardes 1986; Klauer, Roessnagel, and Musch 1997) which postulates that an emotion produced by a context stimulus affects the evaluation of a subsequently perceived stimulus, a positive mood state which is generated by a pleasant ambient scent has a positive effect on the perception of the salesperson with whom a customer is interacting. In addition, the mood maintenance theory (Isen, Means, Patrick, and Nowicki 1982) suggests that people in a positive mood judge objects or other people less rigorously (Cunningham et al. 1990) and with less cognitive effort in order to maintain their positive mood (Bower 1991; Cunningham 1988; Forgas 1995; Forgas 1998, Greenberg and Pyszczynski 1986; Milberg and Clark 1988). Thus, positive mood induced by the ambient scent is supposed to influence customers' evaluations of the salesperson’s competence and trustworthiness:

Hypothesis 4: The more positive customers’ mood, the more positive is their evaluation of the salesperson.

Note that a customer’s evaluation of the salesperson might in turn influence his mood. There are two plausible effects. First, the customer’s mood that is positive due to the ambient scent becomes even more positive because the customer is delighted about the salesperson’s competence and trustworthiness. From a retailer’s perspective, this is the optimal case because positive effects of a positive mood are even intensified. The second effect is that the customer’s disappointment about a lack of competence and trustworthiness of the salesperson might deteriorate the customer’s initial positive mood. This effect is not considered here because retailers should have a high motivation to have highly competent and trustworthy salespeople.

Effects of Mood and Ambiance Evaluation on the Evaluation of the Assortment

Several studies show that mood has positive effects on attitudes and evaluations (Batra and Stayman 1990; Batra and Stephens 1994; Gorn, Goldberg, and Basu 1993; Groenland and Schoormans 1994; Holbrook and Batra 1987; Isen and Shaller 1982). In addition, studies in a retail context provide the notion that store-induced mood strongly influences customers’ in-store responses (Donovan and Rossiter 1982; Sherman, Mathur, and Smith 1997). These arguments lead to the assumption that customers’ mood induced by the ambient scent has a positive effect on their evaluation of the store assortment. Therefore:

Hypothesis 5: The more positive customers’ mood, the more positive is their evaluation of the assortment.

The causality assumed in H5 is plausible because the mood induction takes place when entering the store and (un)consciously smelling the ambient scent, thus before forming an evaluation of the assortment which can only be done after having spent a while in the store. A negative evaluation of the assortment might in turn influence the initial positive mood, but this particular case is not considered here.

Direct effects of mood on purchase intention are not expected because the study presented here is on high involvement products and previous research has shown that direct mood effects on product evaluation are less important for high involvement products than for low involvement products (Bambauer-Sachse and Gierl 2009) and thus should have an even weaker effect on purchase intention which represents a consequence of product evaluation.

Regarding the effect of ambiance evaluation on assortment evaluation, previous research provides the notion that environmental elements affect consumer evaluations of merchandise quality (Baker, Grewal, and Parasuraman, 1994). More specifically, Sharma and Stafford (2000) found that product evaluation is more positive for “prestige ambiance” stores than for “discount ambiance” stores. Thus, it can be argued that the evaluation of the store ambiance has positive effects on the evaluation of the store assortment. Therefore:

Hypothesis 6: The more positive customers’ evaluation of the store ambiance, the more positive is their evaluation of the assortment.

It can further be assumed that ambiance evaluation does not have any direct effects on purchase intention because ambiance represents a contextual cue that is not directly linked to the high involvement products offered in a store.

Effects of Salesperson and Assortment Evaluation on Purchase Intention

Findings of previous research provide the notion that customers’ satisfaction with the salesperson positively influences satisfaction with the retailer (Goff, Boles, Bellenger, and Stojack 1997) as well as anticipation of future interaction with the salesperson and purchase intention (Ramsey and Sohi 1997). Furthermore, the studies of Swinyard (1993) as well as of Lam and Mukherjee (2005) provide the notion that merchandise evaluation positively influences purchase intention in retail settings. Thus:

Hypothesis 7: The more positive customers’ evaluations of the salesperson and the assortment, the higher are their purchase intentions.

Research Model

The above presented theoretical considerations are summarized in the research model presented in figure 1. The paths shown in this model will be tested in the empirical study presented below.
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EMPIRICAL STUDY

Product category

As it was intended to conduct the empirical study in a real shopping environment, several stores selling high involvement products in a midsize town in the south of Germany were contacted. The stores were selected on the basis of the following criteria. They should not be too large because otherwise it would have been difficult to diffuse the ambience scent in a sufficient way. In addition, they should have a manageable number of customers per day so that it was possible to administer the questionnaires without disturbing the normal business activities too much. Moreover, it should be plausible to use ambient scent for the considered product category. Furthermore, it was important that the products sold in these stores were unscented so that it was possible to clearly isolate the effect of the ambient scent. Finally, the stores should have attractive assortments in order to avoid negative effects of assortment perceptions. Among the contacted stores, the owner of a jewelry store agreed to participate. Thus, this store, which was not an upscale, luxurious jewelry store, but rather a store offering affordable silver jewelry, was chosen as the test store. The choice of the test store is in line with the notion provided by Fiore, Yah, and Yoh (2000) that ambient scents work best for products that are associated with pleasure and that have moderate prices.

Pretest

A scent that is intended to have positive effects should be perceived as pleasant (Fiore et al. 2000) and should fit to the object studied (Bone and Ellen 1999; Bone and Jantrania 1992) because only in this case, ambient scents continue to affect product judgments, even when they become salient or when consumers are motivated to discount their potential influences (Bosmans 2006). Thus, the purpose of the pretest was to identify an ambient scent for the main study that was judged as likable by the majority of customers and that was characterized by a high fit to the product category chosen for the main study (jewelry). In the first step, six commonly used ambient scents were selected (lavender, rose, cedarwood, green tea, ocean breeze, jasmine). The high percentage of floral scents among the scents selected was in line with the notion provided by Spangenberg et al. (1996) that floral scents are generally perceived as inoffensive scents and thus are likely to generate positive affective responses, and are considered pleasant by most people.

Thirty pretest participants evaluated the first three scents and another 30 participants evaluated the remaining three scents. Thus, 30 evaluations resulted per scent. Following the procedure proposed by Bosmans (2006), small glass bottles that contained a cotton ball with some drops of the tested fragrances were presented to the pretest participants and the participants were asked to sniff the bottles and then to evaluate likeability and scent-store-fit of the fragrances. The order of the scents was varied from respondent to respondent to counterbalance possible order effects. The pretest participants evaluated the likeability of the scents on the basis of four items (pleasant, agreeable, attractive, stimulating, $\alpha = .82$) that were taken from previous literature (Bone and Jantrania 1992; Ellen and Bone 1998; Morrin and Ratneshwar 2000, Spangenberg et al. 1996). The fit of the respective scent to a jewelry store was measured using the single item “this ambient scent is appropriate for a jewelry store” following the recommendation of Bone and Jantrania (1992). The results of the pretest (mean values) that are summarized in table 2 show that the lavender scent was evaluated most positively and was at the same time characterized by the highest fit to the considered store type. Thus, lavender was chosen as ambient scent for the main study. This choice is also consistent with previous literature that characterizes lavender as having a pleasant smell (Bosmans 2006) as well as having positive effects on dwell time and money spent (Soars 2009).

Measures

In the main study, scent likeability and scent-store fit were measured again in order to do manipulation checks. The same items as in the pretest were used ($\alpha_{\text{likability}} = .77$).

In addition, measures were needed for the following model variables: mood, evaluations of the ambiance, the store assortment, and the sales person as well as purchase intention. The mood measures were derived from the studies of Baron and Thornley (1994), Chebat and Michon (2003), Ellen and Bone (1998), Mehrabian and Russell (1974), and McGoldrick and Pieros (1998). The ambiance evaluation was measured following the recommendations of Chebat and Michon (2003) as well as of Spangenberg et al. (1996). The evaluation of the store assortment was operationalized based on statements similar to those used by Chebat and Michon (2003), Morrin and Ratneshwar (2000), and Spangenberg et al. (1996). The evaluation of the salesperson was measured using statements that were derived from the work of Gierl and Bambauer (2006), and purchase intention was measured using the item “I can imagine buying an item from this store”. Table 3 gives an overview of the items used, the factor loadings, the corresponding $t$-values per item as well as the $\alpha$-values per variable.

Table 2

<table>
<thead>
<tr>
<th>Ambient scent</th>
<th>Lavender</th>
<th>Rose</th>
<th>Jasmine</th>
<th>Green tea</th>
<th>Ocean breeze</th>
<th>Cedarwood</th>
<th>ANOVA results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likeability</td>
<td>4.99</td>
<td>4.02</td>
<td>4.28</td>
<td>4.68</td>
<td>3.31</td>
<td>3.61</td>
<td>$F = 7.51$</td>
</tr>
<tr>
<td>scent-store fit</td>
<td>4.40</td>
<td>3.60</td>
<td>2.53</td>
<td>4.17</td>
<td>2.73</td>
<td>3.67</td>
<td>$F = 4.32$</td>
</tr>
</tbody>
</table>

In Table 2, the $\alpha$-values per variable are 0.77 for likeability and 0.82 for scent-store fit.
Table 3
Measures, Factor Loadings, and Reliability

<table>
<thead>
<tr>
<th>Variable</th>
<th>Item Description</th>
<th>PLS factor loadings (t-values)</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mood</td>
<td>feel good .85 (t = 24.54)</td>
<td>.86</td>
<td></td>
</tr>
<tr>
<td></td>
<td>happy .56 (t = 6.74)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>pleased .87 (t = 32.74)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>cheerful .88 (t = 35.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>aroused .67 (t = 8.96)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>energetic .86 (t = 25.25)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambiance evaluation</td>
<td>stimulating .78 (t = 14.72)</td>
<td>.86</td>
<td></td>
</tr>
<tr>
<td></td>
<td>lively .76 (t = 16.20)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>interesting .79 (t = 16.10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>favorable .76 (t = 17.49)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>attractive .75 (t = 15.04)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>motivating .79 (t = 16.70)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assortment evaluation</td>
<td>high quality .79 (t = 18.03)</td>
<td>.83</td>
<td></td>
</tr>
<tr>
<td></td>
<td>favorable .78 (t = 19.45)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>adequate selection .82 (t = 19.99)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>attractive .77 (t = 19.31)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salesperson evaluation</td>
<td>much knowledge about the product .74 (t = 10.75)</td>
<td>.84</td>
<td></td>
</tr>
<tr>
<td></td>
<td>competent .64 (t = 7.17)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>provided helpful information .74 (t = 16.52)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>honest .63 (t = 6.72)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>straightforward .82 (t = 22.48)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>trustworthy .79 (t = 16.77)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: all items were measured on 7-point rating scales ranging from 1 (strongly disagree) to 7 (strongly agree)

The sufficiently high factor loadings, the highly significant t-values and the high α-values show that the chosen items are appropriate to reliably measure the model variables. Thus, for the data analyses, overall variable values were calculated as mean values of the single items that were intended to measure the respective variable.

Main Study

Sample, Experimental Design, and Procedure

Hundred twelve people who entered the jewelry store participated in the main study (participation rate: 75%). The sample consisted of 83% women and 17% men. The age of the participants ranged from 16 to 75 years, the average age was 35.1 years.

The study participants were assigned to two different groups (56 respondents per group) that were based on the ambience scent manipulation (lavender ambient scent vs. no ambient scent). During one month of the data collection period (April), there was no ambience scent in the jewelry store and during another month (May), lavender ambient scent was diffused. The test months were comparable with regard to weather conditions, outside temperature etc. The two groups resulting from the scent manipulation were comparable with regard to average age (group 1: 35.2, group 2: 34.8, t = .44, p > .10) as well as with regard to gender distribution (chi-square = .69, p > .10).

The procedure of the data collection was as follows. The people entered the store and were approached and assisted by a salesperson. Note that the salesperson was trained before the start of the experiment in order to behave in a competent and trustworthy way. After the sales conversation the customers were asked whether they would like to fill in a questionnaire. The questionnaire contained in the first place the measures for mood, than the measures for purchase intention, the evaluation of the salesperson, the assortment, and the store ambiance. At the end of the questionnaire, the respondents were asked to indicate their age and gender. Those respondents who were assigned to the ambient scent condition were additionally asked to evaluate the likeability of the scent and to judge the scent-store fit.

Data Analysis and Results

Before discussing the results of the main study, the results of manipulation checks for scent likeability and the scent-store fit that were conducted on the basis of the main study data will be presented. The results show that scent likeability and the fit between the lavender scent and the jewelry store are evaluated as significantly more positive than the scale midpoint (scent likeability: $M = 4.68, t = 8.66, p < .001$, scent-store fit: $M = 4.60, t = 2.62, p < .05$), which means that the manipulation was successful.

Figure 2
Pls Model

Now, the results of testing the research model presented in figure 1 will be presented. The research model was transformed into the structural model shown in figure 2 and the model structures were estimated using the SmartPLS procedure.

Possible direct effects of ambient scent on salesperson evaluation, assortment evaluation and purchase intention as well as mood and ambiance evaluation on purchase intention or effects of mood on ambiance evaluation (or vice versa) were tested in the first step and proved to be non-significant. Therefore, in a second step, only the model paths shown in figure 2 were estimated. The path coefficients and the t-values estimated with the PLS procedure are summarized in table 4.

<table>
<thead>
<tr>
<th>Effect</th>
<th>Path coefficient</th>
<th>T-value (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient scent → mood</td>
<td>.60</td>
<td>9.81 (p &lt; .001)</td>
</tr>
<tr>
<td>Ambient scent → ambiance evaluation</td>
<td>.39</td>
<td>5.23 (p &lt; .001)</td>
</tr>
<tr>
<td>Mood → salesperson evaluation</td>
<td>.55</td>
<td>4.38 (p &lt; .001)</td>
</tr>
<tr>
<td>Mood → assortment evaluation</td>
<td>.47</td>
<td>3.97 (p &lt; .001)</td>
</tr>
<tr>
<td>Ambiance evaluation → salesperson evaluation</td>
<td>.18</td>
<td>1.22 (p &gt; .10)</td>
</tr>
<tr>
<td>Ambiance evaluation → assortment evaluation</td>
<td>.39</td>
<td>3.29 (p &lt; .001)</td>
</tr>
<tr>
<td>Salesperson evaluation → purchase intention</td>
<td>.46</td>
<td>5.49 (p &lt; .001)</td>
</tr>
<tr>
<td>Assortment evaluation → purchase intention</td>
<td>.45</td>
<td>5.37 (p &lt; .001)</td>
</tr>
</tbody>
</table>

The path coefficients and the associated t-values show that the effect of ambiance evaluation on the evaluation of the salesperson is not significant whereas all other effects are significantly positive. Thus, hypotheses 1, 2, 3, 5, 6, and 7 are supported, whereas hypothesis 4 is not supported. In more detail, the results indicate that customers’ mood and their evaluation of the general store ambiance are more positive when a likeable ambient scent that fits to the store assortment is diffused than in the case where no ambient scent is present. In addition, the results show that the more positive customers’ mood, the more positive is their evaluation of the salesperson and of the assortment. Furthermore, a comparatively positive ambiance evaluation leads to a comparatively positive evaluation of the assortment, but does not affect the evaluation of the salesperson. Finally, customers’ purchase intentions increase with an increasingly positive evaluation of the salesperson and the assortment.

CONCLUSION

The starting point of this paper was the observation that although there is a broad body of research on scent effects, research on effects of ambient scent on purchase intention in real retail settings is limited, and research looking at the detailed mechanisms underlying scent effects does not exist. Consequently, from both a retailer’s and a consumer researcher’s perspective, it stood to reason to develop an integrated research model reflecting possible mechanisms underlying effects of ambient scent and testing this model in a real retail setting.

The findings of the empirical study show that the effects of ambient scent on purchase intention in retail settings result from much more complex processes than previous research suggested. More specifically, the results provide the notion that ambient scent basically triggers two effects: one of them through mood and the other through ambiance evaluation. Mood in turn has effects through salesperson evaluation and assortment evaluation on purchase intention, whereas ambiance evaluation only has effects on purchase intention through assortment evaluation.

These findings do not only provide a valuable contribution to existing research in the field of ambient scent in retail settings but also suggest that retailers should profit from the diffusion of appropriate ambient scents to generate higher purchase intentions. Furthermore, the results provide a better understanding to retailers with regard to where the positive effects of ambient scent come from. Thus, the results indicate what retailers can do to enhance positive effects of ambient scent on purchase intention. For example, retailers could work with additional mood induction procedures beyond ambient scent (e.g., music, offering coupons etc.) to enhance the effect of ambient scent through mood on salesperson evaluation and assortment evaluation. In addition, retailers could hire well-trained, highly motivated, and professional salespeople to enhance effects of mood through salesperson evaluation on purchase intention. Finally, retailers could try to present their assortments in a way that is attractive from the perspective of potential customers in order to additionally support effects of ambient scent through ambiance and assortment evaluation on purchase intention.

For future research, it might be interesting to replicate the study presented here for other store types and product categories. In addition, effects of further variables, such as the gender of the salesperson, the influence of accompanying relatives or friends, or person-specific differences in mood states could be analyzed. Finally, it might be interesting to examine which specific measures might contribute to more positive perceptions of variables such as assortment or store ambiance in order to support effects of ambient scent.

REFERENCES


