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Research note

Odors and consumer behavior in a restaurant

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Abstract

Several studies have shown that odors have an effect on human behavior. Consumer's behavior is also affected by odors. An experiment was carried out in a restaurant where lemon and lavender aromas were diffused and compared to a no-aroma control condition. Results showed that lavender—but not lemon aroma—increased the length of stay of customers and the amount of purchasing. The hypothesis that lavender produces a relaxing effect is offered to explain the results.

Keywords: Odors; Fragrance; Consumer behavior; Time latency; Purchasing behavior

1. Introduction

Various experimental studies have showed that aromas have a positive impact on human behavior, emotions and cognition. Baron and Bronfen (1994) achieved an increase in the performances of difficult cognitive tasks when diffusing a pleasant perfume. Following aromatherapy, Diego et al. (1998) found that subjects performed more rapidly a math computation task. Baron and Kalsher (1998) found that pleasant fragrance enhanced some aspects of driving performance when participants

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performed a simulated driving task with an ambient lemon aroma present in the driving room. Physical performance is also affected by odors. Raudenbush et al. (2001) found that peppermint odor affected athletic task performance. In an experiment, athletes undertook various physical tasks (basketball free-throw shots, 400 m dash, etc.) with or without an odorized peppermint adhesive strip under the athlete's nose. Results showed that the peppermint odor condition resulted in increases the running speed, the hand grip strength and number of push-ups but had no effect on basketball free-throw shots.

Helping behavior is also positively affected by ambient aromas. Baron (1997) observed that people in a region of a mall with pleasant food odors (pastry, coffee shop) were more willing to accept a request for change from a male confederate than persons in a zone with neutral odors (clothing shops, etc.). Grimes (1999) has shown that students agreed to spend more time on voluntary work when they were exposed to a vanilla or lavender odor before the request. Also, Baron and Bronfen (1994) showed that subjects exposed to a pleasant odor during a learning task offered their collaboration more easily to the experimenter asking for help at the end of the task. Guéguen (2001) showed that, on a pedestrian walk, a woman confederate who was instructed to drop apparently without noticing a packet of paper handkerchiefs or a glove was helped more often by pedestrians when she wore a perfume.

To date various studies have showed that ambient aromas influence consumer behavior. Scents appear to be relevant to two forms of consumption: product evaluation (for example scent products) and sale's environment (for example ambient aroma). Pleasant scents directly affected the evaluation of a product. In an early experiment, Laird (1932) found that 50% of subjects preferred narcissus scented socks while only 8% preferred the unscented socks. Haller et al. (1999) found that neonatal experience with vanilla influences more than 25 years later, preference for vanilla-flavored foods. Bone and Janatria (1992) found that scent that was appropriated with a product increased product evaluations. Morrin and Ratneshar (2000) found that a pleasant ambient scent (geranium scent) improved brand evaluations especially for unfamiliar brands. These researchers also found that ambient scent increased recall of unfamiliar brand names.

Odors environment in a sales area seems to have a positive effect on consumers' behavior. Knasko (1989) showed that ambient aroma had a positive impact on the duration of time spent by consumers at a jewelry counter. This result was confirmed by Lipman (1990). Ambient aromas also affect gamblers' behavior (Hirsch, 1995). During one weekend a slot-machine area in a LasVegas Casino was odorized. The amount of money gambled in this area was compared to the amount of money gambled in the same area before and after odorization. The results showed that during the experimental weekend, the amount of money gambled was greater by an average of 45.1% compared to the weekend before and the weekend after the diffusion of the aroma. Hirsch (1995) showed no difference between the three weekends when comparing the amount of money gambled in a control slot-machine area which was non-odorized. The study also found that when the concentration was higher, larger amounts of money were gambled.