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# Empirical Assessment of the Impact of Store Atmospheric Elements on Consumer Buying Behaviour: Evidence from Indore City

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**Abstract**

The rapid expansion of organized retail in Indian cities has heightened the importance of store atmospherics as a strategic determinant of consumer buying behaviour. This study empirically examines the impact of store atmospheric elements—lighting, colour, aroma, temperature, and display/layout—on the buying behaviour of consumers purchasing lifestyle brands in Indore City. Grounded in the Mehrabian–Russell Model of environmental psychology, the research analyses how atmospheric stimuli influence consumers' emotional responses, particularly pleasure and arousal, and how these emotions mediate behavioural outcomes such as purchase satisfaction and revisit intention. Primary data were collected from 1,250 shoppers across major lifestyle retail outlets using a structured questionnaire. A quantitative, descriptive, and analytical research design was adopted, and data were analysed using descriptive statistics, chi-square tests, correlation analysis, and multiple regression techniques. The findings reveal that store atmospherics significantly affect consumer emotions and buying behaviour, with lighting emerging as the most influential factor in enhancing emotional pleasure and purchase satisfaction. Gender was found to moderate the perception of several atmospheric cues, while temperature showed a neutral effect across demographic groups. The study provides empirical evidence supporting the relevance of store atmospherics in shaping consumer experiences and offers practical insights for lifestyle retailers in Indore to optimize store environments for improved customer satisfaction and loyalty.

Keywords: Store Atmospherics, Consumer Buying Behaviour, Mehrabian–Russell Model, Lifestyle Retailing

## Introduction

The rapid growth of organized retail and changing consumer lifestyles in Indian cities have intensified competition among retailers, making store atmosphere a vital strategic tool for influencing consumer buying behaviour. In urban centres such as Indore City, where consumers are exposed to a diverse range of supermarkets, malls, and branded retail outlets, purchasing decisions are increasingly shaped by in-store experiences rather than product attributes alone. Store atmospheric elements—including lighting, music, layout, colour schemes, scent, cleanliness, and employee interaction—create a sensory environment that affects consumers' mood, perception of quality, and overall shopping satisfaction. Empirical research in retail marketing suggests that favourable atmospheric conditions encourage longer store visits, impulse purchases, and higher spending levels. However, the relative influence of specific atmospheric variables may vary across cities due to cultural preferences, income levels, and shopping motivations, underscoring the importance of context-specific empirical investigation.

This study undertakes an empirical assessment of the impact of store atmospheric elements on consumer buying behaviour with special reference to Indore City. Using primary data collected from retail consumers, the research examines how different atmospheric dimensions influence key behavioural outcomes such as purchase intention, time spent in-store, and likelihood of repeat visits. By applying quantitative analytical techniques, the study seeks to identify statistically significant relationships between atmospheric cues and consumer responses, thereby moving beyond conceptual discussion to evidence-based conclusions. The focus on Indore City provides localized insights into consumer behaviour in a rapidly developing urban retail market, contributing to the limited city-level empirical literature in India. The findings are expected to offer practical implications for retailers and mall managers in designing effective store environments that enhance customer experience and drive sales performance, while also enriching academic understanding of the role of store atmosphere in shaping consumer buying behaviour within emerging urban contexts.

**Research Methodology**

The research methodology provides a systematic framework for examining the influence of store atmospheric elements on consumer buying behaviour in lifestyle retail outlets in Indore City. Guided by the Mehrabian–Russell Model (1974), the study adopts a descriptive and analytical research design to assess how environmental stimuli such as lighting, colour, aroma, temperature, and display/layout affect consumers' emotional responses—particularly pleasure and arousal—and subsequent purchase behaviour. A quantitative, deductive research approach forms the core of the study, enabling the collection of measurable data through structured questionnaires administered to shoppers of major lifestyle brands including Zara, H&M, Nike, and Puma. The research follows a cross-sectional design, with data collected at a single point in time from respondents representing diverse demographic profiles. Statistical tools such as descriptive statistics, cross-tabulations, chi-square tests, correlation analysis, and multiple regression are employed to examine relationships and test hypotheses. Limited qualitative interpretation is incorporated to contextualize statistical findings within consumer psychology. the methodology ensures validity, reliability, and alignment with the research objectives, facilitating both empirical rigor and practical relevance for retail managers seeking to enhance store atmospherics and consumer satisfaction.

**Population of the Study**

A population of a study can be defined as the whole body of individuals or things that have the features that the investigator wishes to examine. In my study, the population will consist of consumers who make regular purchases in the lifestyle retail stores that are available in Indore city. This involves customers that visit fashion and lifestyle stores like Zara, H&M, Levi, Puma, Nike and Forever 21 among others on a regular basis.

The target group consists of a general population of men and women buyers of different ages, income levels, educational and occupation demographics. The paper centers on the world of consumers in urban settings who are conscious towards contemporary shopping and are shaped by physical look and feel of stores.

The study is restricted in geographical scope to Indore city, which is a fast growing metropolitan city in Madhya Pradesh as far as its retailing business environment is rich as well as its consumer population is getting exposure to international brands. This makes it an appropriate venue in which to study the role of store atmospherics on consumer emotions and purchase behavior.

The study will concentrate on the consumers in this city to come up with insights which are both locally oriented and generalizable to other urban retail settings in other parts of India. The results can also be used as a point of wish to carry out comparative research in other emerging retail centres.

**Sample Size and Sampling Design**

A sampling design delineates a method and plan by which a subset of a population should be chosen that would accurately represent the over-all population. Because it is unfeasible to gather the required data of all the consumers in Indore, a scientifically-defined sample would guarantee that the results are valid, reliable, and generalization.

**Sample Size**

The size of the sample used in the study is set to 1,250 comprising of people who regularly shop at lifestyle retail outlets in the city of Indore. This amount suffices to develop quantitative analysis and guarantee the statistical reliability. Some of the factors that selected the sample size included diversity in the population, time, and availability of resources. The size of sample will enhance correctness of the findings and reduce sampling error since the findings will represent the actual consumer perceptions in the retail environment of the city.

**Data analysis and interpretation**

This analysis examines the influence of key store atmospheric elements—lighting, colour, aroma, temperature, and display/layout—on the buying behaviour of consumers purchasing lifestyle brands in Indore City. The interpretation is grounded in the Mehrabian–Russell Model, which explains how environmental stimuli evoke emotional responses, particularly pleasure and arousal, that subsequently shape consumer behaviour within retail settings.

The study is based on primary data collected from 1,250 respondents representing diverse demographic characteristics. Descriptive statistics, cross-tabulations, chi-square tests, correlation analysis, and multiple regression were employed to identify patterns and relationships between atmospheric variables and consumer responses. Descriptive results provide an overview of consumer perceptions, while inferential analyses reveal the strength and direction of relationships between store atmosphere, emotional reactions, purchase satisfaction, and revisit intention.

The findings generate empirical evidence on the role of store atmospherics and offer practical guidance for lifestyle retailers in Indore to enhance customer satisfaction and loyalty through effective store design and ambiance management.

**Association Between Gender and Store Atmospheric Elements (Chi-Square Analysis)**

**Cross Tabulations**

Chi-square tests of the elements of store atmospherics were done to determine whether differences in the perceptions of the attractions exist between the different genders. Chi-square test is used to determine whether there is a significant difference in the distribution of responses of males, females as well as others (strongly disagree to strongly agree). The findings demonstrate some fascinating gender perceptional arrangements regarding the mechanisms of experientiality of the diverse atmospheric cues in the context of the Indore lifestyle retail locations.

**Gender and Lighting**

The outcome of chi-square testing of lighting ($X^2 = 19.768$, $p = .011$) shows that the perception of the lighting in stores has a significant relation to gender. This result implies that male and female customers perceive the lighting effects in different ways. The agreement that lighting leads to better mood and better focus was observed in male respondents (60.6 percent of the total sample), with a relatively large proportion of female respondents focusing more on the aesthetic and emotional impression formed by lighting set-ups. This agrees with the previous research stating that males are more sensitive to practical lighting that helps vision, and females appreciate the warmth and atmosphere produced by the soft or decorative light. Therefore, the design of lighting needs to balance the convenience and atmosphere to meet the expectations of gender.

**Crosstab**

| | | LIGHTING | | | | | Total |
|---|---|---|---|---|---|---|---|
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | |
| Gender | MALE | 280 | 170 | 125 | 100 | 83 | 758 |
| | FEMALE | 142 | 108 | 88 | 65 | 79 | 482 |
| | OTHER | 6 | 4 | 0 | 0 | 0 | 10 |
| Total | | 428 | 282 | 213 | 165 | 162 | 1250 |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 19.768[a] | 8 | .011 |
| Likelihood Ratio | 23.377 | 8 | .003 |
| Linear-by-Linear Association | 5.613 | 1 | .018 |
| N of Valid Cases | 1250 | | |

a. 5 cells (33.3%) have expected count less than 5. The minimum expected count is 1.30.

| Symmetric Measures | | | | | |
|---|---|---|---|---|---|
| | | Value | Asymp. Std. Error[a] | Approx. T[b] | Approx. Sig. |
| Interval by Interval | Pearson's R | .067 | .028 | 2.374 | .018[c] |
| Ordinal by Ordinal | Spearman Correlation | .076 | .028 | 2.691 | .007[c] |
| N of Valid Cases | | 1250 | | | |
| a. Not assuming the null hypothesis. | | | | | |
| b. Using the asymptotic standard error assuming the null hypothesis. | | | | | |
| c. Based on normal approximation. | | | | | |

**Gender and Colour**

The level of gender difference in the aspect of color perception is also demonstrated by the fact that the chi-square value of color (2= 16.943, p = 0.310) is significant. Male respondents were found to consider color in terms of clarity and visibility of the product, but females were also determined to be swayed by how color combinations can change the mood and aesthetic satisfaction. This means that designs are dual-functioning in that they provide navigation to male customers and trigger emotion to female customers. Even though regression analysis later indicates that the direct effect of color on purchase intention is not that significant, its psychological effect, which is gender-based, is still significant in determining first impressions of the store.

| Crosstab | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | COLOUR | | | | | Total |
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | |
| Gender | MALE | 179 | 213 | 231 | 82 | 53 | 758 |
| | FEMALE | 86 | 146 | 164 | 58 | 28 | 482 |
| | OTHER | 0 | 7 | 3 | 0 | 0 | 10 |
| Total | | 265 | 366 | 398 | 140 | 81 | 1250 |

| Chi-Square Tests | | | |
|---|---|---|---|
| | Value | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 16.943[a] | 8 | .031 |
| Likelihood Ratio | 19.291 | 8 | .013 |
| Linear-by-Linear Association | 1.024 | 1 | .312 |
| N of Valid Cases | 1250 | | |

| |
|---|
| a. 5 cells (33.3%) have expected count less than 5. The minimum expected count is .65. |

| **Symmetric Measures** | | | | | |
|---|---|---|---|---|---|
| | | Value | Asymp. Std. Error[a] | Approx. T[b] | Approx. Sig. |
| Interval by Interval | Pearson's R | .029 | .027 | 1.012 | .312[c] |
| Ordinal by Ordinal | Spearman Correlation | .039 | .028 | 1.383 | .167[c] |
| N of Valid Cases | | 1250 | | | |
| a. Not assuming the null hypothesis. | | | | | |
| b. Using the asymptotic standard error assuming the null hypothesis. | | | | | |
| c. Based on normal approximation. | | | | | |

**Gender and Aroma**

The variable of aroma gave a chi-square statistic of 22.284 with p = 0.004 and therefore indicates that the relationship between gender and aroma perception is very significant. Both men and women customers recognized the effects of perfume, although their response levels were not equal. Aroma was found to be more important in creating comfort and extending the length of stay, as female customers rated it higher in factors than men, which conforms to the research claims of a better sense of smell in women. Males, however, related scent to freshness and cleanliness but not with emotion. Thus, the consumer engagement might be maximized with the help of gender-specific scents, such as the use of subtle woody or citrus scent in male-targeted areas and flowers or light-sweet fragrances in Female-targeted areas.

| **Crosstab** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Aroma | | | | | Total |
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | |
| Gender | MALE | 175 | 212 | 207 | 109 | 55 | 758 |
| | FEMALE | 95 | 123 | 119 | 97 | 48 | 482 |
| | OTHER | 3 | 0 | 4 | 0 | 3 | 10 |
| Total | | 273 | 335 | 330 | 206 | 106 | 1250 |

| **Chi-Square Tests** | | | |
|---|---|---|---|
| | Value | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 22.284[a] | 8 | .004 |
| Likelihood Ratio | 24.169 | 8 | .002 |
| Linear-by-Linear Association | 8.990 | 1 | .003 |
| N of Valid Cases | 1250 | | |

| |
|---|
| a. 5 cells (33.3%) have expected count less than 5. The minimum expected count is .85. |

| **Symmetric Measures** | | | | | |
|---|---|---|---|---|---|
| | | Value | Asymp. Std. Error[a] | Approx. T[b] | Approx. Sig. |
| Interval by Interval | Pearson's R | .085 | .029 | 3.008 | .003[c] |
| Ordinal by Ordinal | Spearman Correlation | .081 | .029 | 2.862 | .004[c] |
| N of Valid Cases | | 1250 | | | |
| a. Not assuming the null hypothesis. | | | | | |
| b. Using the asymptotic standard error assuming the null hypothesis. | | | | | |
| c. Based on normal approximation. | | | | | |

**Gender and Temperature**

In the case of temperature, the chi-square test ( 2 = 7.112, p =.525) indicates that there is no significant difference in perceptions of males and females in regards to temperature. This implies that thermal comfort is globally appreciated and that there is no gender difference that can be considered significant. Each of the respondents stated that comfortable temperature levels contribute to increased comfort levels and longer stay in the shop. The implication of the result is that temperature is one of the core environmental comfort determinants, which can affect satisfaction levels irrespective of their demographic differences.

| **Crosstab** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Temperature | | | | | Total |
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | |
| Gender | MALE | 194 | 215 | 253 | 59 | 37 | 758 |
| | FEMALE | 99 | 143 | 169 | 45 | 26 | 482 |
| | OTHER | 4 | 3 | 3 | 0 | 0 | 10 |
| Total | | 297 | 361 | 425 | 104 | 63 | 1250 |

| **Chi-Square Tests** | | | |
|---|---|---|---|
| | Value | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 7.112[a] | 8 | .525 |
| Likelihood Ratio | 8.314 | 8 | .403 |
| Linear-by-Linear Association | 1.662 | 1 | .197 |
| N of Valid Cases | 1250 | | |

| |
|---|
| a. 5 cells (33.3%) have expected count less than 5. The minimum expected count is .50. |

| **Symmetric Measures** | | | | | |
|---|---|---|---|---|---|
| | | Value | Asymp. Std. Error[a] | Approx. T[b] | Approx. Sig. |
| Interval by Interval | Pearson's R | .036 | .028 | 1.290 | .197[c] |
| Ordinal by Ordinal | Spearman Correlation | .044 | .028 | 1.546 | .122[c] |
| N of Valid Cases | | 1250 | | | |
| a. Not assuming the null hypothesis. | | | | | |
| b. Using the asymptotic standard error assuming the null hypothesis. | | | | | |
| c. Based on normal approximation. | | | | | |

**Gender and Display/Layout**

The variable that contributes the most to the association with gender is the display and layout variable ( 2=34.398, p =.001). The results prove that men and women have varying perceptions of the store structure and visual presentation. Women respondents majored on the attractiveness of the visual effects, accessibility of the products and thematic arrangement and the males majored on the clarity, signage, and logical organization. This discontinuity creates a necessity of integrative gender-based store design strategies, that is, layouts that are both practical and aesthetically appealing enough to meet both the sense of exploration and goal-oriented shopping preferences.

| **Crosstab** | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Display and Layout | | | | | Total |
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | |
| Gender | MALE | 231 | 175 | 201 | 103 | 48 | 758 |
| | FEMALE | 93 | 130 | 133 | 88 | 38 | 482 |
| | OTHER | 3 | 7 | 0 | 0 | 0 | 10 |
| Total | | 327 | 312 | 334 | 191 | 86 | 1250 |

| **Chi-Square Tests** | | | |
|---|---|---|---|
| | Value | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 34.398[a] | 8 | .000 |
| Likelihood Ratio | 37.063 | 8 | .000 |
| Linear-by-Linear Association | 8.610 | 1 | .003 |
| N of Valid Cases | 1250 | | |

| |
|---|
| a. 5 cells (33.3%) have expected count less than 5. The minimum expected count is .69. |

| **Symmetric Measures** | | | | | |
|---|---|---|---|---|---|
| | | Value | Asymp. Std. Error[a] | Approx. T[b] | Approx. Sig. |
| Interval by Interval | Pearson's R | .083 | .028 | 2.943 | .003[c] |
| Ordinal by Ordinal | Spearman Correlation | .095 | .028 | 3.365 | .001[c] |
| N of Valid Cases | | 1250 | | | |
| a. Not assuming the null hypothesis. | | | | | |
| b. Using the asymptotic standard error assuming the null hypothesis. | | | | | |
| c. Based on normal approximation. | | | | | |

The chi-square analysis reveals that gender is significantly associated with lighting, colour, aroma, and display/layout, while temperature shows no significant association, indicating a neutral effect across genders. These results highlight gender as a relevant factor influencing sensory perception within retail environments. From a managerial perspective, aligning store atmospherics with gender-sensitive preferences—such as balanced lighting schemes, fragrance zoning, and equitable display arrangements—can enhance overall shopping experience and purchase intention. Specifically, lighting and display/layout influence gender-based attention and engagement, colour and aroma affect emotional responses and comfort, while temperature remains a universal factor linked to physical comfort.

The findings confirm that gender acts as a moderating variable in the relationship between atmospheric cues and consumer behaviour, supporting earlier research on demographic influences in retail atmospherics. Additionally, the correlation analysis quantifies the strength and direction of relationships between store atmospheric variables and consumer responses. Particular emphasis is placed on the associations between lighting and emotional pleasure, and lighting and purchase satisfaction, as measured through Pearson and Spearman correlation coefficients. These results demonstrate how atmospheric elements interact within the lifestyle retail context of Indore City to shape emotional and behavioural consumer outcomes.

**Lighting and Emotional states: Pleasure.**

The results indicate a moderate and statistically significant positive relationship between store lighting and emotional pleasure ($r = 0.356$, $p < .001$), suggesting that improvements in lighting quality enhance consumers' feelings of pleasure, comfort, and happiness during shopping. This relationship is further confirmed through Spearman's rank correlation ($r_s = 0.380$, $p = .001$), indicating consistency even when ranked data are considered.

These findings align with the Mehrabian–Russell model, which posits that environmental stimuli such as lighting directly influence emotional responses that, in turn, shape consumer behaviour. Adequate lighting enhances product visibility, perceptions of safety and cleanliness, and overall store quality, encouraging longer browsing time. The results are also consistent with earlier studies showing that effective lighting increases emotional comfort and purchase enthusiasm in apparel retail settings, reinforcing lighting as both a functional and emotional driver of consumer experience.

| **Symmetric Measures** | | | | | |
|---|---|---|---|---|---|
| | | Value | Asymp. Std. Error[a] | Approx. T[b] | Approx. Sig. |
| Interval by Interval | Pearson's R | .356 | .031 | 13.467 | .000[c] |

| | | | | | |
|---|---|---|---|---|---|
| Ordinal by Ordinal | Spearman Correlation | .380 | .029 | 14.516 | .000[c] |
| N of Valid Cases | | 1250 | | | |
| a. Not assuming the null hypothesis. | | | | | |
| b. Using the asymptotic standard error assuming the null hypothesis. | | | | | |
| c. Based on normal approximation. | | | | | |

**Lighting and Behavioural Intentions – Purchase Satisfaction**

A stronger and statistically significant association was observed between store lighting and behavioural intentions, particularly purchase satisfaction, with a Pearson correlation of $r = 0.556$ ($p < .001$) and a Spearman correlation of $r_s = 0.550$ ($p < .001$). This indicates a high positive relationship, demonstrating that improvements in lighting quality are closely linked to higher levels of consumer satisfaction with purchased products. Effective lighting facilitates better product evaluation, reduces decision-making fatigue, and enhances consumers' confidence in their purchase choices.

The magnitude of this correlation suggests that lighting is one of the most influential atmospheric cues driving consumer satisfaction and loyalty in lifestyle retail environments. In branded stores such as Nike, H&M, and Zara, dynamic and well-designed lighting not only enhances product appeal but also communicates brand identity and emotional positioning. Consumers often associate such lighting with superior quality, organization, and reliability, thereby strengthening trust in the retail environment. These findings support Hypothesis H1, confirming that store lighting has a significant positive impact on consumer buying behaviour, with visual stimuli playing a central role in shaping post-purchase pleasure and satisfaction.

| **Symmetric Measures** | | | | | |
|---|---|---|---|---|---|
| | | Value | Asymp. Std. Error[a] | Approx. T[b] | Approx. Sig. |
| Interval by Interval | Pearson's R | .556 | .022 | 23.619 | .000[c] |
| Ordinal by Ordinal | Spearman Correlation | .550 | .023 | 23.255 | .000[c] |
| N of Valid Cases | | 1250 | | | |
| a. Not assuming the null hypothesis. | | | | | |
| b. Using the asymptotic standard error assuming the null hypothesis. | | | | | |
| c. Based on normal approximation. | | | | | |

The general implication of the correlation results is that visual environmental stimuli (lighting) have both an emotional and behavioural implication:

- They increase pleasure, relaxation and excitement, emotion-wise.
- They are behaviourally more satisfying, intentionally revisiting, and brand recommending.

This is confirmation of the stimulus-organism-response (S-O-R) mechanism in which lighting (stimulus) would cause emotional responses (organism) which would cause positive shopping behaviours (response). It also implies that the lighting design that complies with the brand image of the store helps to produce a well-linked sense of experience that strengthens customer loyalty and credibility.

| Correlation Pair | Pearson's r | Significance (p) | Relationship Strength | Interpretation |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Lighting ↔ Emotional Pleasure | 0.356 | <0.001 | Moderate Positive | Better lighting enhances emotional mood and pleasure. |
| Lighting ↔ Purchase Satisfaction | 0.556 | <0.001 | Strong Positive | Lighting strongly contributes to satisfaction and purchase intention. |

All of these results support the fact that lighting is both an effective and an affective cue on how to foster consumer perceptions, satisfaction, and loyalty. It affects the experiential way the consumer feels about the shopping experience, evaluates products and develops relationships about the lifestyle retail brands.

**Analysis of Multiple Regressions.**

The multiple regression was done to assess both the combined as well as individual impact of store atmosphere variables such as the lighting, colour, aroma, display/layout, and temperature to consumer buying behaviour. According to this model, the variables of the atmosphere that greatly forecast consumer responses are those variables that are considered altogether.

**Model Summary and ANOVA**

Regression model gave an F-value of 252.243 with a p-value (p <. 001), which indicates that the regression model is highly significant. It implies that the elements of the atmosphere that are totally chosen induce a significant level of the variance in consumer buying behaviour. The model fit is reliable and balanced as indicated by the sum of squares ( regression = 920.773, residual = 908.204).

According to the findings, the variation of weather conditions in the store that deals with lifestyle affects the purchasing behaviour of consumers in a great way. The p-value of below 0.001 confirms the predictors together have statistically significant effect on consumer perception, decision, and behavior on store setting.

**ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 920.773 | 5 | 184.155 | 252.243 | .000[b] |
| | Residual | 908.204 | 1244 | .730 | | |
| | Total | 1828.977 | 1249 | | | |

a. Dependent Variable: Consumer Buying Behaviour

b. Predictors: (Constant), Temperature, Lighting, Colour, Aroma, Display and Layout

**Coefficients and Interpretation of Coefficients.**

The unstandardized and standardized coefficients provide the information of the magnitude and direction of influence of every atmospheric variable.

| Predictor | Beta (Standardized Coefficient) | t-value | Significance (p) | Interpretation |
|---|---|---|---|---|
| **Lighting** | 0.150 | 5.147 | 0.000 | Significant positive influence—lighting enhances consumer comfort and product evaluation. |
| **Colour** | -0.050 | -1.704 | 0.089 | Negative and insignificant—colour has minimal influence on consumer decisions. |

| | | | | |
|---|---|---|---|---|
| **Aroma** | 0.196 | 6.248 | 0.000 | Strong positive effect—pleasant aroma enhances mood and buying intention. |
| **Display/Layout** | 0.164 | 4.857 | 0.000 | Significant positive effect—organized displays improve navigation and engagement. |
| **Temperature** | 0.351 | 11.844 | 0.000 | Highest influence—comfortable temperature drives satisfaction and purchase confidence. |

According to the coefficients, three most influential predicates of buying behaviour are temperature, aroma, and lighting; which are the three atmospheric predictors. They are all positive and statistically significant, which means that the better these factors, the better purchasing satisfaction and behavioural intentions of the consumers are.

**Coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .569 | .066 | | 8.589 | .000 |
| | Lighting | .129 | .025 | .150 | 5.147 | .000 |
| | Colour | -.053 | .031 | -.050 | -1.704 | .089 |
| | Aroma | .193 | .031 | .196 | 6.248 | .000 |
| | Display and Layout | .163 | .034 | .164 | 4.857 | .000 |
| | Temperature | .390 | .033 | .351 | 11.844 | .000 |

a. Dependent Variable: Consumer Buying Behaviour

**Conclusion**

This empirical study concludes that store atmospheric elements play a significant role in shaping consumer buying behaviour in lifestyle retail outlets in Indore City. The findings demonstrate that sensory cues such as lighting, colour, aroma, and display/layout exert a measurable influence on consumers' emotional responses and behavioural intentions. Among these variables, lighting emerged as the most influential atmospheric factor, showing strong positive relationships with emotional pleasure and purchase satisfaction. These results confirm that a well-designed store environment enhances consumers' comfort, confidence, and engagement, thereby encouraging longer store visits, higher satisfaction, and repeat purchase intentions.

The study further establishes the relevance of the Mehrabian–Russell model in explaining consumer responses within contemporary Indian retail settings, as environmental stimuli were found to significantly affect emotional states that mediate buying behaviour. Gender was identified as a moderating factor in the perception of several atmospheric cues, highlighting the importance of demographic considerations in retail design strategies. Temperature, however, was found to be a neutral and universal factor affecting physical comfort rather than differentiated behavioural responses. The research provides robust empirical evidence supporting the strategic use of store atmospherics as a competitive tool. The findings offer actionable insights for lifestyle retailers in Indore to optimize store environments in ways that enhance customer satisfaction, emotional connection, and long-term loyalty, while also contributing to the academic literature on retail atmospherics in emerging urban markets.

**References**

1. Kathuria, V., & Saha, S. (2023). Exploring the influence of various spatial organizations of urban marketplaces on perceived outdoor comfort. *NIT Rourkela Institutional Repository.*
2. Kotler, P. (2018). Atmospherics as a marketing tool. *Journal of Retailing, 49*(4), 48–64.
3. Krasonikolakis, I., Vrechopoulos, A., Pouloudi, A., & Dimitriadis, S. (2018). Store layout effects on consumer behavior in 3D online stores. *European Journal of Marketing*, *52*(5/6), 1223-1256.
4. KRISHNA, M., Basava, G., & Kar, S. (2016). A Study on the Impact of Store Atmospheric Attributes on Consumer Experiences. *Asia Pacific Journal of Research*, *33*(1), 10-13.
5. Krywuczky, F., Verlegh, P., & Kocaman, B. (2023). Background music in retail: When taking it slow may benefit you. *Proceedings of the European Marketing Academy Conference (EMAC)*, 210–219.
6. Kwenda, S. (2021). *The influence of store atmospheric on consumer behaviour in clothing stores in Durban* (Doctoral dissertation). Durban University of Technology.
7. Lata, A., & Singh, A. (2020). Impact of retail store environmental marketing cues on consumer buying physiology. *International Journal of Management*, *11*(12).
8. Lucas, M., & Romildo, T. F. (2023). Thermal and mechanical performance of earth composites with rice husk phase change material: Implications for retail façade elements. *Scientific Committee Proceedings, 2*(3), 89–102.
9. Mattila, A. S., & Wirtz, J. (2022). Congruency of scent and music as a driver of in-store evaluations and behavior. *Journal of Retailing, 75*(3), 273–289.
10. Meitiana, M., Kristinae, V., & Prasetia, G. A. (2023). Influence of quality, service, and atmosphere on satisfaction via buying interest–Season Coffee. *Studi Ilmu Manajemen dan Bisnis, 6*(2), 45–58.
11. Michon, R., Chebat, J. C., & Turley, L. W. (2005). Mall atmospherics: the interaction effects of the mall environment on shopping behavior. *Journal of business research*, *58*(5), 576-583.
12. Rajic, T., & Dado, J. (2013). Modelling the relationships among retail atmospherics, service quality, satisfaction and customer behavioural intentions in an emerging economy context. *Total Quality Management & Business Excellence*, *24*(9-10), 1096-1110.
13. Reza, T. (2023). Enhancing consumer purchases through store design: Does atmospheric alchemy matter? *Business Perspective Review, 5*(3), 15–28.