

IMPACT OF LIGHTING ON CUSTOMERS' EMOTIONAL REACTIONS IN UPSCALE RESTAURANTS

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ABSTRACT: *Urgency of assembling necessities of life, today human stood in the race of grasping things which raised the demand for ready services like the food at the table. Beyond that he also wishes for pleasure and relaxation, dining in restaurants is getting pace to get all above. The race also increased experimentation to expand the restaurants' facilities, workforce, building style, interior, dining arrangements, aesthetics, etc. but lighting is considered mainly for general or decorative purposes. The researcher took the initiative to analyze the impact of change in lighting on customers' emotions in a real situation. The previously used energy savers are altered with spotlights in two chosen upscale restaurants named Lahore View restaurant with rope lights and Jasmine restaurant with chandeliers. The customers considered new Lighting more focused, warm, bright, clear, concentrated, comfortable, pleasant, relaxed, satisfied, happy and excited than the previous lighting in both restaurants. This concludes that both new lightings were considered accepted, on the bases of customers' emotions.*

Keywords restaurant, lighting, customers, emotions, upscale restaurants

INTRODUCTION

Saturation in the styles and offers in dining give rise to demand more than food in dining out, restaurateurs become conscious to add in more also in interiors to retain people. The feasibility, comfort, pleasure, relaxation are current features wanted in a dining place not only for customers but for the survival of the specialty of the corporate.

The constructional style of a place and emotions of the customers must be measured primarily before designing for any space [1]. Lighting is also crucial, exclusively, in a selling environment where people come for their needs [2].

Researches [3,4, 5, 6] and John Flynn [6, 7, 8, 9, 10] tried to unveil the impact of interior lighting such as offices, hospitals, restaurants and also the experimentation by lighting manufacturing that how it impacts on human moods [11].

The waves coming from a place are because of light there [12] and that make to feel people about a place, situation or celebration [12]. Human feelings in space are mostly emotional attachments when dealing with a product [13], especially while dining.

The literature and investigations proved that it is important to plan lighting for restaurants to accommodate more customers and to retain them.

A number of researches conclude that comprehensive interior lighting is eminent in restaurants to satisfy people. But lighting is not given much importance in restaurants of Pakistan as an influencing aspect.

The researcher tried to become part of the lighting field by trying to track the passage of Flynn, the primary investigator of light in a natural setting [7, 8, 9, 10] and his fellow researchers [2, 10, 14, 15, 16].

Many researchers such as Ciani, Durak, Olgunturk, Yener, Guvenc, Gurcinar, Flynn, Hendrick, Spencer, Martyniuk, Kotler, Zaltman [7, 8, 9, 10, 11, 17, 18,] performed experiments with lighting but in the controlled environment. The study was new in the aspect of doing a survey in a real situation.

The moderate upscale restaurants were chosen owned and designed solely, having similar interior, finishes, furniture, menu, and lighting. The study only included moderate upscale restaurants and only artificial lighting.

The hypothesis formulated to support the study in which the relationship between the lighting and customers' emotions was considered so the following hypothesis was formulated.

H: If the lighting in the upscale restaurant is changed, there shall be a significant change in customers' emotions.

Objectives

1. To analyze the emotions of the customers in undesigned and designed the lighting of the selected restaurants.

There are following relates objectives to accomplish above mentioned objective

- i. To analyze the undesigned lighting of the selected restaurants.
- ii. To design the needed alternatives required in the lighting of the selected restaurants.
- iii. To device new designed lighting in the selected restaurants.

METHODOLOGY

The research is an experiment with the lighting of the restaurant as well as a survey of the customers' emotional responses. The researcher's discussions with the restaurateur convinced him of altering his restaurants' lighting and he also bore all the expenses. The restaurants were selected because of the lighting there which was not according to the standards set for restaurant lighting so there was margin for alteration.

Formation of the Questionnaire for Emotional Responses

A questionnaire was set to analyze lighting on customers' emotional responses in restaurants. The emotional features were taken from a tree structure designed by Shaver which is also the key feature for psychological reactions [19]. The scholars were conflicting to depend on a single list of emotions and a number of researchers developed their own features but a thorough consideration resulted that Shaver's list of emotions is comprehensive and totally portrays the emotions [19].

Table 1
Selected Emotions with their Meaning

Comfortable – physical facility
Relax- relieve, naturalness
Satisfied- gratified, happy, pleased
Happy- gladness, pleasure, cheerful
Exciting- passionate, inspiring, stimulating
Pleasant- pleasing, amusing, agreeable
Frightful- unlikable, disagreeable, fearsome
Depressing- discouraging, low-spirit, sorrowful
Unnerving-dispirit, worrying. Unbearable

Finally, the nine emotional responses (table 1) were chosen for the research which were also used by others: Flynn, Spencer, Martyniuk, Hendrick, Flynn, Subisak, Loe, Mansfield, & Rowlands [10, 14, 15, 20, 21] the nominated emotions and their meanings are given in table 4:

The Likert scale on five-point, from strongly disagree, disagree, neutral, agree and strongly agree was selected for the answers.

The demographical responses related to gender, age, marital status, education, income was added and analyzed on a multiple-choice single response format using nominal and ordinal scales.

Specifications about the Restaurants

Two moderate upscale restaurants, named Lahore View (R1) and Jasmine (R2) in Shalimar Tower Hotel were selected. The reason to select both of the restaurants was the same food, especially the same main dishes, side dishes, beverages, sweets, and desserts. The signature dish was minced meat fry, a specialty of these two restaurants [22].

Interior and Lighting of the Restaurants

Both of the restaurants' walls were having rose white emulsion paint and a decorative ceiling was used with different impressions and sections at a height of 9 feet. Chairs were upholstered and wooden tables were used in both of the restaurants; chairs were occasionally covered with the rich textured fabric. The lighting in both of the restaurants consisted only of energy savers (ES) of 25Watts, downwards from the ceiling. Critically, the previous lighting of the restaurants had a prominent and visible glare.

Implementation of the Designed Lighting

The lighting system that meets both the physical and psychological needs of the user [7, 23, 24] was required in the restaurants. The energy savers were altered with spotlights in the restaurants.

Light level and color temperature were also considered according to IESNA standards [25]. The financial restrictions the study was limited to consider the only light level and color temperature, other technical aspects would be studied with the collaboration of the electrical and lighting experts. The color temperature for both of the restaurants was up to 3000 Kelvin which has a warmer look to accentuate the wood and earthy tones, this category is considered in warm white light.

In Lahore view restaurant (R1), the contemporary light was decided to use such as rope light which is also used for a decorative purpose, accompanied by spotlights to use as a task light and to highlight the place. Bright yellow-colored rope lights were used, the style named, Contemporary Lighting (CL2) (figure 1).



Figure 1 Contemporary Lighting (CL2) in Lahore View Restaurant (R1)

In Jasmine restaurant (R2), it was decided to use chandeliers hanging from the ceiling, the reason to choose the chandeliers was to illuminate the nearest area and was not used for general lighting even it was for creating an ambiance. The chandeliers were big and eight in number which were used there, each of them was having fifteen bulbs of low luminance, the style named, Traditional Lighting (TL2) (figure 2).



Figure 2 Traditional lighting (TL2) in the Jasmine Restaurant (R2)

DATA COLLECTION & ANALYSIS

The data collection was assisted by the researcher and the restaurants' managerial and other nominated staff has also helped. A preliminary test was performed before conducting the survey, the data outliers were calculated from the collected data. The normality test was also put on to check the authenticity of the data, before calculating further results. The questionnaire was distributed to 580 customers in both restaurants, the 545 forms were filled completely. In Lahore View Restaurant (R1), a total of 315 customers participated from which 138 customers answered for the Previous lighting (L1) and 177 customers for Contemporary Lighting (CL2). In Jasmine Restaurant (R2), a total of 230 customers participated from which 120 customers answered for the Previous lighting (L1) and 110 for Traditional Lighting (TL2).

Analysis of Customers’ Emotions

Customers’ emotional responses were analyzed on SPSS 20 to find out mean scores and represented in tables.

The demographical characteristics were also collected and used for concluding the results. The ratio of male and female customers was approximately the same in the restaurants, the age range was between 44 to 55 years, most of the customers were married and the income was between the 40, 000 to 60, 000 rupees per month. The educational level shows the qualification under graduation or graduation.

Table 2
Customers’ Emotions in Previous (L1) & New Contemporary Lighting (CL2) in Lahore View Restaurant (R1)

Emotional Responses	Mean L1	Mean CL2
Comfortable	1.91	3.72
Frightful	2.33	1.57
Pleasant	2.06	3.81
Relax	2.03	3.80
Satisfied	2.12	3.67
Depressing	1.38	2.29
Happy	2.65	3.71
Exciting	1.72	4.18
Unnerving	2.25	1.33

The table 2 shows, in Lahore View Restaurant, that there is an increase in mean a score of the following aspects of emotions by customers in CL2, such as comfortable from 1.91 to 3.72, pleasant from 2.06 to 3.81, relax from 2.03 to 3.80, satisfied from 2.12 to 3.67, happy from 2.65 to 3.71, and exciting from 1.72 to 4.18.

There is a decrease in the mean scale score of the following aspects of the emotions of customers such as frightful from 2.33 to 1.57, depressing from 1.38 to 2.29 and unnerving 2.25 to 1.33. This concludes that the customers liked the new lighting, named Contemporary Lighting (CL2) than the previous lighting in Lahore View Restaurant.

Table 3
Customers’ Emotions in Previous (L1) and New Traditional Lighting (TL2) in Jasmine Restaurant (R2)

Emotional Responses	Mean in L1	Mean in TL2
Comfortable	2.48	3.72
Frightful	1.98	1.56
Pleasant	2.51	3.81
Relax	2.13	3.45
Satisfied	2.11	3.29
Depressing	2.21	1.64
Happy	1.98	3.70
Exciting	2.13	3.98
Unnerving	2.23	1.64

The table 3 shows, in Jasmine Restaurant, that there is an increase in mean scale score of the following aspects of emotions such as comfortable from 2.48 to 3.72, pleasant from 2.51 to 3.81, relax from 2.13 to 3.45, satisfied from 2.11 to 3.29, happy from 1.98 to 3.70 and exciting from 2.13 to 3.98.

There is a decrease in mean scale score of following aspects of emotions such as frightful from 1.98 to 1.56, depressing from 2.21 to 1.64 and unnerving 2.23 to 1.64 in TL2.

This concludes that the customers liked the new lighting plan, named Traditional Lighting (TL2) than the previous lighting in Jasmine Restaurant.

Finally, both new lightings were considered better, on the bases of customers’ emotional responses, than the previous lighting so the hypothesis is accepted.

SUMMARY AND CONCLUSION

The study not only provided with the data of restaurants’ new lighting but the detail of previous lighting and its comparison with new lighting was also described.

The customers considered new Lighting more focused, warm, bright, clear, concentrated, comfortable, pleasant, relaxed, satisfied, happy and excited than the previous lighting in both restaurants, according to their emotional responses [26].

The study recommends planning and designing the restaurants’ lighting as a special feature to attract customers because of the hidden power of illumination.

Future Projections

The research can be extended to the more technical aspects of the lighting according to the increase in budget level. The functionality of the designed lighting can also be checked again. The designed lighting can be used again in other types of restaurants such as in fine dining halls, cafes, bistros, and themed restaurants.

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