

PERSUADE OF LIGHT ON PATRON TURNOVER RATE (PTOR) AND EXPENDITURES IN THE RESTAURNATS

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ABSTRACT: *The restaurants are designed for the patrons who give money in return of the services provided by that place such as food, drinks and environment. The environment is a vast field in which light is a very essential element and if it is planned properly it raises the patron turnover rate which ultimately increases in profits. But as the patrons increase the expenditures of the place may also goes up. The first aspect can be the electricity consumption and its expenditure which directly relates to light usage. The increase in number of patrons coming to the restaurant also effect on expenses of kitchen grocery because more people would need more food. The other things related to kitchen and food preparation are gas and water whose consumption would also be effected. In this experimental study, the new planned lighting is implemented in two upscale restaurants, named Lahore View Restaurant (R1) and Jasmine Restaurant (R2) instead of previous lighting. The lighting plan named, Contemporary Lighting (CL), consisted on spot lights and rope lights is implemented in R1 and the second plan, named Traditional Lighting (TL), consisted on spot lights and chandeliers is implemented in Jasmine Restaurant (R2). The data of patron numbers is collected on daily basis and calculated by applying a formula, the detail of expenditures on kitchen grocery, gas, water and electricity is taken from restaurants' administration. The SPSS 20 is used to find out mean, standard deviation and paired sample t-test for the conclusion. The results conclude that variation in light increases the number of patrons which also raises the expenditures in both of the restaurants.*

KEY WORDS: Persuade of light, Patron Turnover Rate (PTOR), Expenditures, Restaurants

INTRODUCTION

Researchers have stressed the need to develop and plan the environment of retail interiors [1,2,3,4,5] according to the standards and users' requirements [6,7]. The light is also very much important in the restaurants and it has a vital impact on patrons [8,9,10,11,12,13] to decide to come again [14], or on their turnover rate [21] and that attitude ultimately increase in profit [15,16,18,19,20,21]. The available researches guided about the way the luminance environment helpful in establishing the ambience in the restaurant environment. The interior can be enhanced by the help of lighting e.g. by using different light intensities, dimmers or only by changing the lighting fixtures. The availability of the designs and features of the lighting fixtures also raise the need to investigate different lighting situations in the restaurants. But lighting is considered to a limited context as a factor to impact on patrons especially in the restaurants of Pakistan. Although there is not a definite standard to maintain the visitors' [12] but tried to raise the patron turnover by implementing different lighting combinations, also tried to know about differences in expenditures.

The patrons' willingness to dine out, also raise the need to plan research on a combination of light, restaurant and patrons. Then it is very much clear that when the users are increased the demand for things ultimately increase. Such a situation give rise to the need of the study and to turn towards the expenditures which related to the patrons needs such as expenses of kitchen grocery, gas, water and electricity. These things are directly affecting the food such as its preparation and consumption.

MATERIAL AND METHOD

This experimental study is about light, PTOR and expenditures in the restaurants. There are numerous types of expenditures in the restaurants but for the study expenditures only on electricity, kitchen grocery, gas and water are

considered. The PTOR and expenditures in previously used lighting (L1) were compared with the PTOR and expenditures in the new planned lighting (L2) in two selected upscale restaurants, named Lahore View restaurant (R1) and Jasmine restaurant (R2), situated in Shalimar Tower Hotel.

The reason to select the restaurants was that the restaurateur willingness to change the light of the restaurants and he has also provided financial assistance for the whole process. Both of the restaurants provided with the identical continental and traditional food with a number of main dishes, side dishes, beverages, sweet dishes and desserts. The signature dish, specialty of any moderate upscale restaurant [22] was minced meat fry with freshly toasted ingredients (khara masala kema fry), creamy chicken karahi, mix daal masala, milky naan and crunch ice cream. Both of the restaurants were also selected because of their similar interiors and lighting.

The lighting in both of the restaurants was almost identical; the energy savers (ES) of 25Watts were used, downwards in the ceiling of the restaurants.

The previous lighting of the restaurants was analyzed for variation because a prominent and visible glare and bluntness was present in the light thrown by energy savers. There was also not any special lighting fixture which could enhance the interior or to create an ambience. So an effort was made to implement changed lighting in both of the restaurants. The following variations were made in the lighting of the restaurants. The new lighting plan in Lahore View (R1) consisted on rope lights and spot lights (Figure 1) named "Contemporary Lighting" (CL) and previously installed energy savers and lamps were removed.

Jasmine restaurant (R2) was illuminated with chandeliers and spot lights (Figure 2). Total of eight chandeliers were used, each having fifteen bulbs, the planed lighting was named "Traditional Lighting" (TL).



Figure 1 New Planned Contemporary Lighting (CL) in Lahore View Restaurant (R1)



Figure 2 New Planned Traditional Lighting (TL) in Jasmine Restaurant (R2)

The data for the number of patrons coming to the restaurants, was collected in the month of August 2013 for previous lighting (L1) then in the starting of September 2013 new planned lighting was implemented in both of the restaurants and after 22 days of new lighting the survey was again conducted in October 2013 in new planned (L2) lighting (CL and TL) in Lahore View restaurant (R1) and Jasmine Restaurant (R2). The record of number of patrons coming to the restaurants, from 7pm to 10 pm, was maintained in an Excel sheet. Then the data was calculated by the use of a formula to calculate the rate of patrons' turn over in the restaurants. The formula deals with the seating capacity in each restaurant and the patrons coming to the restaurant. According to the formula, total numbers of patrons seated (dined) in the restaurant were divided by the total number of seats available in the restaurant, the formula is given below in figure 3.

$$PTOR = \frac{\text{Total Number of Patrons seated}}{\text{Total Number of Seats in Restaurant}}$$

Figure 3 Formula to Find out PTOR

The evidences and detail about the expenditures were collected from the restaurants' administrative and operational work force. The expenditure sheets were made to show the expenditures in the month of August 2013 for previous lighting (L1) and in October 2013 for new planned lighting (L2).

RESULTS AND DISCUSSIONS

The results are concluded in two phases first the relationship of lighting with PTOR and then relationship of lighting PTOR and expenditures was analyzed. The Statistical Package for Social Sciences (SPSS 20) was used to find out

mean, standard deviation and paired sample t-test. The results were presented in the tabular and graphical form.

Table 1 Comparison of Variations in Lighting Regarding PTOR

Variation in Lighting	in	PTOR		t	df	p
		Mean	SD			
Before (L1)	Variation	0.27	0.22	6.9	37	<.001
After (L2)	Variation	0.92	0.55			

The table 1 shows comparison of before variation (L1) and after variation (L2) in lighting regarding PTOR in both of the restaurants. Paired Sample t-test was conducted to find the difference between before variation and after variation in lighting regarding PTOR. Results show that there is significant difference (P<.001) before variation and after variation in lighting regarding PTOR in restaurants. Mean number of patrons after variation (Mean=0.92, SD=0.55) is much more than mean number of patrons before variation in lighting (Mean=0.27, SD=0.22). This concludes that PTOR increased when new lighting was implemented in both of the restaurants. The results conclude that there is a significant positive relationship between new planned lighting (L2) and PTOR.

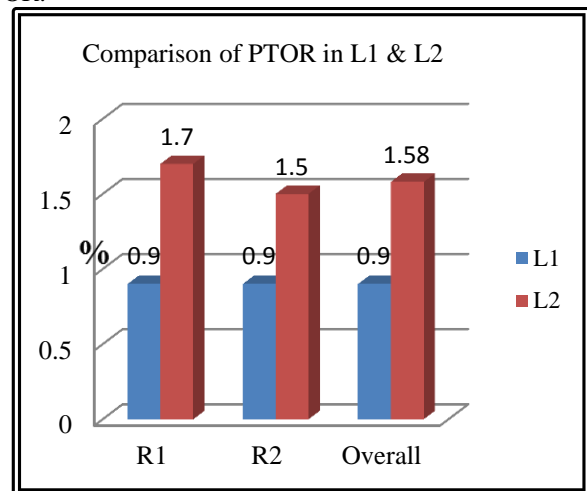


Figure 4 Separate and Overall Percentage of PTOR in both of the Restaurants (R1 & R2) after and before Variation in Lighting

The above figure 4 illustrates that both Contemporary and Traditional lighting plans ((CL & TL) attracted the patrons more than previous lighting (L1) in R1 (Lahore View Restaurant) and R2 (Jasmine Restaurant). This also concludes that according to percentage, before variation in lighting PTOR is 0.9 and after variation PTOR is 1.58, overall there is an increase in PTOR after variations in lighting,. The results conclude that If PTOR increases because of lighting then the restaurants' expenditures would also in specific lighting.

Table 2 Expenditures in Restaurants and PTOR during L1 and L2

Restaurant	Lighting Plan	Grocery (Rs.)	Electricity (Rs.)	Gas (Rs.)	Water (Rs.)	Total Expenses (Rs.)	PTOR
R1	L1	280,200	118,089	10,800	12,000	421,089	0.9
	CL	348,700	133,210	14,667	11,000	507,577	1.7
R2	L1	268,015	110,300	8,900	7,000	394,215	0.9
	TL	367,040	126,900	14,200	15,000	523,140	1.5

According to table 2 the expenditures increased on grocery, electricity, gas and water when lighting changed as well as Patron Turnover Rate (PTOR) also increased.

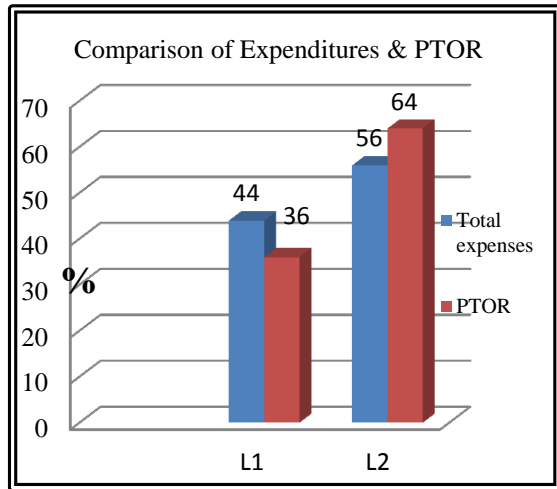


Figure 5 Comparison of Expenditures & PTOR during Previous Lighting (L1) & New Planned Lighting (L2) in both Lahore View & Jasmine Restaurant

The above figure 5 shows that both overall expenditures as well as PTOR raised in the new planned lighting (L2 = CL & TL) than previous lighting (L1). The total expenditures in L1 were 44% which rose to 56% in L2 and PTOR in L1 was 36% which rose to 64% in L2. This concludes that there is significantly positive relationship between PTOR and expenditures in the restaurants.

CONCLUSION

The study concludes that after variation in lighting the patron turnover rate (PTOR) also rose, in Contemporary lighting (CL) in Lahore View restaurant (R1) as well as in Traditional Lighting (TL) in Jasmine Restaurant (R2). The comparison of expenditures with PTOR concluded that as PTOR increased, the expenditures on kitchen grocery, electricity, gas and water were also increased. The study would contribute to the work of interior designers and restaurateurs especially in Pakistan to plan lighting to increase in PTOR and also to have an estimate that when patron increases the expenditures would also increase.

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