

## IMPACT OF LIGHTING AS A FACTOR OF VISUAL MERCHANDISING IN RETAILING

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**Abstract:**Lighting should fulfill aesthetic, emotional and functional requirements in interior spaces, especially in commercial building. Lighting design in commercial establishments should be oriented towards product sales and satisfying the consumers taking into consideration the health, well-being and purchasing behaviour of consumers. A major challenge in recent times in the illumination field has been to define how light affects health, not only in aspects related to purchasing behaviour but also related to shopping attitude and mood. The objectives of the study mainly to explore the influence of lighting in retail cloth stores on consumer purchasing behaviour. For the study, ten retail cloth stores were selected in Ernakulam, Kerala. The study was conducted on 100 consumers who visit these retail cloth

stores. The data was collected by using an interview schedule and the results showed that the lighting condition in the retail cloth stores was not a factor that can influence the consumer shopping behavior. Planned purchase, impulse buying, time and money spent towards shopping under lighting was found to be moderate.

**Keywords:** *Lighting factors, consumers, planned purchase, impulse buying.*

### Introduction

A consumer is the one who can make the decision whether or not to purchase an item at the store, and someone who can be influenced by shop image and advertisements. “Consumer Behaviour is the study of individuals, groups or organizations and the processes they use to select, secure, use, and dispose of products, services,

experiences or ideas to satisfy needs and the impacts that these processes have on the consumer and society (Hawkins et al., 1990).

Consumer buying behaviour involves a long process where the buyer has to identify the product, study well its features, the pros and the cons and lastly deciding on whether to purchase it or not (Schiffman and Kanuk, 2000).

A consumers' attitude was considered as an important concept for the business practices since it is clearly shown in behavioural studies that it played an important role in consumers' buying behaviour (Peter and Bowler, 2001, Hopes, 1995 and Dubois, 2000).

Consumer behaviour research is the scientific study of the processes consumers use to select, secure, use and dispose of products and services that satisfy their needs. Knowledge of consumer behaviour directly affects marketing strategy (Anderson et al, 2005).

This is because of the marketing concept, i.e., the idea that firms exist to satisfy customer needs (Winer, 2000). Firms can satisfy those needs only to the extent that

they understand their customers. For this reason, marketing strategies must incorporate knowledge of consumer behaviour into every facet of a strategic marketing plan (Solomon, 2002).

A study was conducted by Tendai and Crispen (2009) to investigate the influence of in-store shopping environment on impulsive buying among consumers. A 5% test of significance showed that in-store factors of an economic nature such as price and coupons were more likely to influence impulsive buying than those with an atmospheric engagement effect like background music and scent.

Park and Farr (2007) indicated that consumers were aroused and pleased by certain lighting effects and that cultural differences influenced perceptions as well as the behavioural intentions of "approach-avoid" in a retail environment.

## **2. Methodology**

### **2.1 Area of the sample**

Exploratory research design was selected for this study. From each store, the list of ten consumers was selected immediately after a purchase and solicited responses regarding

their demographic characteristics, planned purchase, impulse buying, time spent and money spent. The researcher conducted a study with a sample size of 100 consumers of different age groups randomly selected in retail cloth stores of Ernakulam for investigating the effect of lighting parameters on consumer's shopping behavior in retail cloth stores.

## 2.2 Variables and their measurement

The independent variables of the study were quantity of lighting parameters in retail cloth stores. The dependent variables selected for the study were planned purchase, impulse buying, time and money spent. In the present investigation the quantity of illumination in retail cloth stores was taken as a base for understanding the differences among retail cloth store. According to United States environmental protection agency (1997), the quantitative parameters of illumination are luminous flux (lm), illuminance (lux), luminance (cd/m<sup>2</sup>). Hence these lighting parameters were taken as independent variables. These parameters were measured on floor, ceiling, backside of the consumer seating (wall 1), left hand side of the consumer seating (wall 2), wall facing

the consumer seating (wall 3) and right hand side of the consumer seating (wall 4).

## 2.3 Data Analysis

Frequencies and percentages were calculated for the profile of the respondents on the variables. The four outcome groups based on the similarities of lighting conditions were treated as independent variables for data analysis. The data was subjected ANOVA, to find out the association between independent and dependent variables of the study. The data collected on consumer's planned purchase, impulse buying, time spent and money spent was tabulated, presented and discussed below. Hypothesis was formulated to test the relationship between independent and dependent variables.

## 3. Results and Discussion

The results of the data are discussed below:  
3.1 Profile of the Consumers Age of the consumers visiting the retail cloth stores ranged from 20 to 69 years. Only seven per cent of the consumers fell in the age group of above 46. Comparatively young consumers were 21 per cent and nearly three-fourth of consumers were middle aged. it was revealed that the consumers in the age

group of 24 to 45 were more actively involved in shopping. Most of the female consumers were more actively involved in shopping at retail cloth stores than the male consumers. Cloth shopping was found to be a women dominated area.

From the education and occupation, it was observed that, highly educated and employed consumers were more involved in shopping in retail cloth stores. Young consumers before starting their own personal income were found highly involved in shopping.

### **3.2 Lighting impact on consumers planned purchase in shopping**

Impact of lighting in retail cloth stores on the planned purchase of consumers was explored in the study. The respondents were asked to indicate the frequency level of influence of lighting in retail cloth store on their planned purchase in terms of always, sometimes and never.

The possible score range was between 4 and 12. The score of the respondents in the study ranged between 6 and 12. The mean score was 9.23 with a standard deviation of 1.59. More than half of the sample (59%) scored between 8 and 10. Twenty seven per cent of

the sample had more influence of lighting on their planned purchase. The remaining 14 per cent of the sample scored below 7

More than one fourth of the consumers were highly influenced by lighting in retail cloth stores and made unplanned purchased. In general the impact of artificial lighting in the retail cloth stores on the planned purchase of consumers was found to be moderate

**3.2.1 ANOVA among groups in planned purchase with regard to lighting effect on consumers** According to planned purchase, Analysis of variance was performed among groups of retail cloth stores. The 'F' value was found to be non significant. There exists no relationship between lighting condition in retail cloth stores and planned purchase of consumers. Lighting conditions in retail cloth stores were not exerting any impact on planned purchase.

### **3.3 Lighting impact on consumer's impulse buying in shopping**

Impact of lighting in retail cloth stores on the impulse buying of consumers was explored in the present study. The respondents were asked to indicate the level of influence of lighting in retail cloth stores on their impulse buying in terms of always,

sometimes and never. Scores 3, 2 and 1 were allotted for always, sometimes and never respectively. The scores were interpreted such that the higher the score higher the impact of lighting on the impulse buying of consumers.

The possible score range was between 5 and 15. The score of the respondents in the study ranged between 5 and 14. The mean score was 10.55 with a standard deviation of 1.88. Nearly three-fourth of the sample scored medium. Fifteen per cent of the sample scored above 12

The impact of artificial lighting in the retail cloth stores on the impulse buying of consumers was found to be moderate. Only 15 per cent of the consumers were highly influenced by lighting in retail cloth stores and made impulse buying. In case of 73 per cent of the sample lighting in retail cloth stores tempted them to go for impulse buying sometimes (Fig. 2). According to the study it can be concluded that lighting in retail cloth stores do tempt consumers to go for impulse buying.

3.3.1 ANOVA among groups in impulse buying with regard to lighting effect on consumers According to impulse buying,

Analysis of variance was performed among groups of retail cloth stores. The 'F' value was found to be significant at 0.01 level

### **3.4 Lighting impact on consumer's time spent in shopping**

The respondents were asked to indicate the level of influence of lighting in retail cloth stores on their time spent in shopping. The impact of artificial lighting in the retail cloth stores on the time spent by consumers in shopping was found to be moderate. The lighting condition in the shop was not a factor that can influence the time spent in shopping by consumers to a great extent. However the lighting condition showed moderate level of influence on consumer time spent in shopping.

### **3.5 Lighting impact on consumer's money spent in shopping**

Impact of lighting in retail cloth stores on money spent by consumers in shopping was studied. The respondents were asked to indicate the level of influence of lighting in retail cloth stores on their money spent in shopping, The mean score was 7.64 with a standard deviation of 1.81. Sometimes

Ninety nine Per cent of the sample spent their money highly.

#### 4. Conclusion

An attempt was made to study the lighting impact in retail cloth stores on consumer shopping behaviour. The study revealed that the consumers in the age group of 24 to 45 were more actively involved in shopping. Highly educated and Young and employed consumers were more involved in shopping in retail cloth stores. It was concluded that the lighting condition in the shop was not a factor that can influence the consumer's planned purchase, impulse buying, time and money spent towards shopping to a great extent; it showed moderate level of influence on consumers' planned purchase, impulse buying, time and money spent while shopping.

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