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An Intervention into Visual Merchandising Tools through Exploratory Factor Analysis (EFA)

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Abstract: ***This paper makes an attempt to develop the elements of Visual Merchandising that make the impact on the retail shoppers. A total of 175 samples were taken from different demographic status and data has been collected through administering online method. The research questions were designed to classify which elements of Visual Merchandising are the most important for consumers while shopping for apparels. Factor Analysis was employed by using Statistical Packages for Social Sciences (SPSS) software to identify the elements of Visual Merchandising influencing shoppers buying behaviour. Findings may help retail marketers to direct effective Visual Merchandising strategies to increase the foot falls.***

Keywords: Apparel, Retail shoppers, Visual Merchandising, EFA

1. Introduction

Visual Merchandising has been around since the dawn of civilization, when humans started selling merchandise to each other. When a retailer or suppliers arrange their goods to be more attractive to a customer, or when a farmer puts the best of his/her harvest on the top of the basket for the consumers to see and touch, it is visual merchandising.

In today's competitive world customer is the king and Retailing has become an essential part of our everyday lives. It offers an easy access to a variety of products, freedom to choice, and high level of customer service. Retailing includes all activities involved in selling goods or services to final consumers for personal use (Phillip Kotler and Gary Armstong, 2012). So, retailers are the final business entities in a distribution channel who acts as a bridge between a manufacturer and customers. Manufacturers make products and sell them to wholesalers. Wholesalers sell these products to the retailers, who in turn, sell them to the end consumers. Due to the heavy competition retailers want to attract at retain their customers by using different strategies. Visual Merchandising is one of the technique which is now became an integral part of each retail store. By using different combination of visual merchandising elements a retailer is trying to attract a customer to the store. This technique creates arousal by affecting the emotion of the customer to visit a store and make purchases (Rasa Gudonaviciene, Sonata Alijiosiene, 2015). Many surveys show that 27-62 percent of customers make instant purchase at the shopping centres (Mattila & Wirtz, 2008). Pleasant and better store environment encouraged purchaser to stay long time in the store and to make impulse purchase. Store environment and layout create positive effects on consumer Donovan, Rossiter, Marcoolyn and Nesdale (1994). Now a days Visual Merchandising is an inevitable part of any retail business. Mostly in apparel store this technique became an important part to create more impulse buying by using this technique. Now many professionals are engaged in the retail industry as merchandise managers who create an sales environment by using colours, lighting, signage etc to display the product differently. According to Kerfoot, Davies &Ward (2003) and Pajuodis (2005) merchandising in in-store retail trade is one of the key marketing tools that affects consumer behaviour and stimulate impulsive buying. A typical saying is there seeing is believing, this exactly became the strategy which is followed by every retailer to showcase their product. But only showcasing the product is not the focus of a retailer but how a customer will attract towards the same and convince to take a purchase decision is the integral part of the strategy. Now the tool, Visual Merchandising create arousal among the customer through its different factors.

2. Literature Review

Visual merchandising is a tool which create an image about the product and the store in the customer mind. This image may be positive or negative but looking at the physical appearances and product arrangements a customer can create a view about the same. So, visual display is an important aspect through which retailers can present its product which he wants to sell to the customer effectively. This technique is being adopted in all categories of stores it can use in fashion retail stores, footwear stores, furniture, lifestyle etc. In furniture store window display, store front, store layout, shelf display and creative style and trend coordination have impact on the purchase behavior of a consumer (N. P Mehta, P. K Chugan, 2014). But taking apparel retail industry it is found that window display, in-store form or mannequin display, floor merchandising and promotional signage are the main dimension of visual merchandising. But most importantly window display and in-store design make the highest impact on impulse buying in clothing and footwear stores (R. Gudonaviciene, S. Alijiosiene, 2015).

Shoppers mostly buy products, which are not pre-planned, that attract their eyes (Tullman & Clark, 2004). Apparel is one product category where lot of creative visual merchandising can be done as it has varied tools that can be used for display. Dimensions other than those explained

earlier in this chapter, like mannequin display (Clark, 2007), props (Dua and Karolia, 2008), colour combination (Gajanayake et al, 2011), and store atmospherics (Milliman, 1982) are also important dimensions. Some research suggested that store characteristics including window display, promotional signage and scent play crucial role in stimulating the impulse buying behavior (Begzod Nishnov, Umidjon Ahunjonov, 2016). Different components in store environment which boost up impulsive buying behavior include product display, store lighting, crew behavior, technology, store location, music, layout and availability of goods (Geetha Mohan *et al, 2012,* Umair Akram *et al, 2016,* Anuja, Mahesh Kumar, *2017).* Visual merchandising elements do have a significant impact on impulse purchase in retail stores, with store layout having the highest impact, followed by promotional signage, and window display, while in-store product display did not have a significant impact on impulse purchase (C. Thirumal Azhagan *et al,* 2020, T Narayan Reddy, *et al,* 2019). In recent times there is a high competition between organized retailers and unorganized retailers. To overcome this competition few organized retailers uses visual merchandising tools to increase their sales. Product display, store ambiances, floor merchandising elements which invokes consumer in purchase decision (Syed Md. Faisal Ali Khan, Devesh Kumar, 2016). Few research reveals a fact that visual merchandising components do significantly affect motivation to buy clothing in retail stores, but an interesting fact comes out that for men, only store layout had a significant positive impact on impulse purchase on the other hand, for women, store layout, mannequin display and promotional signage had significant positive impact on impulse purchase (T Narayan Reddy, *et al,* 2019).

3. Research Methodology

The main objective of this study to identify which factors of Visual Merchandising are having impact on the buying behavior of the urban consumers. With special reference to fashion retail the researcher is trying to reveal what visual merchandising elements have highest impact on consumers buying beahaviour. The study was confined to the organized retail stores in the urban cities of Odisha. Convenience sampling methods was used to select the sample. A sample of 175 customers is selected for the purpose of the study. The questionnaire was filled in by 210 respondents. Survey instrument: the method used for this research was based on a survey including close ended question. The questionnaire was developed and adopted from the literature review. A five-score Likert-type scale was used to form the main questions of the questionnaire. The collected data was analysed by using factor analysis with the support of the Statistical Packages for Social Sciences (SPSS).

4. Result and Discussion

The data was tested using Cronbach alpha. The results as seen from the table indicated that he data were reliable as the reliability score is 0.963

Table 1: Reliability Statistics

Cronbach's Alpha	N of Items
.963	43

Source: Survey data

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.844
Bartlett's Test of Sphericity	Approx. Chi-Square	3154.589
	df	903
	Sig.	.000

Source: Survey Data

The KMO value ranges between 0 and 1. A value of 0 indicates that factor analysis inappropriate for the data and a value of 1 indicates that factor analysis will yield distinct and reliable results. A value of 0.5 or above means that the sample is adequate and factor analysis can be conducted. But if the value is below 0.5 then more data has to be collected (Field, 2000). As seen from Table 2, the KMO value for the data is 0.844 which is acceptable.

For factor analysis to work there has to be some kind of relationship between the variables and this is tested using the Bartlett‟s Test of sphericity. This test indicates whether factor analysis is appropriate for a given set of data. Factor analysis can be considered appropriate for a data only if the significance value is less than 0.05 (Field, 2000). As the significance value for the present data as shown in Table 1 is 0.000, factor analysis is appropriate for this data. As the present data satisfies both KMO test and Bartlett‟s test, factor analysis is appropriate.

Table 3: Communalities

Statements	Initial	Extraction
Product arrangement factor	1.000	.751
Placing of the product factor	1.000	.752
Excitement in trying new product	1.000	.708
Influence of mannequin display	1.000	.733
Influence of promotional signage	1.000	.745
I carefully plan most of my purchases	1.000	.552
I feel a sense of excitement when I make an impulse purchase	1.000	.632
After I make an impulse purchase I feel regretted	1.000	.684
A good offers propels me to buy	1.000	.734
When I see a good deal I am tempted to buy	1.000	.809
I feel excited when I do sudden unplanned purchase	1.000	.767
I buy product never planned due to in store music	1.000	.649
Eye catchy window display prompts me to enter a store	1.000	.791
I feel compelled to enter the store when I see an interesting window display	1.000	.786
I tend to buy clothing which is on the window display	1.000	.735

A store window display helps me to know the latest fashion trends	1.000	.845
I actually look at the window displays to see what brands the store carries	1.000	.769
I use window displays to get general impression of the store	1.000	.776
Before entering the store I usually checkout its window display	1.000	.682
Temperature and fragrance	1.000	.734
When I walk along to the aisle I tend to look through the clothing close to me	1.000	.708
I tend to try clothing that catches my eye when I pass by	1.000	.772
When I see clothing that I like on mannequin display I tend to buy	1.000	.774
I find mannequin displays useful for how the cloths look on me	1.000	.836
I get an idea of what I buy after looking through in store display	1.000	.700
When I see clothing featuring a new style on display I tend t buy it	1.000	.802
When I see clothing that I like on In-store form/Mannequin display, I tend to buy it	1.000	.866
I tend to rely on store displays when I make a decision to purchase clothing	1.000	.854
reduced price, sales promotion	1.000	.784
Sales clearances signs entice me to look through the clothing	1.000	.807
When I see a special promotional sign I go to look at the clothing	1.000	.794
I am more likely to make an unintended purchase if the clothing has a sale sign	1.000	.700
I am impressed towards the store arrangements made at the entrance	1.000	.799
Product Placement according to diff colour combinations catches my attention	1.000	.782
Product placement according to diff colr combination allow me to find the product	1.000	.782
The use of bright lighting attracts me towards the items which are clearly seen	1.000	.740
Use of bright lighting swings my mood towards buying	1.000	.728
Cleanliness would make positive impression about the store	1.000	.845
The use of music tends me to spend more time in the store make choices free	1.000	.688
Furniture and fixtures in the store appeals me to buy	1.000	.715
A proper store layout makes a comfortable environment to me	1.000	.738
Theme based decorations in the store arouses my interest towards buying	1.000	.720
Vedio display helps me to get info about new arrivals and promotions	1.000	.716
Extraction Method: Principal Component Analysis.		

Source: Survey Data

Table 3 shows the communalities before and after extraction. It shows the extent to which each variable accounts for the variation in the factor. Principal component analysis works on the assumption that all variance is common. So before extraction all communalities are 1. Column two, i. e., the extraction column indicates the percent of common variance associated with each question. Hence from Table 3, it can be stated that 86.6 percent of variance associated with the variable" When I see clothing that I like on In-store form/Mannequin display, I tend to buy it" is common, 85.4 percent of variance associated with the variable" I tend to rely on store displays when I make a decision to purchase clothing" is common and so on. The table clearly shows the percent of common variance associated with each variable. The highest percent of common variance is in the case of "When I see clothing that I like on In-store form/Mannequin display, I tend to buy it" and lowest in the case of "I carefully plan most of my purchases".

Table 4: Rotated Component Matrixa (Orthogonal rotation)

	Component							
	1	2	3	4	5	6	7	8
Product arrangement					0.72			
Placing of the product					0.758			
Excitement in trying new product					0.645			
Influence of mannequin display					0.731			
Influence of promotional signage					0.653			
I carefully plan most of my purchases							0.558	
I feel a sense of excitement when I make an impulse purchase							0.532	
A good offers propels me to buy							0.585	
When I see a good deal I am tempted to buy							0.534	
I feel excited when I do sudden unplanned purchase							0.564	
I buy product never planned due to in store music								0.552
Eye catchy window display prompts me to enter a store			0.65					
I feel compelled to enter the store when I see aninteresting window display			0.674					
I tend to buy clothing which is on the window			0.658					
A store window display helps me to know the latest fashion trends			0.778					
I actually look at the window displays to see what brands the store carries			0.72					
I use window displays to get general impression of the store			0.773					
Before entering the store I usually checkout its window display			0.626					
I spend more with excellent time Atmospherics condition (Temperature, fragrance)								0.641
When I walk along to the aisles I tend to look through the clothing close to me						0.565		
I tend to try clothing that catches my eye when I pass by						0.712		

When I see clothing that I like on mannequin display I tend to buy						0.522		
I find mannequin displays useful for how the cloths look on me						0.662		
I get an idea of what I buy after looking through in store display								
When I see clothing featuring a new style on display I tend to buy it				0.676				
When I see clothing that I like on In-store form, I tend to buy it				0.788				
I tend to rely on store displays when I make a decision to purchase clothing				0.781				
If I see an interesting promotional offer (reduced price, sales promotion etc.) on in-store I tend to buy		0.71						
Sales / clearance signs entice me to look through the clothing		0.776						
When I see a special promotional sign, I go to look at that clothing		0.742						
I am more likely to make an unintended purchase if the clothing has a sale sign		0.759						
I am impressed towards the store arrangements made at the entrance.	0.598							
Product placement according to different color combinations create my immediate attention	0.721							
Product placement according to different color combinations allow me to find items more easily	0.71							
The use of bright lighting attracts me towards the items which are clearly seen.	0.612	0.456						
Use of bright lighting swings my mood towards buying combinations create my immediate attention	0.624							
Cleanliness of the store would make positive impression about the store	0.664	0.496						
The use of music in the store tends me to spend more time and make choices more freely	0.74							
Furniture/Fixtures of the store appeals me	0.663							
A proper store layout makes a comfortable environment to me.	0.637							
Theme based decorations inside the store arouses my interest my buying	0.663							
Video displayed in digital screens & walls helps you to get information about new arrivals & promotions	0.693							
Extraction Method: Principal Component Analysis.								
Rotation Method: Varimax with Kaiser Normalization.								
a. Rotation converged in 24 iterations.								

Source: Survey Data

Table 4 explain the rotated component matrix which is the matrix of factor loadings for each factor into each variable.0.5 was used as the cut-off for factor loading. The factors converged at 24 iterations. The variables are listed in the descending order of size of their factor. As evident from Table 4, factor rotation resulted in the extraction of 8 factors as important components of visual merchandising which affects the customer buying decision. Factor 1 loaded across eleven variables, i. e., "I am impressed towards the store arrangements made at the entrance", "Product placement according to different color combinations create my immediate attention", "Product placement according to different color combinations allow me to find items more easily", "The use of bright lighting attracts me towards the items which are clearly seen."

"Cleanliness of the store would make positive impression about the store" "The use of music in the store tends me to spend more time and make choices more freely", "The use of music in the store tends me to spend more time and make choices more freely", "Furniture/Fixtures of the store appeals me, "A proper store layout makes a comfortable environment to me", "Theme based decorations inside the store arouses my interest my buying" and "Video displayed in digital screens & walls helps you to get information about new arrivals & promotions" which will jointly be termed as "Exterior and Interior Design". The Second factor loaded across four variables, i.e., "If I see an interesting promotional offer (red'uced price, sales promotion etc.) on in-store I tend to buy", "Sales / clearance signs entice me to look through the clothing, "When I see a special promotional sign, I go to look at that clothing", and "I am more likely to make an unintended purchase if the clothing has a sale sign" which can be referred to as "Promotional Signage".

The third factor loaded across seven variables, i. e., "Eye catchy window display prompts me to enter a store", "I feel compelled to enter the store when I see an interesting window display", "I tend to buy clothing which is on the window display", "A store window display helps me to know the latest fashion trends", "I actually look at the window displays to see what brands the store carries" I use window displays to get general impression of the store and "Before entering the store I usually checkout its window display" can be termed as "Window Display". The fourth factor loaded across three variables, i.e., "When I see clothing featuring a new style on display I tend to buy it", "When I see clothing that I like on In-store form, I tend to buy it", and "I tend to rely on store displays when I make a decision to purchase clothing" can be termed as "In-store Layout". The fifth factor loaded across two variables, i.e., "Product arrangement", "Placing of the product", "Excitement in trying new product" "Influence of mannequin display" and "Influence of promotional signage" can be referred to as "Product Assortment". The sixth factor loaded across four variables, i.e., "When I walk along to the aisles I tend to look through the clothing close to me", "I tend to try clothing that catches my eye when I pass by", "When I see clothing that I like on mannequin display I tend to buy", and "I find mannequin displays useful for how the cloths look on me" can be referred to as "Floor Display". The seventh factor loaded across five variables ` I carefully plan most of my purchases", "I feel a sense of excitement when I make an impulse purchase", "A good offers propels me to buy", "When I see a good deal I am tempted to buy" and "I feel excited when I do sudden unplanned purchase"

can be termed as “In Store Promotion” The eighth factor loaded across two variables, I buy product never planned due to in store music” and “I spend more with excellent time Atmospherics condition (Temperature, fragrance) can be termed as “Store Ambiance”. Hence, the forty-two variables included in the analysis converged into a eighth factor namely “Promotional Signage”, “Window Display”, “In-store Layout”, “Product Assortment”, “Floor Display”, “In Store Promotion” and “Store Ambiance‟ To sum up one can state that the usage of Visual merchandising elements in a proper and innovative manner leads to increase the sales of the retail store. The literature review reflects that visual merchandising tool having a significant impact and positive impact on the purchase decision. And Impulse buying is driven only through the visual merchandising techniques.

5. Conclusion

This study state that consumers are more inclined towards the mannequin display and store display, the purchase decision is being taken after getting through these tools. Most of the purchases are impulse in nature so hardly a customer planned its purchases. Product placement, in-store Music and most importantly, assortment arranged in different colour combination motivate a consumer to buy a product. Promotional activities and store signage are too important elements in any store to propel a consumer to take a purchase decision, Cleanliness too an important factor to drive a customer towards the store purchase. Nevertheless a customer avoid certain store decorations and lighting and will attract towards the product as well. There are different elements of visual merchandising which applied by the retailers to attract the attention of the consumers towards the store.

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