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The role of appropriate design and colour in reducing aggressive behaviour of customers

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Abstract

The basic philosophy of interior designing is to provide the users with facilities that are aesthetically appealing, easy to maintain and environmentally safe as well as operationally efficient. Though design envisages the combination of an array of elements, among them the most prominent one is colour and its appropriate utilisation in the design. Also, colour has the ability to influence human emotions, moods and feelings of individuals; therefore, it has a significant role in making the design effective. This study evaluates the influence of colour and design in triggering aggressive impulses in patrons, whose stress levels are compounded by factors such as drunkenness and physical environment. In addition to these research studies, Baker-Miller Pink, which is recommended for reducing aggressive behaviour and physical strength of prisoners in holding cells, will be assessed for usability in bar and pubs to reduce the stress levels of drunken customers and to encourage them to conduct peacefully.

Keywords: Tranquillising effect of colour, interior design, aggression, pub and bars.

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1. Introduction

Conflict and violence crime in bars and pubs are a common occurrence and a major public concern in the world. Obviously, one of the reasons is that alcohol removes inhibition and enhances people's tendency to react freely to situations. No matter how thoughtful and well planned the design is, one cannot hope to completely eradicate aggression in the setting of a bar or pub. On the other hand, one cannot simply ignore the 'influence' of the design of a pub or bar on the 'mood and behaviour of people who spend time in it' (MCM, 1992, p. 3). This is because various elements in the environment in which functions of humans are known to exercise a high level of influence on their behaviour and determine how they respond to given situations. The design, light, colour or flow patterns of bars and pubs, when coupled with other factors such as alcohol/drug consumption, noise pollution and long waits (the presence of queues or line-ups) can increase the stress levels of patrons and create flashpoints for instigating aggression. Research evidence suggests that the design, interior and 'overly energetic decor—complexity and colour schemes' are causing 'between 15% and 20% of all aggression' in bars and pubs (MCM, 1992, p. 3). Therefore, these factors need to be taken into consideration when the designs of bars and pubs are planned and decided.

In the present day, client-initiated violence is on the increase, which is identified as a major issue in retail trade, including bars and pubs (Mayhew, 2000). Thus, it is significant for such organisations to understand the role of suitable design and appropriate colour schemes in reducing aggressive behaviour in customers. Hence, this research attempts to evaluate the influence of colour schemes and physical environment design in bars and pubs on customers' behaviour and to examine how the stress element can be reduced by using appropriate designs and colour schemes.

2. Effect of colours on human mind and body

The results that reveal the effects of colour on individual take effect on lots of fields from education and design to health sector. Interior architects, being aware of these effects, use them to create places that will provide the least stress and the optimum ease for the users. The International Federation of Interior Architects/Designers (IFI) states that indoor places should support life (humanity) and all functions by means of design (Demirbas, 2017, p. 538). Every surface material and finish (walls, ceiling, doors, floors, woodworks, metals, furniture, fabric, window coverings and artwork) is a part of full spectrum colour palette, and they contribute to colour scheme (Marberry & Zagon, 1995, p. 19).

The studies towards the effects of colour concentrate on colour symbolism, psychological and physiological effects of colours and personal colour tendencies. Symbolism of colours signifies the things about colours that we have learned in our childhood. Colour psychology is the common responses given to colours and affecting our behaviours regardless of our age, our geographical area, our gender and our culture (Smith, 2017, p. 5).

Secretions of colour hormone affect reactions against stress, autonomic nerve system and cerebral cortex that falls within emotions; while these effects indicate impacts on the individual as psychologically and physiologically, they affect his/her quality of life (Jin, Yu, Kim, Kim & Chung, 2009, pp. 1971–1972). The studies that clarify the relationship between colour stimuli and human sense define the factors that can affect human feelings as size, material, lightening conditions, backgrounds, colour stimulus in their environment, as well as gender, ages and nationality of observer (Gong, Wang, Hai & Shao, 2017, p. 72). Despite the fact that there are some cultural and personal factors that affect the colour choice, there are some certain tendencies.

Physical effects of colours on human, psychological reaction and psychological behaviours towards colours affect the physical reaction (Birren, 1998). Research evidence on the psychological impact of colour on humans indicate that the 'visual stimulus' that the 'human perceptual system' processes 'contains colour information' and, thus, the element of colour has a significant influence on human

perception and behaviour (Elliot & Maier, 2007, p. 250). These authors, quoting Frank and Gilovich (1988, p. 250), find that black colour is 'associated with evil and death' and can stimulate 'aggressive behaviour'. On the other hand, they associate red and blue colours with 'happiness and sadness', respectively (p. 250). They further contend that colours automatically exercise a psychological function on humans and activate 'motivated behaviour' without any 'conscious intention or awareness' of people (p. 251). However, while brown is considered as 'restful and warming', it is also found to be 'depressing if used alone' (Salvan, 1999, p. 70). In contrast, colours like white and blue are thought to evoke a sense of cheerfulness, peace and tranquillity beside reducing 'excitability' (p. 70). These research studies show that colours do have a strong impact on human psych.

When viewed from the physiological aspect, superior autonomic and cardiac vascular responses against stress cause more aggression. Aggression originating from colour can occur by means of a sensual impact or stimulation (Bagchi & Cheema, 2012, p. 949). When looked at literature research studies about physiological effects of colour on human, it is seen that especially comparison of red and blue colours is addressed. The reason for this stems from the powerful effects of these two colours on human behaviours and being located in the opposite sides of colour spectrum. For instance; researchers assert that red colour annoys the patients having a tendency to violence more than the blue colour (p. 948). Another research is about how the uniform colours of competitors in combat sports affect their aggressive behaviours. The two laboratory-based experiments results have showed that the red-wearing competitors are more belligerently talented than the blue-wearing counterparts and the competitors thinking that they take on a rival wearing red perceive the rival more aggressively capable (Fetterman, Liu & Robinson, 2015, p. 107).

Red colour increases the pace of blood pressure, breath rate and winking (O'Conner, 2007, p. 230). Since red colour increases autonomic and cardiac vascular responses, this clarifies promoting excitability and aggression. On the other hand, the blue colour is accepted as a colour that decreases blood pressure and is a remedial on the nervous disorder (Marberry & Zagon, 1995, p. 16; Jin et al., 2009, p. 1972). There are some reasons to clarify why red colour can be associated with aggression. Mostly the emotion that comes with hostility is anger and anger is metaphorically connected with red colour, the term of 'Seeing red' that is frequently used in English is a common metaphor of anger (Fetterman et al., 2015, p. 107).

Red colour can cause chaos if it is not used in a proper tone and rate. Henri Matisse, a famous French artist and draughtsman, contends that colours have a 'significant action on the feelings of those who look at them' (Hornung, 2005, p. 128). Thus, it transpires the colour schemes used in bars and pub can trigger aggressive behaviour in patrons without any premeditation on their parts. An example can be seen in the following setting (Figure 1), Red room—the description in the name—is drenched fully in monochromatic red (red ceiling, red walls, red floor and red furniture). For Farrelly (2003, p. 166) tells so, inspiration source of Red Room is to create a kind of 'devilishly glamorous hell' bar. Such an ambience can be an ideal background for the customers to flare up their mood and encourage them to engage in aggressive behaviour after intoxication.



Figure 1. Red room, San Francisco [source: Farrelly (2003, pp. 167–169)]

In his work titled, *Colour*, Feisner (2006, p. 42) discusses the emotional impact of colours, where he argues that dark colours arouse feelings of 'night, darkness and fear, while light compositions impart feelings of illumination, clarity and optimism'. Therefore, an ideal design needs to focus on providing an appropriate ambience by using sober colours that may be pleasing to the patrons' aesthetic appeal and give them a sense of calm and peace in the setting of bars and pubs. Sober colours, in this context, refer to colours that are plain and subdued and not flashy. Mahnke (1996, p. 22) believes that most of the information that humans receive from the 'visual field (or visual stimulation) lies in the hands of the designer' and, hence, it is important that he or she must 'understand the basics of the activation theory'. Thus, while designing bars and pubs, they must consider the traits of various colours that can trigger different emotions in the patrons. Joen Wolfrom in his book, 'The Magical Effects of Colour', provides a detailed analysis of the physical aspects of red colour. He contends that red colour 'stimulates the brain', causing a rush of adrenalin and thus, triggers a 'temporary spurt of energy' (Wolfrom, 1992, p. 13). Therefore, when an intoxicated patron remains in a setting with red colour, he or she may be induced to engage easily in aggressive behaviour. Similarly, most cultures associate black colour with death, evil and aggression and when the setting involves this colour, it may bring gloom in people (Caldwell & Burger, 2011, p. 306). In addition to these, the use of yellow colour which is accepted as the colour of joy, activity and mind stimulation in indoor places; (Pile, 1997, p. 144) and green colour with calming, restful and stress decreasing impacts of it (O'Connor, 2007, p. 231) has positive effects on people.

From the range of literature reviewed during the course of this study, it transpires that colour has a significant influence on the human mind and emotions. The perception of colour differs from individual to individual. The emotional and cognitive developments in individuals vary considerably and thus their perception of colours may also differ depending on the levels of their emotional and cognitive developments. Similarly, among humans, the perception of colour varies in a 'predictable and regular fashion', depending on their culture, language and other attributes (King, 2005, p. 7). However, red is generally accepted as a colour that stirs strong emotions in the human mind and it can cause aggressive impulses in them, especially when they are in an inebriated state of mind. Similarly, black colour can be understood as having 'negative sociological connotations' as people associate it with 'depression and mourning' (Baraban & Durocher, 2010, p. 78).

Brown colour, again, is associated with having a depressing effect on people. Therefore, when these colours are used in bar or pub settings, they may create energising or depressing effect on the patrons who remain there in an intoxicated state. On the other hand, colours such as green, blue, yellow and white are perceived as having a positive impact on the human mind. These colours are further thought to have soothing effects and usually, people associate them with peace, happiness, nature, joy, etc. Therefore, these colours will have a positive impact on the patrons who may be sitting in bars or pubs in the inebriated state of minds. In this context, a designer will need to have a proper appreciation of the impact of various colours on the psych of the patrons and design the settings of bars and pubs accordingly.

2.1. Baker-Miller pink

In addition to all these findings, the studies that are about decreasing potential in the field of present anger and agitation by using colour focus on a certain tone of pink colour that is referred to different names (Drunk Tank Pink, Cool Down Pink) but is commonly called as Baker-Miller Pink.

Schauss (1979) has asserted that when it is applied in a proper manner, on the basis of experimental studies that are practiced with the Kinesoid method, pink colour has tranquillising effect; and at the same time, he has suggested 'a pink jail' practice. In 1979, this suggestion is decided to be carried on in US, 223 days after this practice, the effectiveness of the results has drawn attention and it has been seen that including violence, aggressive behaviour potential has decreased. As a reason, Schauss has considered this as the decreasing aggression and causing muscle relaxation effects of the

pink colour. He has suggested using pink colour in a condition that is sudden and has uncontrollable aggression possibility (Schauss, 1979, pp. 218–220). It is also known that the tranquillising effect of Baker-Miller Pink does not last a long time. The body returns to its former state when balances it. To take advantage of the calming effect of this colour, Baker-Miller Pink has been used in the locker room of the visiting team players in American football (Figure 2). However; after its effectiveness has been understood, according to the rules of Western Athletic Conference which is now at work, it has been obligatory that locker room colours of both home team and visiting team should be same (Akkin, Egrilmez & Afrashi, 2004, p. 278).



Figure 2. Kinnick stadium's visiting team locker room. (A): Url-1; (B): Url-2; (C): Url-3

Genschow, Noll, Wanke & Gersbach (2014) have tested this tone of pink which Schauss has revealed and is called 'Baker-Miller Pink' on prisoners with another experiment and have asserted that the results do not replicate the original findings, Baker-Miller Pink does not have a significant effect on aggression. By going one step further in the research that they have conducted, they have predicted that since pink colour is associated with girls and females, being put in a pink detention cell can be perceived as abasement and an attack to their 'masculinity concept' in male prisoners' perception (Genschow et al., 2014). When both two studies are taken into account, the possibility that the differences between the methods and practices of researchers in their experiments can lead them to different conclusions, should not be ignored. Many Western countries have allowed for these practices in their prisons (Figure 3).



Figure 3. Practice of Baker-Miller pink in prisons. (A and B): Url-4; (C): Url-5; (D): Url-6

Research studies that have been done do not include a sample which is associated with the use of Baker-Miller Pink in bars and pubs. However; the calming effect of pink colour on people is known (Pile, 1997, p. 142 and 240). When people who visit these places do not belong to any gender class are taken into consideration, whether including pink in indoor arrangement (in some material surfaces or decorative tools) of places like bars and pubs to decrease customers' behaviours that include aggression can be decided through data that will be obtained by varying relevant usage areas of the colour and holding detailed examination.

3. Physical environment leading to violence in bars and pubs

Aggressive and violent behaviours from one human being towards another is not a new fact in bars and pubs, we can meet with examples of this problem in almost every society today. Anderson and Huesmann (2003) define human aggression as 'behaviour directed towards another individual carried out with the proximate (immediate) intent to cause harm' and violence is defined as aggression that has extreme harm as its goal (e.g., murder, aggravated assault).

Despite the fact that there is no direct and obvious relation between violence and use of alcohol (Tomsen, 1997, p. 100), the research studies that have been conducted are corroborative about drunkenness that is irresponsibly the encouragement of drinking alcohol is one of the factors that lead to violence. Furthermore; research studies have shown that there is a strong relation between aggression and environmental factors in places that are drunken alcohol (Graham & Homel, 2012, p. 90). At this point, the point worth stressing is whether the evaluation of arrangements of places where alcohol are consumed has critical factors or not. Homel and Tomsen (1993, p. 55) consider the environmental factors such as overcrowding and uncomfortable indoor arrangements are the main reasons of the violence related to aggression.

The items that lead to violence in bars and pubs are collected under eight titles: physical environment (e.g., Lightening, seating, number of bars); security officers; social environment (crowd); customers; bar stuff; consume of alcohol/drugs; responsible serving practices; and conflict/violence (Homel & Clark, 1994, p. 14 and 15). Although there is no direct relation between violence and physical attraction of the place, users value the places that are comfortable, clean, new and have a good design as having an effective management and positive staff who respond gently. Among the most important issues related to the physical environment, comfort and sufficient ventilation system come. Lack of seating and dense crowd (especially corridors, door entrances, stairs and dance floor) disturb patrons. In this case; to decrease their discomfort, patrons show a tendency to drink faster and this causes drunkenness in high level and aggressive manner to individuals or property (Homel & Tomsen, 1993, p. 59).

Size of the establishment has an effect on aggression. However; since more people necessitate more interaction, foresight of violence is expected. Hence; current size measures (number of bars, number of patrons in view and seating capacity) are considered as moderate predictors of aggression (Homel & Clark, 1994, p. 20). In addition to overcrowding, since queues that are formed to get a drink in front of the bars and make customers wait in these queues in a long time increase boredom and physical interaction, they are effective on aggression. To solve this problem, number of bars that sell alcohol can be increased, number of customers who visit the place can be limited to avoid overcrowding, adequate seating areas can be arranged, the areas that are rammed (door entrances and exits, washrooms, stairs, corridors) and the establishment can be designed with rational solution methods.

Decline in the level of comfort causes boredom. It has been seen that the crowd which are amused are in less boredom, that's why they consume alcohol very slowly and they act in less hostile attitude (Homel & Tomsen, 1993, p. 60). In this regard, by preparing activities that make customers entertain like music bands, dance and stage performances, bar parties (bar quizzes and bar games), television, game and card machines will help to create a positive social atmosphere and decrease the level of aggression (Figure 4).



**Figure 4. Various entertaining activities that bars and pubs organise for their customers.
(A and B): Url-7; (C): Url-8; (D): Url-9**

4. Conclusion

The prevalence of aggressive and violent behaviours today is sufficient to make it a social problem worth of attention around the World. Various factors contribute to this phenomenon such as the level of intoxication, social and cultural influences, design of the physical environment, sound systems as well as the colour schemes used in the settings. In these establishments, priority should be given to manage all risk factors that cause violence. Colours have a strong influence on human moods and behaviours. Patrons who are already in an inebriated state of mind after the consumption of alcoholic beverages can be easily tempted to engage in an aggressive behaviour when unsuitable colour schemes are used in the setting of bars. Though violence cannot be completely eliminated from bars and pubs through their designs alone, providing a calm and tranquil setting may prevent violence from happening to a great extent. The designer should pay attention to the effects of factors like uncomfortable conditions, lack of ventilation, opposing of present size with the comfort of the customers. Especially, it should be considered that the crowd which are stood in front of the entrances, exits, washrooms, stairs and bars that sell alcohol have a direct effect on unconscious physical contact that causes violence and aggression and by considering 'people-flow' factor, interior designs should be dominated. Therefore, while designing bars and pubs, designers will have to exercise extra caution to ensure that they not only select the proper shape and direction of the building but also choose a sober colour scheme and apply optimal design ideas to facilitate a more congenial setting in pubs to reduce the stress levels of drunken customers and to encourage them to conduct peacefully.

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