



## CORRELATION OF COLOR PREFERENCES OF CHILDREN WITH THEIR ANXIETY LEVELS IN THE PAEDIATRIC DENTAL OPERATORY: A SHORT STUDY.

<b>Nidhi Agarwal</b>	B.D.S, M.D.S, Head of Department, Department of Pedodontics and Preventive Dentistry, Institute of Dental Studies and Technologies, Kadrabad, Modinagar, Ghaziabad.
<b>Ajay Pratap Singh*</b>	B.D.S, Post Graduate student, Department of Pedodontics and Preventive Dentistry, Institute of Dental Studies and Technologies, Kadrabad, Modinagar, Ghaziabad. *Corresponding Author
<b>Zohra Jabin</b>	B.D.S, M.D.S, Professor, Department of Pedodontics and Preventive Dentistry, Institute of Dental Studies and Technologies, Kadrabad, Modinagar, Ghaziabad.
<b>Gundeep Kaur Madan</b>	B.D.S, M.D.S., Senior Lecturer, Department of Pedodontics and Preventive Dentistry, Swami Devi Dyal hospital and Dental college, Barwala, Haryana.

**ABSTRACT** **Introduction:** - Color of dental environment could have positive impact on children, thus by adding bright colors to dental set-up and incorporating colorful equipment dentist can make child feel at ease in dental environment.  
**Aim:** - To assess color preferences in relation to paediatric dental clinic.  
**Materials & Method:** - Questionnaire regarding color choices distributed in a school to 500 children aged 7 to 12 yrs. Five colors were shown & color preferences were recorded.  
**Results:** - Most of the children preferred red color in happy situations, & linked to a playful surrounding. Majority of children associated blue color with unhappy feelings. Apart from given colors, white & pink color were chosen by children as their preferred choice. Children related white color to calm situations & image of dentist.  
**Conclusion:** - As RED/WHITE/PINK color is liked to most of happy feelings, the dental operatory of paediatric patients can be designed keeping color preference of children in mind.

**KEYWORDS :** color, child behavior, surveys and questionnaires

### INTRODUCTION:

Colors are often used as metaphors for moods and have been related well with the anxiety levels in children. Colour preferences appear to change with different situations, emotions, thoughts, and behaviours. Colour preference and perception can be used to explore a child's impression of events in pedodontic clinical settings. Colors that relieve anxiety and create calmness could have a positive impact on the emotional status of a patient.

This study was conducted to determine the association between anxiety levels and colour preferences of children coming to the dental clinic for treatment. It has been shown that the colour of the dental environment could have a positive impact in reducing dental anxiety, thus by adding bright colours to the dental set up and incorporating colourful equipment the dentist can make the child feel at ease in the dental environment.<sup>1</sup>

**AIM:** To assess colour preferences in relation to paediatric dental clinic.

### MATERIALS AND METHODS

The study was conducted on 500 children aged 7 to 12 years from schools in Ghaziabad district.

Ethical committee approval was obtained prior to the commencement of the study. The study was carried over a period of 2 months. The children were selected according to the following criteria.

#### Inclusion Criteria:

- All healthy children aged between 7 to 12 years
- Children with no history of previous dental visit

#### Exclusion Criteria:

- Children having communicative disorders or handicapped conditions

Questionnaire regarding colour choices was given to 500 children. Five colours were shown which were answered by pupils in school classrooms under the supervision of their teachers/ guardians.(Figure 1)



**Figure 1:** Recording Of Color Preference In School Children

The questions included were : Out of 5 colours present i.e.

Red

Orange

Yellow

Green

Blue (the colors were selected from the anxiety rainbow)<sup>2</sup>

- Q.1. Which is your favourite colour?
- Q.2. Which is the colour you don't like?
- Q.3. Apart from the 5 colours mentioned above which other colour do you like?
- Q.4. What colour's gift (soft toy, star, etc.) will you like to take as reward?
- Q.5. What colour of dress would you like your dentist to wear?
- Q.6. What colour of walls do you prefer to have in the dental clinic room where you are treated?

### RESULTS

The data was collected and statistical analysis was done using SPSS software. It was observed that maximum children preferred red color in happy situations accounting to 35% whereas, 40% of the children associated blue color with unhappy feelings.

Apart from the given choices, white & pink color were chosen by 40% of the children as their preferred choice and almost 90% children related WHITE color to calm situations and image of a dentist.

It was also observed that red color was linked to a playful surrounding in 50% of the children.

### DISCUSSION:

Colors play an important role in a child's life. A lot can be observed from the child's environment which convey their feelings for example their clothes, toys, and home accessories.<sup>3</sup> Goldstein<sup>4</sup> stated that specific emotional responses are elicited by particular colors.<sup>8</sup> Color play an important role in day to day life people often buy products in the colors that are most pleasing at the time of purchase, as colors appeal emotionally and aesthetically. The colorful pencil cases, games, or the cartoon stickers are common examples of how colors influence child preference.

How children come to associate different colors with positive or negative topics is an issue which needs to be addressed by further research. One reason for this can be that children may acquire these associations from what they have seen in coloring books, television ads, mobile phones, and interactive media. Terwogt and Hoeksma<sup>5</sup> established that the link between color and emotion preferences varied between age and gender. Color preferences change based on individual experiences. In the present study, most of the children preferred red color with happy feelings and blue color with unhappy feelings. It has been found that the associations of some mood tones with particular colors are more apparent and precise than others. Red, orange and yellow are all warm colors. Warm colors often evoke feelings of happiness, optimism and energy.<sup>6</sup> Lawler and Lawler found that preschoolers colored with a yellow crayon after hearing a happy story and with a black crayon after hearing a sad one.<sup>7</sup> Sad colors are colors that are dark and muted. Grey is the prototypical for sad color, but dark and muted cool colors like blue, green or neutrals like brown or beige can have a similar effect on feelings and emotions depending on how they're used.<sup>6</sup> Apart from this in the present study white and pink colors were observed as the preferred choice for a majority of kids. Neutrals like white, beige and grey can also make you feel calm.

The study has been attempted to understand better the value of color in pediatric population and how it influence the dental environment. The results showed that children do have preferential colors and can match these colors to emotions. Color can play an important role in enabling both therapeutic interpretations of emotional state and also as an intervention aid to facilitate exploration of emotion. The use of color interpretation and emotional association has the potential to become a useful tool in the daily pediatric practice.

Limitations of this study may be cultural and socioeconomic changes regarding different societies where there may (or not) be distinctive child behavioural standards.<sup>8</sup>

Future research with a larger sample size and including children of wider age group, with more variety of color samples could establish a strong association between different colors and psychological aspect of children. This research will have important implications for people who may be involved in using color in practical dental situations. These results can also help health care providers and professionals to understand appropriate colors better for younger populations.

### CONCLUSION:

As red/white/pink color is liked to most of the happy feelings, the ambience of dental operator of paediatric patients can be designed keeping the color preference of children in mind, as the color of happy feelings reduces the child anxiety to enter dental operatory.

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