

Impact of Colour on the Emotional Expression of Men and Women a Comparative Study

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Abstract: Colour significantly impacts human perception and emotional reactions, affecting psychological states and behavior. This study investigates how exposure to different colours relates to mood changes in people, drawing from psychology, neuroscience, and design research. It focuses on how colours like blue, red, yellow, and green influence feelings such as calmness, alertness, happiness, and anxiety. Using a mixed research method—including surveys, controlled tests, and observations—this paper examines both immediate and lasting emotional effects of colours on diverse groups. Early results show that warm colours (like red and yellow) generally boost energy and excitement, while cool colours (such as blue and green) tend to create a soothing and peaceful mood. Understanding how colour affects emotions can be valuable in mental health, education, marketing, and environmental design. This research highlights the importance of deliberately using colour in environments and products aimed at supporting emotional well-being. Based on these results, blue and green are recommended for classrooms, hospitals, and workplaces. Colours like yellow and pink, can be used in areas designed to lift mood. Conversely, colours like black and red, linked to negative feelings like sadness or anxiety, should be applied cautiously in sensitive environments.

Keywords: *Neuro Science, Colours, Emotions.*

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I. INTRODUCTION

Colour is a fundamental aspect of human life, influencing how we perceive, communicate, and feel. Across different cultures and settings, specific colours are often connected with particular emotions—blue is linked to calmness, red to excitement or caution, and yellow to joy. These connections are more than cultural symbols; modern psychology and neuroscience research suggest that exposure to certain colours can have measurable effects on mood, cognition, and even bodily functions.

Since people regularly encounter colours in their surroundings—such as in rooms, screens, clothing, and advertising—understanding their emotional impact is important. However, despite common beliefs about colour and mood, scientific agreement is still evolving, as reactions vary between individuals, cultures, and situations.

One basic idea in colour psychology is that certain hues evoke specific emotional reactions. For example, red often relates to energy, passion, or urgency but can also cause feelings of anger or threat. Blue is usually seen as calming and dependable, while yellow is associated with cheerfulness and mental stimulation. Green tends to symbolize balance and

harmony, likely because it is common in nature. Nevertheless, these associations are not universal; cultural background, personal history, and context all influence how a person interprets colour.

Theories explaining colour's influence on mood combine physiological, psychological, and cultural perspectives. Physiologically, exposure to some colours can affect bodily responses—for instance, red light can raise heart rate and blood pressure, whereas blue light can calm the nervous system. These reactions may have evolutionary roots, as early humans learned to respond to environmental colour signals indicating safety or danger. Psychologically, people develop colour associations through experience and conditioning—for example, white might be linked to cleanliness and hospitals, while darker shades may be tied to sadness due to cultural practices.

This research aims to explore the degree to which colour affects emotional states, focusing on moods like happiness, calmness, tension, and energy. The findings are intended to deepen understanding of colour psychology and contribute to practical uses in areas such as interior design, mental health, advertising, and education.

II. REVIEW OF LITERATURE

Color theory, or more specifically **traditional color theory**, is a historical body of knowledge describing the behavior of colors, namely in color mixing, color contrast effects, color harmony, color schemes and color symbolism. Modern color theory is generally referred to as color science. While there is no clear distinction in scope, traditional color theory tends to be more subjective and have artistic applications, while color science tends to be more objective and have functional applications, such as in chemistry, astronomy or color reproduction. Color theory dates back at least as far as Aristotle's treatise *On Colors* and Bharata's *Nāṭya Shāstra*. A formalization of "color theory" began in the 18th century, initially within a partisan controversy over Isaac Newton's theory of color (*Opticks*, 1704) and the nature of primary colors. By the end of the 19th century, a schism had formed between traditional color theory and color science.

Red is one of the most frequently studied colours regarding mood and behavior. Studies suggest that red is connected with strong emotions such as passion, aggression, and excitement. For example, Elliot et al. (2007) found that seeing red before a test increased anxiety and lowered performance, possibly because red signals danger or mistakes. On the other hand, red is used in marketing to create a sense of urgency, like in clearance sales. The emotional effect of red depends on context; in romantic situations, it might be seen as passionate, whereas in academic settings it could cause avoidance. Blue is typically associated with calmness, trust, and reliability. Research by Kaya and Epps (2004) and Valdez and Mehrabian (1994) shows that blue often promotes relaxation and peace. Blue lighting has even been applied in public places like train stations to reduce

aggression and crime, with reported positive effects. However, depending on shade and context, blue can also evoke feelings of sadness or coldness.

Yellow is generally linked with happiness and mental stimulation. Wexner (1954) noted that people commonly associate yellow with optimism and joy. Yet, very bright or intense yellow can sometimes cause discomfort or anxiety, especially when used excessively.

Green, especially when present in natural settings or interiors, has been found to encourage relaxation and concentration. Purple is often tied to creativity and spirituality but can sometimes suggest ambiguity or sadness depending on its tone. Orange is energetic and friendly but might be over stimulating for some.

Black tends to symbolize power or elegance but can also represent mourning or negativity. White is usually seen as clean and pure but may feel cold or empty in overly sterile environments.

III. METHODOLOGY

➤ Data Received by Survey Method

The survey method is a systematic way of gathering data from a group of people using structured questions and responses. It involves administering questionnaires or interviews to collect information about attitudes, opinions, and behaviors. This study involved fifty college students (50 males and 50 females) in Chennai, who were asked to report their emotional responses to seven colours: green, blue, black, yellow, red, pink, and brown. Participants indicated how each colour made them feel based on a provided survey.

Table 1 Particulars of the Sample

S. No	Particulars (Age)	Percentage
1.	17-18 years	52
2.	19 – 20	36
3	21-22	12

Table 2 Gender Details of the Sample

S. No.	Gender	Total Number
1.	Male	50
2.	Female	50
	UG/PG	percentage
3.	UG	81
4.	PG	19

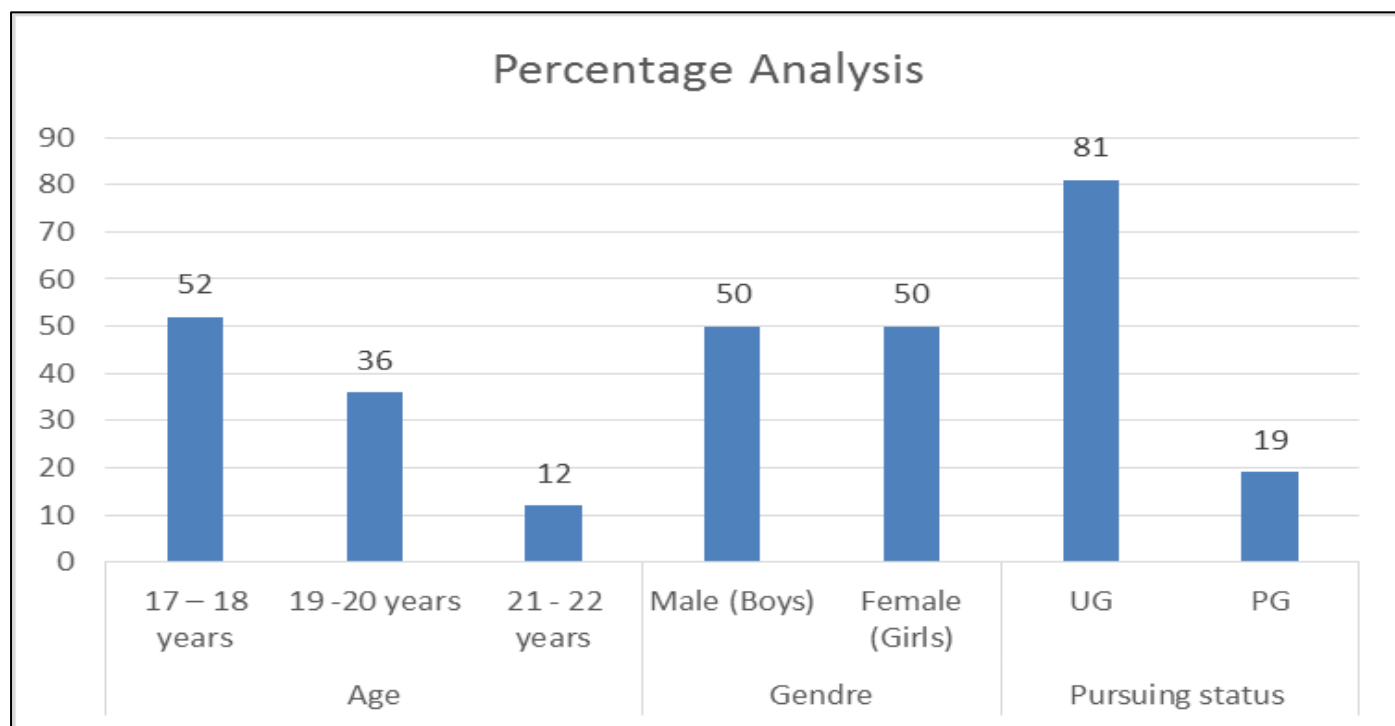


Fig 1 Percentage Analysis of the Sample.

➤ *Data Analysis:*

The participants' ages ranged mainly from 17 to 22 years, with 52% aged 17–18. The group was evenly split by gender, and most were undergraduates (81%). The analysis focused on whether different colours consistently evoked specific emotions and whether these associations differed by gender.

About 36% of the Male students most often reported that black felt sad or depressing, and for 28% green felt to be neutral or balanced, and 18% of them felt yellow was

happy, 32% felt pink evoked love or affection, and 24 % of them said brown felt boring, red made them mad or angry (25%), and blue was calming (24%).

Female students about 42% of them similarly associated black with sadness, and 28% of them green with neutrality and balance, 52% of them correlated yellow with happiness, and 28% of them reported pink with affection, 41% of them correlated brown with boredom, 29% reported red with anger, and 22% felt calmness with blue colour.

Table 3 Male College students associated these feelings with these colors

Black	Green	Yellow	Pink	Brown	Red	Blue
Sad/Cold/ Depressing	Neutral/Balanced	Happy	Love/Affection	Bored	Mad/Angry	Calm
36%	28%	18%	32%	21%	25%	24%

Table 4 Female College students associated these feelings with these colors

Black	Green	Yellow	Pink	Brown	Red	Blue
Sad/Cold/ Depressing	Neutral/ Balanced	Happy	Love/ Affection	Bored	Mad/ Angry	Calm
42%	28%	52%	28%	41%	29%	22%

IV. CONCLUSION

Colour clearly influences mood, but responses can differ between males and females. For example, males found green to represent safety, while females saw it as neutral and balancing. Both genders felt that brown was boring and pink represented love and affection.

Some findings differed from previous research; for instance, brown was expected to convey safety but was reported as boring, and yellow was thought to irritate but was mostly seen as cheerful. Overall, this study confirms that colour has a strong effect on emotions.

Based on these results, calming colours like blue and green are recommended for settings such as classrooms, hospitals, and workplaces to promote focus and relaxation.

Bright colours like yellow and pink, associated with happiness, can be used in areas designed to lift mood.

Conversely, colours like black and red, linked to negative feelings like sadness or anxiety, should be applied cautiously in sensitive environments.

Professionals in design, education, and marketing should consider both emotional impact and gender

differences when using colour to create supportive and effective spaces. Further studies are suggested to explore long-term effects and cultural differences in colour perception.

V. SUMMARY

Colours significantly influence human emotions and mood, affecting psychological and physiological responses. Warm colours like red and yellow tend to increase energy and excitement, while cool colours such as blue and green promote calmness and relaxation. However, these effects can vary based on individual differences, cultural background, and context. A study involving college students showed that colours like black often evoke sadness, green promotes balance or safety, and pink is linked to affection. Gender differences also exist in how colours affect mood. The findings suggest that intentional use of colours in environments like classrooms, hospitals, and marketing can support emotional well-being, but care should be taken with colours associated with negative emotions. Further research is needed to understand cultural and long-term impacts of colour on mood.

RECOMMENDATIONS

The research aimed at creating the better environment for the class rooms shops and other areas of people gathering by selecting suitable colour for the purpose and we propose the research to be conducted for the the home where they show depth and light for the suitable area inside the home to create apparently bigger living space and create peace of mind as people spend time at home for longer during the vocation and at the time of rest.,

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