

The Effect of Colour on Humans Psychology

Dr Prerana Gupta, Professor

Department of Psychitary , Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India

Email id- preranagupta1978@gmail.com

ABSTRACT: *The colour can be explained as the feature of any item that can be described using hue, brightness, and saturation. In physics, the term "colour" refers particularly to electromagnetic radiation having a certain spectrum of visible wavelengths. Research in the field of colour psychology examines how colour affects human behaviour and decision-making. This paper explores the effect of colour on human psychology in a very detailed manner and also discusses the different effects caused by the different colours that change the mood accordingly in humans. When employed in marketing, for instance, certain colours may influence how consumers view a brand in subtle ways, like how some tones might enhance hunger.*

KEYWORDS: *Colour, Psychology, Humans, Nervous System, Blood, Parasympathetic.*

1. INTRODUCTION

There is a plethora of websites on the Internet that assert that a person's colour preferences reveal information about their mood, feelings, and personality. For instance, those who prefer the colour red are said to be "action-oriented", "energetic, joyful, and optimistic", and their motivation comes from "power" and "competitiveness." People with a "logical mind" tend to appreciate yellow. They are "fun," "spontaneous and lively," "perfectionists or dreamers," and "fun"[1]. It is essential to scientifically show that there is a systematic and dependable link between one's current affective state (mood) and the colour matched to symbolize it before being able to draw any conclusions about other people's internal states based on their colour preferences [2].

Sir Isaac Newton, an English scientist, discovered in 1666 that pure white light splits into all of the visible hues as it passes through a prism. Additionally, Newton discovered that each colour is made up of a single wavelength and cannot be divided into other hues. Additional tests showed that light could be blended to create different hues. For instance, orange is produced when the red and yellow light is combined. When certain hues are combined, such as green and magenta, they cancel each other out and produce white light. The majority of colour psychology research has focused on the conceptual connections between colour and emotions or affective qualities.

Valdez and Mehrabian (1994) conducted a groundbreaking study in which they examined how evoked emotive reactions to physical colours were graded along the affective dimensions of valence (e.g., pleasant-unpleasant; affectionate-nasty); arousal (e.g., exciting-calming; frustrated-sad); and dominance (e.g., dominant-submissive; violent-fearful). Affective dimensions and colour dimensions have a non-linear connection. Darker, more chromatic colours were considered to be more stimulating, darker, more saturated colours to be more dominating, and brighter, more chromatic colours to be more pleasant [3]. Other research that used actual colour samples and colour concepts revealed similar relationships.

We have a much stronger emotional bond with colour than we currently realize. Black uniforms might unintentionally scare us. Green rooms are frequently where inspiration is sparked. Red encourages empowerment and self-assurance. The power of colour affects how We feel, think, and act, and our brains have evolved to subconsciously react to it in a variety of ways, from

appetite to productivity. Colours work in harmony with both matter and energy. Each colour has a unique wavelength, frequency, and energy. That explains how many colours can affect your mood [4].

Colours immediately affect the Autonomic Nervous System (ANS), which is controlled subconsciously and unconsciously. Through either the sympathetic or parasympathetic neural systems, the ANS innervates and controls the smooth muscles, internal organs, glands, and blood vessels [5]. The parasympathetic nervous system functions to save the body's energy, whereas the sympathetic nervous system works to mobilize the body during activities and stressful situations. As a result, the ANS system must function to maintain equilibrium in the body's blood pressure, blood vessel contraction and dilatation, temperature, perspiration, and gastrointestinal tract.

Because some wavelengths of colour produce powerful electrical impulses that trigger the body's photoreceptors, colours can disturb the ANS system's equilibrium. The retina-hypothalamic tract, which connects the retina and the hypothalamus, receives a signal from the photoreceptors in the eyes and transmits it to it so that it can be recognized as a certain colour. The sympathetic trunk is activated [6], [7]. By neurons that the hypothalamus sends to the thoracolumbar area of the spinal cord. These neurons start the dilation or constriction of blood arteries. The effects of vasoconstriction and vasodilation cause the heart rate to either rise or fall. Depending on the colour perceived, a rise in heart rate will trigger sweat glands that can cause perspiration [8], [9].

2. DISCUSSION

Although colours activate the hypothalamus and each one focuses on either the sympathetic or parasympathetic nervous systems, which in turn elicit particular physiological responses that result in a psychological response, they can certainly influence your decisions, affect your judgement, and affect your mood. The blue colour, which can be found in the environment and is the hue of the sky and the ocean, is the most popular in the world. Blue is dependable, honest, and trustworthy; it sends out signals of loyalty. It's a fanciful shade to wear to demonstrate your knowledge of your industry, your composure and control, and your competence. Blue actuates the frontal part of the hypothalamus, which controls the parasympathetic nervous system and has a soothing impact on the body by constricting blood vessels and lowering blood flow and heart rate. Blue is also the colour of moderation. Interestingly, blue makes you feel more knowledgeable and industrious and improves cognitive function because it starts the parasympathetic division of the autonomic nervous system. Employees in blue offices accomplish restores as they commit 20% fewer errors. Therefore, it is a fantastic colour to paint your walls if you want to increase productivity.

The Red shade can also be the shade of anger and stress, but it also symbolizes passion, strength, and courage. The strongest colour is red. Red is frequently associated with urgent fires, sirens, and cautionary signals. On a physiological level, seeing red causes growth in heart rate and blood pressure because it triggers the subsequent region of the hypothalamus, which works in conjunction with the sympathetic nervous system to cause blood vessel dilatation, as more blood is required for cardiac and smooth muscle during actions and under dangerous circumstances. Amusingly, red also stimulates appetite, so if you're eating this weekend at a party and see a red dish, you'll want to eat more. As red helps with word retention, attention, and memory, many fast-food companies include it in their advertising logos. Funny enough, red also increases appetite, so if you see a red dish this weekend while eating at a party, you'll

want to eat more. Red is widely used in campaign logos by fast food businesses because it improves word memory, attention, and retention.

The Grey and green colour have the reverse effect of Red. As passive neutral colours, grey and green are a bit more subdued and less attention-grabbing than red. Being a drab, dismal colour, grey makes individuals feel inactive and low-energy. Grey is not a good colour to have in large quantities because it implies uncertainty. Together with grey, which represents balance, harmony, and rest, these two colours mark the frontal hypothalamus, which connects with the parasympathetic nervous system and causes the body to experience anaesthesia by producing sleep.

The purple colour is associated with money, elegance, and royalty. Things appear to be more expensive as a result. It activates the frontal hypothalamus, which controls the parasympathetic nervous system, just like the colours blue, green, and grey do. It calms the body down and lowers the heart rate and blood pressure. Lavender, a tint brighter than purple, is therefore the shade of the world and inspires sentiments of enlightenment, awareness, and reflection. Grey undertones ran through the lavender. Similar to grey but a touch more subdued, it generates the same emotional reactions. The group's most energizing colour is orange. Because orange and black are the colours of abundance, success, and strong energy, sports teams and businesses frequently utilize them in their logos and uniforms. Orange is a cheerful colour that stimulates the body by acting on the sympathetic nervous system.

Information may be conveyed by colour, it can evoke specific emotions, and it can even have an impact on people's decisions. The things that people choose to buy, the clothes they wear, and the way they decorate their surroundings are all influenced by their preferred colours. People frequently choose products whose hues arouse particular emotions or moods, such as choosing a car's colour to appear sporty, modern, svelte, or reliable. To produce a certain mood, room colours can also be used, such as painting a bedroom a gentle green. So, what's the final word? According to experts, while colour can affect how we feel and behave, these effects depend on a person's personality, culture, and environment. We still required more scientific study is needed to comprehend colour psychology.

3. CONCLUSION

Both colour psychology and art therapy play a significant role in the creative and productive process because they profoundly frame the human experience in both physical and psychological terms. Since both involve reflective and analytical interactions with intense and frequently troubling emotions, as this essay has aimed to show, therapeutic techniques and artistic works have a lot in common. Choosing colours can help you confront and deal with difficult emotions by projecting them into the canvas and giving them physical form. Such imaginative colour utilisation makes cryptic and abstract emotions palpable, which helps the patient navigate various mental states and moods. A compelling argument can be made that colour psychology is an important aspect of art production and frequently closely connects with the artist's emotional state based on the academic literature and case study examples. For both artists and art students, a metacognitive understanding of these psycho-emotional dynamics is advantageous since it may provide more control over the usually enigmatic and ethereal artistic process.

REFERENCES:

- [1] J. O. Dirisu, D. D. Adegoke, J. Azeta, F. Ishola, I. P. Okokpujie, and A. Aworinde, "Ergonomics of domestic building structure on occupants' health," in *Procedia Manufacturing*, 2019. doi: 10.1016/j.promfg.2019.06.085.

- [2] H. M. Schill, M. S. Cain, E. L. Josephs, and J. M. Wolfe, "Axis of rotation as a basic feature in visual search," *Attention, Perception, Psychophys.*, 2020, doi: 10.3758/s13414-019-01834-0.
- [3] H. Vazifehdust, S. Ahmadvand, S. J. S. Takami, and E. T. Bonchenari, "Psychologically Examining the Influence of Logo Color on Brand Loyalty (Case Study: Mellat Bank).," *Int. J. Sci. Manag. Dev.*, 2018.
- [4] A. R. Hussain, "Colour Psychology in Art: How Colour Impacts Mood," *Art Des. Rev.*, 2021, doi: 10.4236/adr.2021.94025.
- [5] T. V. Pollet, J. Costello, L. Groeneboom, L. S. Peperkoorn, and J. Wu, "Do red objects enhance sexual attractiveness? No evidence from two large replications," *Displays*, 2019, doi: 10.1016/j.displa.2018.10.008.
- [6] N. Goldschmied and C. Spitznagel, "Sweating the connection of uniform colours and success in sport: No evidence for the red win effect in elite women's NCAA basketball," *Eur. J. Sport Sci.*, 2021, doi: 10.1080/17461391.2020.1727571.
- [7] J. J. Valenti and C. Firestone, "Finding the 'odd one out': Memory color effects and the logic of appearance," *Cognition*, 2019, doi: 10.1016/j.cognition.2019.04.003.
- [8] T. D. Cassidy, "Colour forecasting," *Text. Prog.*, 2019, doi: 10.1080/00405167.2019.1659564.
- [9] N. Wei, T. Zhou, and L. Chen, "Objective measurement of gestalts: Quantifying grouping effect by tilt aftereffect," *Behav. Res. Methods*, 2018, doi: 10.3758/s13428-017-0919-1.