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Color Therapy in Mental Health and Well Being

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ABSTRACT

Color therapy is a method of treatment that uses the visible spectrum (colors) of electromagnetic radiation to cure diseases. It is a centuries-old concept used successfully over the years to cure various diseases ¹. Today in the age of globalization alternative medicines are widely used to solve numerous health and mind related problems. Color Therapy is one of the most popular alternative medicines used to influence the behavior and brain of people. It has been immense used in Egypt, India and China for centuries. The benefits of color therapy are undeniable ². Color Therapists or Chromo therapists claim to be able to use different lights or rays in the form of color to maintain a balance or energy lacking in a person's body. The lacking can be of emotional, mental, spiritual and/or physical. The different colors we see in the world around us are the result of the eye perceiving light vibrating at different frequencies. Sunlight, or full-spectrum light, holds all the wavelengths of color in the visible spectrum (red, orange, yellow, green, blue, indigo, violet, and magenta) as well as infrared and ultraviolet light, which cannot be seen. To treat both physical and emotional problems, color therapy may involve exposure to colored lights, massages using color-saturated oils, contemplating and visualizing colors, even wearing colored clothing and eating colored foods ³. Color is an important component of our built environment and without its presence; our environment would be dull and depressing. It plays a vital role in our built environment, especially in relation to the partially blind, infants, hospital patients and people who are for some reason or the other feel trapped and unhappy with their way of life. The aim of this article is to review the role of different colors and its properties to maintain the mental health and wellbeing ⁴.

Key words: color therapy, mental health, color properties, color psychology, numerology etc.

INTRODUCTION

Color therapy (or chromo therapy) is an alternative remedy that uses color and light to treat physical or mental health by balancing the body's energy centers, also known chakras. This concept dates back to ancient Egyptians who used sun-activated solarium rooms constructed with colored glass for therapeutic purposes ⁵. Today, both conventional and holistic practitioners acknowledge the bright potential art therapy (which, naturally, includes color). And, although color therapy remains a gray area in Western medicine, enthusiasts are tickled pink over its influence. Color is a living energy and a property of light. Light is an electromagnetic energy produced by the sun in different wavelengths as the light is absorbed and reflected and everything in nature is full of color. Vibration forms everything in life. The universe is only the energy in vibration ⁶. Our body has energy fields (called charkas). All of our organs are comprised of vibrating atoms. All of us have our own unique energy system and our organs have different vibrational patterns. We all emit color. Light has different particles called photons and microwaves. Light penetrates everything, even our bodies. Light also emits wavelengths that we cannot see (ultraviolet). These wavelengths contain radiation, which is energy. Energy is Qi and life. Now it is revealed that the length of a wave defines its color. In our environment there is an enormous quantity of waves with different frequency characteristics ⁷.

Background:

Chromo therapy is defined as "the use of light of specific colors to treat health problems." There are many reports in the literature about the possible benefits of color therapy. The basis for most of the studies and theories is the understanding that light (and colors) are composed of electromagnetic energy. Each color represents a different intensity, or pulse, of energy. The body comprises varying energy fields called *chakras*, depending on the system and body part. Chromo therapy assumes that illness is caused by or causes an imbalance in these chakras. True chromo therapy is intended to rebalance using specific colors, thus healing the ailment ⁸.



How it Works:

Color therapy is based on the premise that different colors evoke different responses in people. Some colors are considered to be stimulating, whereas others may be soothing and, therefore, colors may impact one's energy level, mood, appetite, emotions and even decision-making. Perhaps that means that color and lighting (i.e. an illuminated form of color) can be useful healing tools in combating an array of ailments ⁹.

Color therapy has been suggested (though not proven) to positively impact academic performance, aggressive/hostile behavior, asthma, attention-deficit hyperactivity disorder, blood pressure, bronchitis, dyslexia and learning disabilities, enhanced athletic performance, epilepsy, insomnia, lethargy, lung cancer, migraine, muscle relaxation, prison reform, stress, uterine fibroids and vision disorders ¹⁰.

Color may also have adverse effects. The Epilepsy Foundation reports that about 3% of people with epilepsy have photosensitive epilepsy, in which exposure to flashing lights at certain intensities or to certain visual patterns triggers seizures. A study conducted at the University of Goldsmiths London found that certain colors were more likely to cause these epileptic fits. For example, red-blue flickering stimulus causes larger cortical excitation than red-green or blue-green stimulus ¹¹.

Properties of Color:

Color has three properties. They are called hue, value and intensity. Hue is the name of the color according to the categories of the colour wheel – green or red or violet blue. Value refers to the relative lightness or darkness of an object, which is a function of the amount of light reflected from its surface. Gray is darker in value than white, but lighter in value than black. Most colours are recognizable in a full range of values; for instance, everything from palest pink to darkest maroon is identified as “red.” In addition, all hues have what is known as a normal value the value at which that hue is expected to be found. Yellow is thought of as a “light” color and violet as a “dark” color even though each has a full range of values. A colour lighter than the hue's normal value is known as a tint; for example, pink is a tint of red. A colour darker than the hue's normal value is called a shade; maroon is a shade of red ¹². Intensity, also called chroma or saturation, refers to the relative brightness or dullness of a color. Colors may be pure and saturated, as they appear on the colour wheel, or they may be grayed and softened to some degree. The purest colors are said to have high intensity; grayer colours, lower intensity. There are four methods of changing the intensity of colours. The first is to add white. Adding white to pure red creates light red or pink, which is lighter than in value and less intense. If black is added, the result is darker in value and less intense. If gray of the same value as the red is added the result is less intense but retains the same value. The fourth way of changing a colour's intensity is to add its complementary hue. For example, when green (a secondary colour composed of the primaries yellow and blue) is added to red gray is produced as a consequence of the balance between the three primaries. If red is the dominant colour in the mixture, the result is a grayish red; if green is dominant, the product is a grayish green. In any event, the result is a colour less intense and more neutral than the original ¹³.

Principles in color therapy:

Color has such a subtle effect on our lives that we rarely give it a second thought. Color comes from daylight which contains all eight colors of the spectrum: red, orange, yellow, green, turquoise, blue, violet and magenta. It is also a form of radiation ¹⁴.

Research has begun to validate the importance of color in treating disease. For example, looking at blue light has been shown to lower blood pressure by calming the autonomic nervous system, while red light causes it to rise ¹⁵.

Each color is associated with one of the seven chakras of the body, and every color has its complementary color. Single colors or combinations of complementary colors can be used to treat imbalances in the chakras or illness associated with that bodily region ¹⁶.

The basic idea of color therapy:

Colour therapy is a non-invasive and holistic treatment that brings balance and health to your mind and body. The vibrations of the color in color therapy class improve your mood and overall health ¹⁷.

Colours are made up of reflected lights that hit our retinas as the wavelengths vibrate. Our brain interprets these wavelengths, which ultimately makes our perception of colour as a physical and sensory experience ¹⁸.



Colour therapy is based on the idea that colours create an electrical impulse in our brain, which stimulates hormonal and biochemical processes in our body. These processes either stimulate or calm us ¹⁹.

Different colours treat different ailments:

The shades of colours used in your colour therapy session will vary depending upon the type of ailment you are trying to correct. For example, blue or purple lights are anti-inflammatory and calming. Green colour helps to purify and cleanse, white and yellow colour light stimulates the lymphatic system. Red light is invigorating but it may cause agitation if you are already tense ²⁰.

According to Indian philosophy, the chakras are considered the centres of spiritual power and energy within our bodies. There are seven chakras and different colours represent a different chakra:²¹

Red colour: The root chakra located at the base of the spine is represented by red colour. The Chakra has to do with our connection with the Earth.

Orange colour: The Sacral Chakra, which is located 2 or 3 inches below the navel, is represented by orange colour. This chakra is said to be associated with reproduction, kidneys, Adrenals and pleasure. The chakra is the mind-body chakra.

Yellow colour: The solar plexus chakra is associated with liver, pancreas, digestive system, gallbladder, empowerment and well-being. The chakra is located between the navel and sternum.

Green colour: The colour represents the Heart Chakra. It's associated with heart, lungs and immune system, energy, nervous system, mental focus, compassion and empowerment.

Blue colour: The chakra is associated with thyroid and metabolism and also with a peaceful expression.

Indigo colour: The third eye chakra is located between the eyebrows. It is associated with the pituitary gland and pineal gland. It influences our sleep cycle, clarity, wisdom, self-esteem and intuition.

Violet colour: It is associated with the Crown Chakra and is located at the top of the head. It is associated with clarity, dreams, spirituality, sleep cycles, dreams, pineal gland and light sensitivity.

Numerology and Colors:

Colors Numerology can be potential for you to make your life really colorful, inspiring and energizing. If numbers play a vital role in our everyday life, then surely colors numerology also play an important role in our life. This is helpful to discover our qualities, strength and of course true potential ²².

Analyzing your date of birth (time of birth, place of birth, month, and year) and how these numbers are related with different colors that can amazingly change your life are discussed in color numerology. If you really believe in numerology and the effect of numbers in your life then you can take a consultation of a professional numerologist who can help you to decide the appropriate colors for you to get the ultimate benefits of color numerology in your life ²³.

A single color denotes your quality of life, your fortune, how it favors you, your life path, and the aim of life, soul color, your energizing color and more.

We are fond of different colors. It varies from person to person, what one likes another may dislike. If I like for example yellow or any color it is not mandatory for you to like the same colors. You may have a different choice like deep blue, white or pink. Why this liking varies, color numerology discusses this all.

There are negative and positive aspects to all the colors, where color numerology and color therapy indicates your potential color and how you use your potential color to get the overall benefits of your life ²⁴.

REVIEW OF LITERATURE

Colour Therapy is easily distinguishable from other types of light therapy. This light therapy can be ultraviolet blood irradiation and/or from of photobiology, these are scientifically accepted worldwide. It is also accepted that effects of light on living organisms. This therapy is very old. Avicenna (980 – 1037), was a Persian, polymath, his almost 450 works on a



wide range of subjects. He also worked on the benefits of color therapy and its importance for both diagnosis and treatment. He has discussed regarding Chromo therapy and its effects on the human body and mind for the purpose of treatment and diagnosis in his book "**The Canon of Medicine**". He has tried to show the effect of color therapy, is an observable symptom of diseases. He has shown that red moved the blood, blue or white cooled it and yellow minimize the muscular pain and or inflammation. His works had shown how different colors can improve the growth and heal the diseases in human body and mind ³.

Modern Chromo therapists Dr. Seth Pan coast and Edwin Dwight Babbitt conducted various experiments and have shown the effects of chromo therapy in their books, Blue and Red Light, Light and Its Rays as Medicine and The Principles of Light and Color ²⁵.

Indian-born American scientist (1933) Dinshah P. Ghadiali has also shown in his experiment The Spectra Chronometry Encyclopedia, an elaborate work on color therapy has given numerous examples. His experiment has shown how and why the different colored rays proved therapeutic effects on human body. He thought that different colors represent different chemical potencies in higher octaves of vibration, each color stimulates our particular organs and systems of the body, if one can apply the right color for the purpose of therapy or treatment or for diagnosis that can tend to balance the action of any organ that has become abnormal or functioning in an abnormal condition ²⁶.

The 19th century Color healers or Chromo therapists believed colored glass filters can treat different diseases like meningitis, constipation, sleeplessness etc. Practitioners of Ayurveda believe that a human body has seven "chakras"; sometimes it is called a "spiritual centers". And, each of the chakras can be stimulated with a single or multiple colors of the visible light spectrum and can correct such imbalances or abnormality ²⁷.

Colors have a relationship that is very close to the sensitivities of sensible designs; this can be confirmed from manifestations of colors in not only product designs, interior, and marketing, but from a variety of other fields such as color therapy, color meditation, and image consulting. The colors emphasize not only the psychological attractiveness of the appearance but also stimulates psychologically and physically through an individual color's unique wavelengths. Consequently, human beings' emotions are sensitive, and they are most reactive to changes in colors. A great deal of similar research on the relationship between human emotions and color and other factors has been carried out. The results showed that human emotions are more subjective, and Cacioppo and Gardner suggest that the "...measurement of emotions is a very bustling research field" ³.

Although, this is a complementary therapy and a couple of years of old therapy, found in China, Egypt and in India. The therapy especially used for treating a different part of the body, including abnormality if any, with the help of varying wavelengths and energy. The therapy not only helps to improve imbalance of human body parts but also help to re-balance seven chakras.

The color is absorbed by skin, skull etc. and the energy of colors affects us almost all stages like physical, spiritual and mental ²⁸.

Our life is full of positive and negative experience. These positive and negative experiences make an impression upon us. Our positive experiences help us to grow further and energies ourselves in future. On the other hand, the negative experiences manifest physically over time as diseases. This can exhibit our problem in throat chakra, which is related to the spiritual aspect of our self-expression. When our self-expression has been choked, the energy in this area will be affected to perform correctly, thus the abnormality starts and the result leads to a physical evidence of diseases.

Color has the great impact on us. Color plays a major role in setting up particular mode of mind. Colors are wavelengths of electromagnetic energy, are the part of the visible spectrum, and are reflected back by or from a certain object. The color is the part of our everyday life. The color is everywhere around us. If everything is there in the earth, there must be some reasons. So, color is no exception ²⁹.

Ancient Egyptians used solarium rooms with various colored glasses. The sun would shine the beam of the sun through the colored glass onto the patient to attain the therapeutic benefits.

Chromo therapy is not only good and effective for adults and children but also helps to relieve pain and treat animals. Always try to seek professional Color healers or Chromo therapists, who can help you to reduce pain and treat diseases that can be cured by color therapy ³⁰.

Color Therapy to Improve Your Life: Color to shape your habits, the impression you give off, and how your spaces feel.

1. When Exercising

If you want to improve your performance, choose a red outfit, and take your route downtown where you're more likely to see red road signs, red cars, and red stoplights.

2. When You Need to Remember Something

Try to get yellow into the mix. Some research has suggested it may improve memorization.

3. When You Need to Get Work Done

Avoid white walls. Studies show that employees working in white-walled offices experience more side effects like headaches and nausea than those in red or blue workspaces.

4. When You Want Some Space to Relax

Get some green into the mix. Because of its connection to nature and the environment, it's typically associated with relaxation and comfort.

5. When You Want to Refrain from Eating Too Much

If you're watching your weight, avoid yellow in your dining room. A 2007 study found that people in a yellow room ate twice as much as those in a red or blue room.

6. When You Want to Feel Confident

Try a mix of red and black. Both are associated with confidence. If you're going up in front of a room full of people, black can help you appear more authoritative and possibly sophisticated.

7. When You Need to Be Creative

Go blue. A 2009 study found that people exposed to blue were better able to explore their creative sides. Use blue in your art, crafting, or writing room, or slap on a blue piece of jewelry for a creative boost on the go.

8. If You Want to Feel Energetic and Happy

Combine orange and yellow in your wardrobe. Not only will you feel sunnier, but you'll project that image onto others, potentially helping to lift their mood.

9. When You Need to Be Calm

Going into a stressful situation? Try a combination of pastel green and blue colors. These work well in rooms in the home where you want to relax after a stressful day at work, or somewhere within eyesight when you have to confront a stressful situation. Green is particularly helpful for promoting calm in health-oriented spaces, like hospitals, clinics, and counseling offices.

10. When You Want to Be Romantic

Add a little pink to your table decorations, your wardrobe, your jewelry, or your bedroom. Pink is the color of romance, and also tends to be calming and soothing.

11. When You Need to Focus

If you work at home or have your own office, you may want to be sure you have blue in the décor. It not only calms and stimulates creativity, but it can encourage focus, helping to limit distractions so you can get your work done.

12. To Help Keep Your Spirits Up

If life has been difficult lately, it may be time to bring in more yellow to your living and working spaces. Yellow is associated with optimism and good times. Choose bright and cheerful yellow pictures, molding, drapes, or other decorations to help you feel better.

13. when you're Hosting a Party

Make sure you have some orange around! This is a lively, flamboyant color that helps stimulate energy between people, and promotes interaction.

14. when you're Tired and Just Don't Feel Like Doing Anything

Get some red on! This color creates energy and helps infuse your spirit with vitality. Rely on it to get you through a tough day.

15. If you're having Trouble Expressing Yourself

Go somewhere you can be exposed to orange. This color helps lift repressions and encourages freeing expression. If you're in a relationship and it's time to open up, use orange to give you a helping hand.

16. if you're taking a Class

Wear some yellow, as it will help stimulate your interest and curiosity. Yellow connects you to your learning self, and will help motivate you to open up your mind.

17. If You're Feeling a Bit Off-Center

Get out in nature where you can be surrounded by green things. Green connects us to the spiritual center, and brings our attention to the heart, alleviating stress and letting all those small worries just fade away with the breeze.

18. When You Need to Connect With Your Intuition

It's time to incorporate purple into your life. Purple helps us get in touch with our intuition, and is also the color associated with dream activity and psychic powers. If your logical mind is running the show and it's not going so well, get closer to your gut feelings by exposing yourself to more purple.

19- When you're Redecorating Your Home

Consider the effect of each color and what you want to feel in each room. Kitchens and bathrooms often incorporate yellow to convey happiness and joy. Dining rooms that use blue and green will feel calmer and may inhibit the impulse to eat too much. A little pink in the bedroom may stimulate romance, but you may want to combine it with blue or green to encourage a restful sleep. Your workout or exercise room would benefit from performance-enhancing red, and maybe a bit of energizing orange. A little purple in your guest room can make it feel luxurious, and is also great for creative rooms.

20- If You Want to Look Smart

Going for an interview, or trying to impress someone with your brainpower? Go for blue. It's a soothing color, but also aids concentration and is perceived as conveying intelligence.

Color Psychology as Therapy:

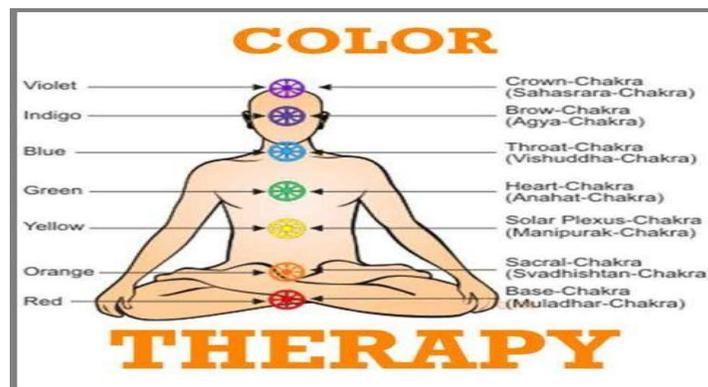
According to the Art Therapy Blog, the use of color to help people heal goes back to the ancient Greeks, Egyptians, and Chinese, all of whom used color to try to affect the mental states of people through the colors used to decorate rooms, the incorporation of natural colors to induce a calm state, and the use of light to balance mental states. In fact, for at least one condition – seasonal affective disorder, or SAD – research has shown that light therapy can help to mitigate the depression and anxiety caused by the disorder, as referenced by Mayo Clinic. Similarly, it is believed that different colors can induce specific emotional or mental states that can change mood, the level of anxiety, or the individual's perception of a situation.

Benefits of different colors:

- a) Light is considered to be one of the purest healing forces in the universe. The presence or absence of light can affect the Hypothalamus, Pituitary and Pineal glands. This, in turn, can influence our physical and mental health. We've listed a few of the various benefits that come from using colour therapy below:
 - b) Safe and pain-free so it can be used for children, adults and elderly alike
 - c) Addresses the physical symptoms of an ailment and also its non-physical origin
- Balances the Chakras in the body
 Has a positive influence on not only physical levels but also mental and spiritual levels
 Helps meditation and relaxation, and can enlighten and transform an individual
 Eliminates emotional blockages before they can manifest as mental or physical illnesses

Apart from these benefits, colour therapy can improve awareness and help individuals understand the need for including certain colours in their daily lives. It can also help natural healing in a body, enabling overall well-being³¹.

Colour therapy is a safe and effective treatment and can be either be used on its own or alongside another therapy like physiotherapy or traditional medicine. Regardless of how it's used, it is important to understand that the therapy can strongly affect the mind and body. That's why it is vital that individuals seek out a professional colour therapist who is well versed in this area of treatment, should they consider this method. It is also recommended that you consult a qualified medical physician before engaging in a colour therapy treatment.



COLOR	BENEFIT*
Red	Activates the circulatory and nervous systems.
Strong Pink	Acts as a cleanser, strengthening the veins & arteries.
Pink	Activates and eliminates impurities from the blood stream.
Orange	Energizes and eliminates localized fat. Helps address asthma and bronchitis.
Strong Yellow	Strengthens the body and acts on internal tissues.
Yellow	Reactivates and purifies the skin. Helps with indigestion and bodily distress.
Green	Acts as a nerve relaxant.
Strong Green	Provides anti-infectious, anti-septic and regenerative stimulation.
Strong Blue	Lubricates joints. Helps address infections, stress and nervous tension.
Blue	Stimulates muscle & skin cells, nerves and the circulatory system.
Indigo	Helps address eye inflammation, cataracts, glaucoma and ocular fatigue.
Violet	Relaxes the nerves & lymphatic system. Addresses inflammation and urinary illness.

Research findings: A small study, 64 college students were randomly exposed to scenarios suggesting anxiety, calm, or neutrality. Participants were then instructed to use their choice of colors to complete a standardized pre-drawn mandala, similar to a color wheel. The results were evaluated for use of colors considered warm (anxious) and cool (calm) and found no statistical difference in the choice of colors used by the participants. Our body perceives light rays through the retina of the eye. The subsequent chain of events involves complex mechanisms of the autonomic nervous system³². In a study to evaluate chromo therapy in healthy people, more than 110 participants were randomly assigned to 1 of 3 groups: those exposed to specific colors, those exposed to specific modulations in light frequency, and a placebo group of those exposed to non-modulated white light. Measurements of autonomic function (heart rate, heart rate variability, skin conductance) were noted before and after the study. Results revealed significant changes in these measures in the treatment groups compared with the placebo group³³. Another uncontrolled study from 2000, viewed by some as purely anecdotal, showed that in Glasgow, where blue light street lamps were installed in several neighborhoods, the crime rate had decreased significantly after several months.

All color effects undoubtedly depend on certain conditions – culture, gender, age, type of task, variant of color, etc. – and acquiring an understanding of these conditions will represent an important marker of maturity for this literature for movement in this direction. Another, more succinct, way to state this third weakness is that theorizing in this area needs to take context, in all its forms, more seriously³⁴.

CONCLUSION

Color therapy could be viewed from diverse aspects such as its role in different cultures. Decreasing physical and psychological disorders and its effect on working climate, industry, creativity and in particular medical and hospital settings are just some of the examples of color therapy. Although color therapy has several benefits, it may be injurious, when we could not use color therapy appropriately. Some physicians and psychologists have questioned color therapy and believe that its effect, if any at all, is temporally. However, color therapy, if used as a complement seems to be reasonable to improve patients' mental health and well being.

The primary conclusions that we take from this review are these:

- The use of colour in healthcare settings currently is not based on reliable research.
- The attempt to formulate universal guidelines for appropriate colours in healthcare settings is, according to Tofle et al, “ineffectual”.
- We need to study systems, practices, and experiences outside of the laboratory, in their local context.
- We need to coordinate the methods that should be used to study and use colour in healthcare environments and these methods should be able to meet “the challenge of validity.”

Clearly, the research of colour in healthcare environment is important but, the subject matter is complex and multifaceted so our approach to research and design practice must change. Giving the last word to Tofle et al : “As designers, we need to discover what is important rather than assume that guidelines can cover every possible eventuality and provide solutions for all design challenges.”

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