Color and Healing

The Power of Color in the Healthcare Environment

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“Research reveals people make a subconscious judgment about a person, environment, or product within 90 seconds of initial viewing and that between 62% and 90% of that assessment is based on color alone.” – CCICOLOR: Institute for Color Research

Color is a powerful medium that can stimulate positive emotional reactions, which promotes conditions for recovery.¹ The word healing comes from the Anglo-Saxon word Haelen, which means to make whole.² Healing reduces stress and anxiety, which in turn positively impacts us.

There are several factors involved in creating an environment and color is an important component. There is a great deal of research that links physical environments in hospitals to health outcomes. According to Ulrich and Zimring, authors of the 2004 report, “The Role of the Physical Environment in the 21st Century Hospital,” there are now more than 700 credible studies that link healthcare design and its influence in medical outcomes.

Despite the varying research, we believe we can engage in a color dialogue and the way we use it within healthcare environments. It is clear that color can be used as a powerful tool and can provide interesting, rich and arresting breaks from the expected neutral palettes of the past. We can also learn much about the healing power of color by observing how it appears in nature.
EFFECTS OF COLOR

The impact of color far exceeds aesthetics. “The truth is,” states British color psychologist Angela Wright, “that color affects us physiologically as well as emotionally.” Since color stimulates the nervous system, it can influence mood and provoke reactions. As a consequence, the use of color can make environments more peaceful and less anxiety provoking. This translates into a positive mood, which encourages the healing process.

Faber Birren conducted color research and determined that bright and vivid color could arouse and increase autonomic functions, blood pressure, heart and respiration rate. This results in a tendency to direct attention outward. Conversely, his studies showed that dimness and softer colors create an inward response - one of calm and repose.

COLOR APPLICATION AND HEALING

Over the centuries, many cultures employed color for its healing powers. Egyptians designed chambers to produce a ray of prism light for healing the sick. In the Indian culture, each color is assigned to energy centers in the body. The field of Chromotherapy uses color as a therapeutic tool for treatments. One of the first examples of color application and healing is the Paimio Sanatorium. It was built in the woods of Finland to help those suffering from tuberculosis. The architect, Alvar Aalto (1898-1976), devised a creative palette that was proven to aid in the healing process.

There have been numerous studies published about color in healthcare. The Coalition for Health Environments Research conducted a study to determine what is really known about color influence. They concluded that the study of color in healthcare settings is challenging because it occurs in the context of meaningful settings and situations where personal perception and judgment come into play. This is further influenced by physiology, culture, time and location.

It is also important neither to separate the perception of color and light, nor to oversimplify the application of color in specific healing environments. While scientists, designers and healthcare professionals agree that color can have an effect, it should not be viewed as a simplistic remedy. There are many other factors that must be considered when selecting healthcare colors such as the generational preferences and needs of the patient as well as the physiological perception of the aging eye.

Being familiar with the meaning of color and its impact on emotions provides the basis to engage in a color dialogue and the way in which color can be used as a powerful tool to enhance the healing environment.
COLOR BY NATURE

Pallas Textiles and KI have researched color to develop a deeper, holistic understanding of its power in healing and the healthcare environment. The following chart summarizes the meaning and effect of each color group relative to emotion, the body and healing – from our research and a Western perspective. Nature has healing components. The Pallas Textiles product line has been thoughtfully organized into simple categories based on color and nature to serve as a guide for applying a particular group to a healthcare project. Most important is to use and mix color as purely and effectively as it is found in nature.

Light Cool Neutrals – Clean
Often pale, white gives the feeling of purity and neutrality. It can connote mental clarity and fresh beginnings. Overall, white projects cleanliness and purification. Gray is a true neutral and can be restful. It can create a noninvasive feeling and can cool more vibrant colors.

Dark Cool Neutrals – Clean
Black is authoritative and can evoke a feeling of mystery or emptiness. Culturally, we have come to view black as sophisticated.

Earth Tones / Light and Dark Neutrals – Grounding
All warm earth tone colors such as grays, beiges, browns, etc. ground you and help you feel sedentary and stable. The earth tone color family is approachable and warm. It is a color family that is familiar and soothing.

Yellow – Optimistic
Yellow stimulates the intellect and makes us alert and aware. Yellow reflects more light and can fatigue the eye, much like white. It is warm, inviting and uplifting. In healthcare, certain hues of yellow work where others are more difficult. In the body it responds to chest, heart and lungs. Tony Torres documents in his book In My Room that children with asthma and breathing problems react most favorably to yellow.

Orange – Energetic
Orange is associated with joy. It radiates warmth. In the body, it is associated with circulation and the nervous system. It can have a tonic effect that is as powerful as Vitamin C. Orange is attention-getting and can be very playful. There are studies linking orange to increasing oxygen supply to the brain.

Red – Bold
It is shown that red releases adrenaline, which elevates blood pressure and quickens the heartbeat. It is exciting and energizing. It is often attention-getting. With regard to the body, it is associated with the spine and motor skill activities.
Pink – Soothing
Gentle and typically feminine and warm, pink is caring and affectionate. It is a color of love and tenderness. It can be protective and full of compassion. Pink is a happy color and can often be lighthearted. If it is bright, it can stimulate energy and respond like red. However, when used in prison cells and institutional settings, it can effectively reduce behavior that is erratic. (http://www.therapycolor.com/BakerMillerPink/)

Purple – Meditative
Purple and violet typically are linked to creativity and spirituality. It helps to develop insight and perception. Violet in the body corresponds to the top of the head, the nervous system and cerebral activity. It often supports non-verbal activity. There are varying associations culturally from royalty and dignity to mourning.

Green – Balanced
When the eye perceives green, it makes no adjustment; thus green is thought to be restful and healing. It is also the color associated with balance, harmony and renewal. It represents a sense of equilibrium and because it is the color of nature, it is comforting and stress relieving. In the body, green relates to the heart, lungs, circulatory system and the complete chest area.

Turquoise – Refreshing
This unique blend of green and blue is vibrant and invigorating. It is particularly suitable to healthcare because it is reminiscent of relaxing environments of pure, fresh water. You find it in spas because of the way it soothes tension and stress.

Blue – Calm
Blue has always been connected to calm. It is infinite, and its association with sky makes it heavenly. It lowers blood pressure and the heartbeat, and allows for deep breathing as it relaxes muscles and the mind. It is a color for communication. In the body, it correlates with the eyes, ears and nose, and involves seeing, hearing and smelling.
COLOR APPLICATION

Important additional data regarding color application:

- In the Radiology suite, colors can be used to positively influence patient mood and promote relaxation. Colors can drape the clinical environment and technologies in a friendly, soothing light, easing fears and making the examination procedure less intimidating. This colorful approach can be extremely helpful when dealing with patients who are anxious or claustrophobic. Since a calmer patient moves less, the risk of possible motion artifacts will be reduced, contributing to a higher imaging quality.3

- In pediatric environments, soothing yet interesting colors communicate a safe, warm and secure place, while brightening dispositions and acting as stress relievers for both little ones and those who care for them. Finally, in elder care, the use of color is especially important when considering the impact of age on vision acuity. In these kinds of environments, the use of light, warm colors is recommended as well as yellow, orange and red in poorly lit conditions to provide points of focus. No matter what kind of clinical environment you’re designing or renovating, consider color and the people who inhabit that clinical space. The effects color can have on patients work the same way for providers, leading to a healthier environment for all.3

- The Society of Critical Care Medicine recommends using calming colors that promote rest in critical care units (Fontaine et al., 2001). Blues, greens and violet are appropriate, because they have healing and calming influences and are stress-reducing colors. Reds, orange and yellow colors should be avoided, because they induce excitement, increase blood pressure and can cause fatigue (Starkweather et al, 2005). Many studies have concluded that cool colors have a tendency to calm, whereas warm colors excite.5
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