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## **THE INFLUENCE OF COLOROLOGY ON PATIENTS' PSYCHOLOGICAL AND MENTAL HEALTH**

The aim of this study was to discover and investigate the psychological effects of colors on healthcare environments. The questionnaires were drawn up and distributed to Bachelor's degree students of Zhytomyr Medical Institute, the survey was done on SurveyMonkey.com platform, taking into considerations the international students' answers too. The scientific literature and other sources relevant to a particular *problem were examined and compared*. On the basis of this research the data from different material were received and analyzed.

This research would contribute to understand more about colors; to highlight and demonstrate links between particular colors and shades, their psychological and physiological effects on individuals including patients and doctors (healthcare environment) in order to make proper outcomes in choosing colors for different spaces to suit the aim for which they are designed; to consider the psychology of color when designing healthcare facilities and wards.

Color has always been known to have both psychological and physiological effects on people. [1] Despite the general lack of research in this area, the concept of color psychology has become a popular topic in marketing, branding, advertising; art, literature, design and other areas, including health care.

Particular colors have been associated with increased blood pressure (BP), metabolism, eyestrain, weakening the immune system and in this sense, affect patients' mental, emotional health too.

It is important to underline, international scientists have made a few meaningful discoveries and observations about the psychology of color and the effect it has on patients' moods, feelings, behaviors, it can also affect their temperaments and reactions. [2]

If lower stress levels and positive mood improve health [3], and if certain colors can encourage calmness and happiness, then those colors would have an indirect effect on overall health, patients' conditions.

A few ancient cultures, including the Egyptians and Chinese, carried on chromotherapy, – the use of colors to heal. Chromotherapy is explained as light therapy or colorology and is used nowadays as a holistic or alternative treatment. According to colorology: red color was used to stimulate the body and mind, to increase blood circulation; yellow was considered to stimulate the nervous system and purify the body; orange was used to heal the lungs and to boost energy levels; blue was believed to soothe illnesses and treat pain, ache; purple shades were stated to alleviate skin problems. [1]

The given results of many color studies prove that colors are needed to be used in hospitals. The survey proved, a simple way to strengthen calmness is to paint the walls soothing colors. The survey proves cool colors tend to be more calming, so objects that

are in blue and blue-green colors really put people at ease because they add a sense of tranquility.

Avoiding bright colors (red, orange, yellow), particularly in adult rooms, is also important, as those colors tend to raise anxiety levels, encourage nervous system to be tensed and worried.

In a children's hospital, however, utilizing more vibrant colors such as yellows and oranges may help the children to feel a little more relaxed and happy, reducing their stress and anxiety. [4]

Our survey and research have proved that light blue walls in a patient room (a ward) encourage the recovery process. However, a red wall slows recovery. Color in healthcare facilities can affect mood, which has an impact on health.

**It is needed to mention**, when a patient enters the hospital, the first thing he notices is either a wall or the ceiling. According to Forbes, walls painted with lighter shades have proven to make people feel accepted, while that of medium shades helps create trust. It was also found that brown is the color that not only provides sophistication but also a comforting option for potential patients. [5] According to Color Connections, different colors come with a set of psychological properties that aid in healing. **Red color** raises blood temperature and stimulates circulation. Red is used to care for people with anemia, fatigue, paralysis, and exhaustion. **Blue** is soothing, symbolizes the sky and sea. It lowers the heart rate, allowing the body quiet time to heal itself. In addition, blue helps alleviate tension, stress, and problems with the immune system. It is believed to decrease insomnia, anxiety, high blood pressure, migraines and skin irritations. **Yellow** is used to heal digestion as well as the liver and intestine process. Yellow is thought to have decongestant and antibacterial properties to act as a cleanser for the body. It has been known to help relieve rheumatism and arthritis. **Green** sets up balance and harmony within the body. The analyzed survey explains green colors are especially good for heart and blood problems. It is known to influence the human cell structure and muscles. Moreover, green is the complementary color to red. If a surgeon looks at a lot of blood, the afterimage from the surgical site could be neutralized with light green colors. **Orange** helps with the kidneys, urinary tract, and reproductive organs. **Purple** is associated with the eyes, ears, nose, and mouth. It helps with head congestion and sinuses and is known to calm the nervous system. **Pink** is a healing color that helps to calm down. [5]

It is important to underline, colors influence a person's perception towards the surroundings. Selection of colors for patients' room and appropriate use of colors in a healthcare facility also depends on the purpose of the room or the area. Colors can accelerate healing, lift spirits and calm nerves, they are capable of influencing human behavior.

To sum up, interest in the subject of color psychology is growing, but there remain a number of questions. More scientific research is needed to gain a better understanding of color psychology. Specifying particular colors for healthcare environments in order to influence emotional states, mental or behavioral activities, is needed to be studied and used in design of hospitals and health care centers.

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