The psychology of colour

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Abstract

How the use of colour in interior design can help to create healing environments

Boex used rich colours to create age-appropriate relaxing areas for young people of all ages at The Everybody Centre in Blackburn

In recent years there has been a growing acceptance that the healthcare environment can have a significant impact on a patient’s perception of their medical care and, in some cases, on their actual recovery. Here we explore the psychology of colour and how well-chosen hues on walls, floors and furniture can have a positive, or indeed negative, effect on a person’s health and wellbeing

“Colour in a healthcare environment should do much more than just make the building look attractive. Well-chosen decor can contribute positively to the creation of an environment in which patients can feel comfortable and at ease.”

This is the claim made in the paper, Transforming the healing environment: Choosing colours and products that make a difference for patients. Produced by paint specialist, Dulux, the document explores the use of colour in healthcare facilities, and explains how, used well, colour can aid the healing process.

For example, research into the impact of certain colours has shown that orange stimulates the appetite, while blue can suppress it. This has led to the creation of very specific colour schemes for dining rooms in mental health facilities treating people with anorexia.

However, orange also stimulates mental activity, so is often avoided in mental health units treating those with more intense psychological conditions.

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Aside from how colour makes patients feel, it can also have an impact on diagnosis. Patients at risk of low oxygen levels or cyanosis present with blue or purple skin colouration. Reflection from yellow surfaces has been found to minimise observation of blue skin tone, while reflection from blue surfaces can unnaturally enhance cyanotic tone. In the same way, yellow or blue surfaces can make observing babies with liver disease, who present with yellowing of the skin, more difficult.
The true impact of colour is not always obvious, as yellow, while associated with joy, happiness, intellect and energy, is also known to make babies cry more, so is often avoided in maternity and neonatal wards; and red, while energetic and powerful, raises blood pressure, so would not be the best choice for a cardiac unit.

The Dulux research divides the healthcare environment into three separate areas, each with its own specific colour needs.

In all three – public, patient accommodation and treatment rooms – a softer neutral colour should prevail, the experts claim, but interest and impact can be created through the use of accent colours in well-chosen areas.

**A place for everything**

In waiting rooms colour schemes should be uplifting and interesting, with accent colours used to highlight different departments and to create modern and temporary environments.

Corridors and receptions can often be confusing, so to aid navigation and wayfinding, long corridors can be divided with strong accent colours, either for directional purposes or to identify different departments. Areas behind reception desks, in particular should stand out. Warmer palettes can then be used in public areas such as restaurants and cafes.

In patient rooms, interior design should be light and fresh. To give interest, a softer palette can be used to highlight key features such as behind sinks, cupboard doors or window walls.

Colour is a brilliant way of creating impact and enhancing spaces on a relatively tight budget

Children’s wards need to be interesting and vibrant using a simple combination of pure accents to create an impression of fun, and clear and unsophisticated colours to reduce anxiety and confusion.

And intensive care units should be calming and restful, with soft neutral tones; while consultation rooms need warn neutral colours in the main, with accent colours only where visual diagnosis does not take place, such as behind desks.

Operating theatres need extra special consideration, with walls usually painted green or blue/green in colour. This is a very deliberate move to counteract the effect on the eye of prolonged staring at the deep red of open wounds. As green is the complimentary colour to red, it can neutralise the after image produced by the surgeon’s concentration. A cooler, muted palette is recommended in these areas.

Colour contrast is vital in dementia care settings, where cognitive and perception problems can lead to falls and increased anxiety.

Research has shown that changing the colour of a toilet seat to a shade at least 30% different to the rest of the toilet means dementia sufferers can see where to sit, avoiding potential falls or spills.
Vibrant colours from the Dulux healthcare range were also used in the new children’s hospital and head and neck centre at the John Radcliffe Hospital in Oxford, both to enhance the surroundings and help with signposting and zoning.

**Making a difference**

Sarah Waller, programme leader of the King’s Fund’s Enhancing the Healing Environment programme, which has funded design changes to hospital dementia facilities, said: “It is about helping people to know where they are, helping them to find their bed area, and giving them something familiar to do or to look at. It’s the little things that can make an enormous difference.

“A tin of coloured paint doesn’t cost any more than a tin of traditional magnolia paint, but the effect it has is significant.”

The link between colour and the patient experience is further considered in The Application of Color in Healthcare Settings by Sheila J Bosch et al.

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The paper offers some insight into how colour affects the senses. For example, bright colours appear to be lighter in weight, with red the heaviest and yellow the lightest. Bright objects are overestimated in size, with yellow appearing the largest and black the smallest; while a light object appears larger against a darker background, and light colours with small patterns visually enlarge a space.

It states that while the current research is far from overwhelming, designers are being encouraged to use colour, adding: “The lack of color (white walls) is unfamiliar to some, considered modern by others, and, for many years, has been one of the hallmarks of what has been referred to as an ‘institutional’ environment. Consider this publication a baseline that perhaps will stimulate much more research about the influence of color. But for now, go forth and use color. The more you do it the more confident you will become.”

And Health in Wales’s *Lighting and colour for hospital design research and development* report, adds: “In hospitals, a properly-designed visual environment, with the appropriate use of colour and lighting, will have important benefits. It can make the hospital experience more pleasant for a wide range of users from the elderly to the very young.”

**Colour and contrast**

Examples of where colour has been used to enhance the environment include at The Everybody Centre at the Barbara Castle Way Health Centre in Blackburn, which offers health and wellbeing services for young people aged between 14-24. With such a big age range to cater Designed by Boex Healthcare, colour was a key element in the interior design, helping to break up spaces and enhance mood, with each private consultation and waiting room taking on its own colour identity, giving young people a choice dependant on their mood. The accompanying reception area and waiting room carry through the colour palette of the pods with bright hues present within wall decoration and seating.

Boex also created a colour-filled children’s playroom in the neonatal intensive care unit, the Dyson Centre, in Bath. It was designed using vibrant pinks, lime greens and orange hues; while in two waiting rooms for older children at Salisbury District Hospital, darker purple and blue hues were mixed with lime green and oranges to be more age appropriate.

The company’s Sam Boex explained: “Colour is a brilliant way of creating impact and enhancing spaces on a relatively tight budget.

“In particular, it can help with wayfinding and to identify individual areas, as well as having a massive impact on patient wellbeing as in the case of dementia patients, where the use of colour can prevent trips and falls by helping objects to stand out.”

**References**

Dulux worked with the Dementia Services Development Centre at the University of Stirling to develop to develop paint ranges specifically for use in dementia care environments, where colour can help with wayfinding.

**Companies**

- Boex
- Salisbury NHS Foundation Trust
- John Radcliffe Hospital
- King's Fund
- Stirling University
- Dulux

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