

Rector's Office
Auenbruggerplatz 2, A-8036 Graz

Victoria Zotter, MA BA
Public relations and event management

victoria.zotter@medunigraz.at
Tel +43 / 316 / 385-74065

Press release
For immediate publication

The recovery process: The effect of color and art in a patient's room
Focus on patient quality of life after an operation

Graz, 20. October 2021: Hospitalization can be a thoroughly stressful event connected not only with pain but also with fear. Since the general well-being of patients is an important factor in rehabilitation, a team at the Med Uni Graz Department of Orthopaedics and Traumatology investigated the effect of color and art in hospital rooms on the recovery process. Based on its observations, it appears that there is great potential for colorfully designed spaces in the health care sector.

Well-being as an important factor in rehabilitation

Osteoarthritis is one of the most common joint diseases in adults. Individuals who are affected suffer from chronic pain, limited mobility and reduced quality of life. Hips and knees are primarily affected, which is why advanced arthritis often requires implantation of an artificial joint. Prior research on complete joint replacement has concentrated on clinical findings such as postoperative complications. The team of department chair Andreas Leithner wants to go one step further and explore ideas that affect general well-being during hospitalization. "As studies have indicated, patient well-being plays an important role in rehabilitation, and the clinical environment has a clear influence on fear, stress response, sleep and pain tolerance. Frequent disturbances, noise or (too) bright light have been described as problematic environmental factors that influence psychological components," summarizes Andreas Leithner. The doctors seldom found indications of the influence of color on patient recovery, which is why their goal is to observe this in patient rooms with regard to mood, fear, quality of life and pain after the operation.

Prospective study with 80 participants

The team conducted a prospective, randomized controlled study of 80 patients recruited from the Med Uni Graz Department of Orthopaedics and Traumatology. Since total hip or knee endoprosthesis becomes necessary primarily in older individuals, people 50 years and older were included in the study. While the intervention group was accommodated in colorful patient rooms, the control group was treated in a standard room with white walls. The colors were selected in accordance with the ideas of Graz artist Richard Kriesche, who developed six color codes for the intervention rooms under the assumption that bright colors have a calming effect on mood. These color codes were also framed as artistic pictures and hung up in these rooms. Each patient was accommodated in a room with multiple beds and shared the room with three other patients. Each room had two windows. Since the view out the window might have an influence on mood, each group stayed in rooms with the same view. The patients were questioned once before the operation and

then at two different points in time after it (days 3 and 6). Mood, fear and depression, quality of life and pain as well as chronic diseases were documented.

Significant positive effect of color on postoperative quality of life

No postoperative complications occurred in any of the groups, nor was there any difference between the two groups in terms of length of hospitalization. Slightly more than half of the patients were male (56.3%) and the average age was 67.3. Compared to the first and second points in time after the operation, the results on the day they were admitted revealed a worse mood and greater fear in both groups. "We assume that these results reflect preoperative stress due to the planned surgical procedure. Earlier investigations that indicate a similar amount of preoperative anxiety confirm our results," reports study coordinator Sandra Eminovic. With regard to mood, no significant differences were detected between the two groups after the interventions. However, the observations on quality of life painted a clear picture: "The results on quality of life went up continuously in both groups after the operation, yet interestingly six days after the operation, significantly higher values were observed in the intervention group," says Andreas Leithner. The scientists suppose that this could be a positive psychological side effect of the rooms being more individually designed than usual and thus the patients feeling more comfortable in this environment.

Consideration of the use of color in planning or renovating hospitals

The use of color in hospital rooms can be an effective and lower cost measure that improves well-being and possibly fosters more rapid rehabilitation. "Our findings are useful for planning future renovations of hospitals," says Sandra Eminovic. Since greater impacts on well-being were observed at a later date, it is assumed that significant findings can be detected in the event of longer hospitalization. Studies should concentrate on patients who are in the hospital for a longer period of time, for example at rehabilitation clinics, recommends Andreas Leithner. "Further studies are necessary to confirm the findings in a larger cohort. In addition, the impact of the medical environment including other influencing factors such as light, sounds, temperature or patient perception of the physical environment must be taken into account," concludes the study team.

Further information and contact

Andreas Leithner
Medical University of Graz
Department of Orthopaedics and
Traumatology
Auenbruggerplatz 5, 8036 Graz
Tel.: +43 316 385 72003
andreas.leithner@medunigraz.at

Richard Kriesche
Kirchengasse 1/14a
8010 Graz
Tel.: +43 664 2113803
richard@kriesche.eu
<http://kulturdata.joanneum.at>
www.medienblock-richard-kriesche.at

Profile

Richard Kriesche is a media artist and theorist. He has held professorships at the University of Art and Design Offenbach am Main and Beaux-Arts de Paris and participated in more than 300 national and international art exhibitions including documenta Kassel twice and la Biennale di Venezia three times. Richard Kriesche was the first Austrian artist to be awarded a Biennale Honorable Mention. He is currently working on the topic "*echtzeitästhetik*" (real-time aesthetics).

Link to publication

Positive effect of colors and art in patient rooms on patient recovery after total hip or knee arthroplasty: A randomized controlled trial

<https://link.springer.com/article/10.1007%2Fs00508-021-01936-6>



Photos: Color codes are framed as pictures and hung up in patient rooms.