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Art as Contextual Element in Improving Hospital Patients' Well-being: A Scoping Review

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Abstract

The study investigates how visual art as a contextual element affects patients' well-being and experience of healthcare facilities, especially in hospitals. Placing artworks into hospital rooms may be one way to improve these experiences, and, for example, applying virtual reality can offer new opportunities for increased well-being. A total of 29 research articles indexed in three databases (Arts in Medicine, PubMed, PsycINFO) were included in the review. They were selected using thematic searches. The study shows that systematic research supporting the value of art in the healthcare sector is still limited. Moreover, it acknowledges clear positive effects of art on patient outcomes in a hospital context. It is concluded that artworks can positively affect the mood of patients and offer them means to better cope with mental and physical health conditions although more research of different art practices in hospital contexts is needed.

Keywords:

Art-viewing, context, hospitalisation, well-being, healthcare; stigma, virtual reality, visual art

Introduction

According to Aaron Antonovsky (1979), human experience of well-being falls in the continuum between *salutogenesis* (health) and its opposite, *pathogenesis* (disease/disorder). Lifestyle and our choices determine how we move within the spectrum, and the consequences of our behaviour affect how we are orientated towards the future. According to Eike von Lindern et al. (2017), one of the foundations for well-being is dependent on the help restorative environments can give us for maintaining our sense of coherence by enhancing manageability, meaningfulness and comprehensibility.

In sickness, we may need intensified medical care, so our physical context is often a hospital environment, which is hopefully designed to enhance well-being and help us cope with stress and pain. Considering the impact of visual artworks in hospital settings from a contextual perspective can provide new ways to shape those processes affecting healing. One example of the art's

significance for well-being is the 'BIG Anxiety Project' by the UNSW Sydney in Australia, which drew on art and design interventions to engage the public and enhance their knowledge of mental health (Larsen et al. 2018).

The importance of art in healthcare has become more widely acknowledged in recent years with studies demonstrating different health benefits art may have. These include, for example, positive physiological and psychological changes, shortened hospitalisation periods, better doctor-patient relationships, improvements in mental healthcare and development of empathy in health practitioners in different community settings (Camic 2008). The benefits of art therapy have also been widely studied and acknowledged in the healthcare context (Fancourt and Finn 2019).

Louis Tay and colleagues (2018) speculated that it does not matter what kind of cultural activity or genre of art is used to enhance well-being. Connecting with the artwork in terms of one's personal interests and cultural values is more important. They emphasize that individuals are more sensitive to certain types of arts and humanities, and the greater the sensitivity, the greater the potential well-being effect. For example, some people value music over visual art or literature. For those people, engaging in musical activities is more beneficial than going to see an exhibition at an art gallery (Tay et al. 2018). Even so, it may be advisable to apply visual art to different environments because unlike performance art, visual artworks are more permanent as they remain observable in an environment for a long time. Other ways to enjoy art and unique environments is through virtual reality (VR). Studies have shown that VR may, for example, decrease symptoms of distress through distraction during cancer treatments (e.g., Schneider et al. 2003).

The purpose of this study is to evaluate the impact of art (with focus on visual art) in the hospital context by examining the current evidence through a literature search and provide a background to our own observations. Art in this context refers broadly to most forms of visual expression such as paintings, photographs, sculptures, but also reproductions of artworks. The main questions are: 1) How does art-viewing in a hospital environment affect patients' well-being? 2) What type of art is beneficial, and how does art in patient rooms effect the hospital stay? 3) How can viewing art be used to reduce the stigma of mental health conditions? 4) What do virtual reality and other technologies bring to patient care?

Methodical considerations

Research material

The reviewed material included articles indexed in three databases: Arts in Medicine, University of Florida, focusing widely on the benefits of the arts for public health and medical science; PubMed, maintained by the United States National Library of Medicine at the National Institutes of Health,

U.S. Department of Health and Human Services; PsycINFO (Ovid), produced by the American Psychological Association (APA). The reviewed journal articles cover the current research as evidenced in these databases.

The databases were inspected in December 2018 and 2019, checked again in May 2020. A special revision was made in August 2020 on 'Arts in Medicine' concentrating especially on articles published in the *Journal of Applied Arts and Health (JAAH)* and *Arts and Health* as specialist journals.

Design and analysis

The use of keywords varied because the related databases are collected with different content emphases. After the initial choice, the article titles and abstracts were examined and everything relevant to the subject of arts improving health was included. The process was the following:

1) Arts in Medicine. A general keyword 'psych' was used to find articles on arts and personal health. The search provided 297 titles, and after inspection, the final selection provided 203 articles. The extra revision gave two more titles, totalling 205 articles.

2) PubMed. Because of its wide content spectrum, a more precise keyword search was used. The search words were 'art', 'psychiatric illness', 'mental health' and also 'hospital' to further specify the search. The word 'antiretroviral', a word often used in the HIV/AIDS-research, was excluded because its abbreviation 'ART' mixed in with the results. The search provided 229 titles, and after inspection, the final selection was 107 titles.

3) PsycINFO. With the search terms 'art', 'hospital', 'psychiatry' and 'environment' 2483 articles were found. The final selection was made by using 'visual art' instead of just 'art' (including all manner of artforms such as dance and performance art) as a search term. This adjustment gave 40 articles.

After the selection process, the abstracts of the articles were examined closer. The new selection comprised articles with a clear research design on the topic of art in hospital environments and active care, patient mood, recovery speed, and how art can help cope with psychological/physiological trauma and stigma. Editorials, reviews and opinion pieces were excluded. The total amount with this emphasis was 38 articles. The final selection made with the chosen study questions in mind comprised 29 articles. No duplicates were included, but some articles answered several questions. The articles were arranged according to the chosen research questions and a thematic analysis was conducted.

Subsequently, inspired by the research reviewed here, we have implemented an art-viewing programme for patients with eating disorders and depression at the Vaasa Central Hospital in Finland, which we will discuss later on in the article.

Credibility of the findings

For credibility of the findings, it was taken into consideration that the chosen databases are well established as reference-bases in healthcare settings and the use of art in those settings. Arts in Medicine has a wide collection of research and other texts on projects showing the connection between art and medical as well as psychological care. The healthcare databases, PubMed and PsycINFO are recognized in the field of evidence-based medical and psychological research.

To ensure the relevance of the findings, the review conducted by the main researcher (Kristina Timonen) was verified by a senior researcher (Tero Timonen). Mutual agreement was reached by checking the use of keywords in the database search and conforming the division of the articles into the related research questions. In unclear situations and disagreements, the observations were discussed in order to reach agreement.

Findings : The effects of art-viewing

In this section, we discuss five effects of art-viewing that we found in our findings: the impact of visual art on the environment and atmosphere, positive benefits and enhancing the patient experience, types of art and its effect in patient rooms, effect on stigma, and virtual reality and other technologies.

Impact on environment and atmosphere

Perhaps not surprisingly, one impact of visual art was on the environment and atmosphere in medical settings. Shigeko Takahashi studied the effect pictures can have on mood in the mid-1990s. He found that the attributes of texture (of the lines: thick, rough, smooth), as well as rhythm (drawing speed and motions of the pencil according to mood) might be responsible for the effect drawings have on the viewer's sentiment, and it can remind about situations associated with particular emotions (Takahashi 1995). This is similar to Max Liljefors's (2020) recently made distinction between the sensation of presence and the interpretation of meaning in artworks.

Artworks alter the hospital atmosphere, often making wards feel warmer and more homelike. This was discussed in the Western European context in a Norwegian study by Mette Ingeberg and colleagues in 2012. They discovered that both figurative and non-figurative art promote discussion and reflection in patients, even when the healthcare staff saw non-figurative art

as a disturbing element. In one patient, a non-figurative artwork evoked memories of a ‘wonderful journey’ to France (Ingeberg et al. 2012: 28). Another patient interpreted the same artwork as ‘sharp-looking arrows’, which the researchers note could be an indication of paranoia (Ingeberg et al. 2012: 28). Without having an image of the artwork or identifying information about the artist and title of the piece by which to appreciate the patients’ responses to it, readers of the Ingeberg et al. article are left to wonder what patients actually saw. We believe it important for researchers to document, whenever and however possible, the artwork in their reports to provide needed context for readers.

Susannah Colbert and collaborators’ findings in 2013 showed that art can be an important factor in providing distraction from distressing symptoms. In a study by Catherine McCabe et al. (2013), an art application called ‘Open Window’ was shown to have a positive impact on patients’ health-related quality of life. This practice gave patients access to a virtual window in their rooms showing nine different art channels and other media experiences that they could choose from. Participants felt that the trial provided connection with the outside world and was a positive distraction for them.

Chia-Hsiu Chang and colleagues (2013) studied the effect of visual art on nursing home residents in Taiwan. The nursing home walls were painted with pictures of familiar scenes from the residents’ lives, such as the old ‘Alishan Forest Railway’ with its red cars. Each ward had a unique theme, which helped residents and visitors with orientation. The researchers note that visual art can help reinforce dignity of nursing home residents.

While observing art, directions and prompts can have beneficial effects. Rainbow Ho and colleagues (2015) demonstrate how patients receiving directions while reflecting on artworks can achieve some therapeutic effect, and feelings of relaxation and peacefulness often emerge. They also argue that the healing effect art has on individuals may be affected by how one engages in art.

When considering the impact of representational paintings, Florence Gelo et al. (2015) found that those of landscapes and natural scenes in particular create positive response in patients. Discussing images, especially those with a narrative content that awakens feelings and encourages personal storytelling, may help patients ‘find emotional support, hope, and reassurance’ (Gelo et al. 2015: 51). For people suffering from psychosis, art can be a means to explore their life experiences and modify the dominant narrative regarding psychosis within their personal stories. The study included prints of famous paintings, such as *Room in Brooklyn* (1932) by Edward Hopper and an image of the sculpture *Ugolino and His Sons* (1860-61) by Jean-Baptiste Carpeaux.

The use of artworks for cancer patients was studied by Daniel George and colleagues (2017). They discovered a humanising effect art can have in an otherwise sterile environment. Furthermore,

Stine Nielsen and colleagues (2017) brought artworks into dayrooms of five medical wards in a hospital in Hjørring, Denmark. They found through patient interviews and general observations that art created a sense of safety and ease by merely being displayed in the room. It was concluded that the presence of art can bring warmth and personality to any space, which is a better alternative to white walls and can positively affect mood.

Positive benefits and enhancing patient experience

In 2010, Norma Daykin et al. reported a three-year art project in 16 National Health Service (NHS) facilities in the UK. Included were 36 art commissions as textiles, water features and paintings. Service users participating in art processes felt a better sense of control in their environment. This enhanced their patient experience thus having a positive benefit, which was another finding we noted.

A project with promising and successful trials by art-viewing was conducted by Upali Nanda et al. (2011) in a mental health facility, where the administration of PRN (pro re nata = drug given only when needed) medication decreased when prints of artworks with calming nature scenes were on display. A project with likewise promising and successful trials was conducted at the University College London Hospitals using visual arts and musical performances during a three-year project period (Froggett and Little 2012).

Visual art production and cognitive art evaluation (i.e., reception of art) was compared in Anne Bolwerk and colleagues' study (2014). They concluded that art production may be important in preventing the burden of chronic illnesses in older adults because it improves interaction between the frontal and posterior and temporal brain regions. Mami Kasahara-Kiritani and colleagues (2015) discovered that literature and films could act as sources of social support and reduce suicide risk constituted by low sense of belonging.

Daniel Graham et al. (2013) discussed how aesthetic judgement of landscape paintings and photography does not regress in Alzheimer's patients even when the aesthetic judgement of portrait photographs does. This suggests that even people suffering from memory disorders can recognize and enjoy certain types of artworks.

Charles Tyack and colleagues (2015) conducted a trial in which touchscreen tablets were used to display images for people with dementia. The items were chosen from the collections of the British Museum, Dulwich Picture Gallery and Hunterian Museum, and included images of early Greek and Egyptian objects, representational and abstract European art from the 16th–21st centuries and urban and rural photographs. Findings included positive changes in mood, relationships, behaviour and cognition. Interestingly cognition was documented to improve widely as in

stimulating thoughts, remembering, attention and learning (Tyack et al. 2015: 879, 883).

It seems clear that cultural activities, such as museum visits, are a resource for people suffering from dementia (Belver et al. 2017). Unfortunately, these visits cannot always be organized. A different kind of exercise for individuals with dementia was conducted by Gill Windle and colleagues (2018) using art-viewing and art-making activities in a flexible way in different venues (hospital, residential care facilities, community venues). Regardless of venue, scores for wellbeing increased.

In a study conducted by Manuel Schindler et al. (2017), cognitive art evaluation and visual art production practices were found to stand on equal ground with regard to improving cognitive abilities. Stimulation in art activities was discovered to improve processing speed and visuo-spatial cognition, regardless of whether the stimulation came from creating or evaluating art. Larsen et al.'s study (2018) showed that different art activities lessen agitation and anxiety especially for people with mental health conditions.

Type of art and its effect in patient rooms

Another finding is that the type of art in patient rooms impacts the effect of it. Gelo and colleagues (2015) point out that artworks displayed in hospital rooms give patients opportunities to reflect and discuss their experiences of illness and hospitalisation with staff and visitors. They further note that it is easier to talk about art than to speak directly about fears, pain, concerns and loneliness. Their research focused on the spiritual use of nonreligious representative artworks, but it could be possible to use other types of images as well. During a treatment period, feelings of pain, stress and anxiety often develop and may even affect the length of stay. Trials such as the previously discussed 'Open Window' have been effective in reducing adverse feelings even when the patient is undergoing intense medical treatments (McCabe et al. 2013). Similarly, Ingeberg et al. (2012: 28) found that a porcelain sculpture, *Arctic Border* (2011), by Arild Berg was mentioned to have been used to increase understanding of interpersonal communication

Practices that can steer patients' thoughts away from their illness are important as brought up by George et al. (2017). In their study, three groups of cancer patients were given a choice of artworks to be displayed on their hospital room walls. One group could choose the work of art on their own, for the second group art was randomly selected by the study team, whereas the third group had no art in their rooms. The two groups with artworks in their rooms felt better than the group with no art. Personal choice was also an important factor as some in the second group did not enjoy the artworks selected for them. The feeling of relative autonomy was empowering and important to the patients when they were given an opportunity to choose the art displayed in their

rooms. Artworks of established local artists were used. One artwork was a painting by Erica Harney, *Hide and Seek* (2013), depicting a bright red Pennsylvania Dutch farmhouse in a snowstorm. The print evoked thoughts of returning home to loved ones. One patient chose a watercolour painting of a turtle swimming in blue water called *Drifters* (s.a.) by Sharon Lennox Woelfling, which she said brought peace to her mind and calmed her down.

Nanda and colleagues (2011) used artworks from three different genres to see the effects they would have on patients' wellbeing. A stock photograph of what the authors refer to as a Savannah landscape was found to have the best effect on negative feelings, whereas prints of a post-impressionistic painting by Vincent van Gogh (*The Fields*, 1890) and an abstract expressionistic painting by Jackson Pollock (*Convergence*, 1952) had a smaller impact (Nanda et al. 2011). The painting by Pollock is highly stimulating with bright colours scattered around the canvas. Clearly the intent of the image is not to calm, but there are other abstract artworks that may be more suitable for that purpose. It is also questionable whether the atmosphere in van Gogh's *The Fields* can be compared with the 'Savannah' landscape. The painting depicts a stormy sky and strong wind blowing through a patchwork of fields while in the photograph the sky is clear. The researchers conclude that the interpretative quality of the images plays a bigger role than colour or form (Nanda et al. 2011), and yet the only similarity in the 'Savannah' photograph and *The Fields* is the subject of fields.

There is ongoing discussion whether representational artworks depicting nature themes are better than abstract art in hospital settings. For example, Nielsen and colleagues (2017) found that a patient's emotional state can be positively affected regardless of the artwork's level of abstraction. They write that an artwork's potential to create sociality and atmosphere is seen as a more important factor than its style. Regarding the potential of abstract art, the researchers express a need to re-examine more widely existing theoretical perspectives.

Abstract art sometimes has a poor reputation in health care settings, partly due to Roger Ulrich's studies in the field. In his early notion from 1984, Ulrich emphasized the importance of a window opening to nature in recovery from surgery, thus anticipating his later adherence to the biophilia hypothesis. In 2004, Ulrich and his team found negative responses to abstract art in patients (Ulrich et al. 2004), and in 2018, he and his colleagues underlined again the importance of nature views and what they call 'nature art' as positive distractions and ways to reduce stress (Ulrich et al. 2018). Mardelle Shepley and collaborators (2017) referred to Ulrich when they highlighted the importance of figurative nature themes as opposed to abstract art by surveying mental healthcare staff. It is unhelpful to consider the whole genre of abstract art as one category, so more studies on the effect of its different forms are needed in healthcare settings to determine the

value in a more nuanced way (cf. Nielsen et al. 2017).

Effect on stigma

A smaller yet still very important finding looks at the connection between visual art and stigma. Neil Quinn and colleagues (2011) have found that art practices such as community-based arts festivals can change stigma. In a study by Takashi Yamauchi and colleagues (2012) in Japan of an exhibition displaying art created by people experiencing mental health conditions was studied with regard to the public's perceptions of the exhibition. It is important to note that famous artworks are not always more attractive than unknown artworks (Tröndle and Tschacher 2012). That is why small-scale art exhibitions with different presenter groups, where e.g. outsider art - meaning art made by people with no formal art education and training - is displayed, can be appreciated by wide ranges of people.

There is a clear positive effect art has on the stigma that people with mental health conditions often experience. For example, in Simon Riches and collaborators' study (2018), a voice-hearing simulation in an art gallery improved the general public's understanding of auditory hallucinations and increased empathy towards those with unusual sensory experiences.

Virtual reality and other technologies

With changes in technology, there are more ways for patients to experience visual art. Susan Schneider and collaborators (2003) discovered that virtual reality decreases situational anxiety related to chemotherapy treatment for older women treated for breast cancer. The participants in the study could choose from three different CD-ROM-based interactive scenarios during chemotherapy: 'Oceans Below', 'A World of Art', or 'Titanic: Adventure Out of Time'. The VR scenarios could last for hours, and the patients spent on average 39-78 minutes in each. According to the researchers, VR can be a positive distraction for people who struggle to direct their attention away from stressful situations (Schneider et al. 2003). Hunter Hoffman and collaborators (2008) bring up the issue of immersion in their study of pain control treatment of burn wound patients with an icy, cooling virtual environment called 'Snow World'. It was assumed that patients with a stronger experience of illusion in the virtual world would also be more distracted by VR than those with a lesser experience of illusion.

Stefan Nilsson and colleagues carried out a VR-study in 2009 on children and adolescents experiencing needle-related treatment in an oncology unit. During the procedure, the participants did not think the 3D-experience of the game they played added anything to the distraction. The interviews indicated that even though the participants enjoyed the VR game, it did not reduce pain

intensity during the treatment, rather it gave them something else to focus on. The researchers take into account that they did not use a full immersive VR (a head-mounted display) but an autostereoscopic display that brought about the 3D effect of VR, which may have affected the results (Nilsson et al. 2009). For patients with mental health problems, VR can be used to practice difficult real-life situations in a virtual world or to treat obsessive-compulsive disorders, which Martine van Bennekom et al (2017) did in their study.

Other technical solutions can be the use of video screens as in the McCabe and colleagues' (2013) study to enhance well-being in intense medical care as well as tablets like in the Tyack and colleagues' (2015) trial for people with dementia.

Our own preliminary experimentation

One ongoing trial conducted by Katrina Timonen together with hospital staff at the Vaasa Central Hospital in Finland is to make an art museum experience possible in the hospital context.

One used artwork is *Valley L447/Video installation* (2016). It is a looped video installation produced by artist Johanna Ketola (b. 1978), showing natural and unnatural elements in a forest scene placed at the ward for eating disorders (Figures 1 and 2). The presentation is done as a video-diptych displayed on two TV-screens lasting 7 minutes before starting from the beginning. It was displayed at the Turku Art Museum, Finland, in 2018 and transferred to the hospital context in cooperation and a contract with the artist. Adolescent and young adult patients with eating disorders and depression as well as the personnel are encouraged to write down their thoughts after viewing the video. Writings are discussed, and personal video making is planned to be implemented for the patients with the theme 'my own mental landscape'.

Another application follows the 'slow art' -technique while viewing art in museums and virtual art exhibitions. The patients are tasked to choose 5-6 artworks, observe them for 10-15 minutes and write down their thoughts and feelings. The contents of the writings are examined in therapy and supporting discussions.

One purpose for the planned procedure is to enhance patients' language use and improve perspective-taking so that they can better describe their own condition. The video art and ideas received by taking patients to art exhibitions are meant to serve as metaphorical contents for flexible language use, which is one methodological emphasis in many forms of psychotherapies and art therapies (e.g., Hayes et al. 2018). The preliminary results show that art appears to be a valuable component for the main therapeutic and medical care. The application especially seems to give the assumed effects for flexible language use and thinking.

Figure 1: Film detail – greyhound in a leopard print costume (Ketola 2016).

Figure 2: Film setting and display at the ward.

Discussion

The positive impact art can have on human well-being is better acknowledged today. Many promising field trials and studies have been conducted since the beginning of 2000, but the number is still limited. The studies vary from hospital design to improving mental and physical conditions, stigma reduction and promoting a higher quality of life. The reviewed articles represent Western ideals in hospital design and focus mainly on adult populations.

The debate on the favourable types of artworks for hospitals is open. There is a need for more collaboration and inclusion of art researchers from different genres. Shaun McNiff (2018) emphasized that art operates within a different paradigm to natural sciences and must be respected with an independent research methodology. Thus, it cannot just be seen as an extension of the medical, psychological and social research strategy. All means of enhancing patients' well-being should be explored (Bates 2018). It is important that transdisciplinary approaches, such as collaboration between designers, staff and patient groups, are used in the development of healthcare systems in order to humanize treatment.

When comparing patients' responses to figurative and non-figurative artworks, the content of the work should be taken into account. For example, representations of war and death rarely have the same calming effect as a peaceful landscape or a serene abstract painting. Ian Verstegen (2005) refers to Rudolf Arnheim while discussing the meaning of individual perception and symbolic understanding of observed objects such as artworks. Victor Petrenko and Evgeniya Korotchenko (2012: 534) also refer to Arnheim while discussing the connection between the viewer and an artwork, for example one evoking feelings of neglect and sedation through the depiction of a 'misty river'. The aspects of content and form are not unambiguously separable, as motifs only become graspable through artistic means.

Studies from the research tradition formed by Ulrich have made claims regarding abstract art's poor suitability in hospital settings (e.g., Nanda et al. 2011; Ulrich et al. 2004). However, there has not been enough evidence to consider abstract art an inferior choice for hospitals. Ulrich's influence in the field shows especially in studies done by researchers from the Texas A&M University, where he co-founded the Center for Health Systems and Design. More research should be conducted on the impact of abstract art on patients' mood and condition. It is not fruitful to consider the range of abstract artworks as one thematically and affectively homogenous category,

which may lead to generalizations about their role in the hospital context. Suggesting that a particular style of art is more appropriate than another may be over-simplistic (Ho et al. 2015). Art expresses emotions, and viewers can experience a broad spectrum of them by engaging with different artworks.

It is also important to consider image formats. When using prints of famous paintings, the artwork may lose its original impact, especially if the prints are resized or when the colours and textures of the original artworks do not transfer into the prints. Reproductions of original artworks do not strictly belong in the definition of art when there is no creative process involved, but they can still carry personal meaning and value. Other important variables are image placement, print quality, lighting and whether light flares hinder seeing the images. In addition to format and quality, the number of elements and amenities in hospital rooms affect how patients experience their hospitalisation period. With many elements, patients have expectations of positive distraction and social support (Andrade and Devlin 2015). This in itself helps reduce stress and ease worry. Important to consider is also patients' knowledge of and interest in art as well as personal art preferences.

Conclusion

Much emphasis in the studies has been put on the importance of a relaxing atmosphere by thematically focusing on nature and spirituality. However, this element cannot be the only requirement for healing. As Anthony Biglan and Dennis Embry (2013) state, we need to concentrate more on cultural practices in order to promote human well-being and psychological flexibility in the society. Design, cultural activities, and visual art are undeniably beneficial for everyone's mental health, and for this reason should also be considered for people with health conditions and while undergoing treatment. Art-based activities, such as workshops and exhibitions, can be used to educate and alter people's attitudes towards mental health conditions, which may even contribute to the reduction of stigma in these circumstances. One modern possibility to introduce art into the hospital context is to use different technical equipment and apply virtual and augmented reality.

Artworks can positively affect the mood of patients and offer them means to better cope with mental and physical health conditions. It is helpful to keep the selection of artworks wide, because every patient's perspective varies for what is likeable. More research of different art practices in hospital contexts is needed and different forms of implementation provide opportunities for enhanced well-being for patients.

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