

"Thematic Review on art Therapy Perspectives in older Adults' Nursing Home Design: Bridging Emotional Healing And Space Innovation"

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ABSTRACT: *In the face of the global trend of an ageing population, the design of nursing homes has largely prioritized medical care. However, the emotional and therapeutic needs of the older adults residents have been neglected. Therefore, this review aims to analyze the relationship between the design of spaces for older adults care and art therapy between 2013 and July 2024. Inclusion and exclusion criteria were proposed, and articles were searched and screened from three major databases (i.e., WOS and Mendeley). Ultimately, 20 articles that met the eligibility criteria were selected for comprehensive analysis. Quantitative results derived from the analysis software ATLAS.ti 9 revealed research trends in the design of geriatric care spaces related to art therapy. At the same time, the qualitative analysis yielded three major themes related to the topic: (1) art therapy and well-being, (2) environmental design and home adaptation, and (3) social interaction and community engagement. Finally, the findings are expected to contribute to the theoretical and practical applications of older adults care space design.*

KEYWORDS: *Older adults Nursing Home Design; Art therapy; Design for Aging; Social Connection; ATLAS.ti*

I. INTRODUCTION

The global trend of population ageing highlights the urgency of art therapy, and art therapy interventions in older adults nursing home design can support not only the physical health of the older adults but also their spiritual and emotional well-being. In this context, art therapy has gained much attention as a meaningful, non-pharmacological intervention to improve the quality of life of older adults, especially in nursing home settings. Unlike traditional therapeutic approaches, art therapy promotes expression, cognitive stimulation, and emotional solace through creative engagement, and is particularly suitable for older adults who often face physical and mental decline (Anne Charron, 2001). Complementary to this, the architectural and social design of nursing homes - their aesthetic, spatial, and interactive qualities - plays a key role in shaping residents' experience of 'home', self-worth, and social engagement (Bailey et al., 2019; Chang et al., 2013; Eijkelenboom et al., 2017). While the existing literature provides compelling evidence that art therapy has psychological benefits, particularly in terms of reducing depression, loneliness, and cognitive decline (Aydin & Kutlu, 2021; Cetinkaya et al., 2019; Wulandari et al., 2023), several key gaps remain. First, many studies rely heavily on self-reported outcomes and do not incorporate objective or long-term assessment measures (Aydin & Kutlu, 2021; Cesetti et al., 2017). Second, interventions are often short-term or lack integration with the built environment, limiting their sustainability and broader applicability (Anne Charron, 2001; Huang et al., 2023). In addition, there is an

apparent disconnect between treatment programs and spatial design - research tends to isolate environmental or programmatic strategies rather than exploring their integration.

Furthermore, while the physical environment of nursing homes has been shown to influence residents' cognitive and emotional states (Chang et al., 2013; Eijkelenboom et al., 2017), few studies have explored how physical environments can be intentionally designed to augment or complement art-based therapeutic practices. The synergistic potential of combining architectural strategies with art therapy to optimize geriatric care environments remains underexplored.

Therefore, this review seeks to address this interdisciplinary gap by critically synthesizing current research findings on art therapy and environmental design in nursing home environments and highlighting how their intersection can contribute to the overall wellness of the older adult population. The study concludes that when art therapy is spatially integrated with well-designed supportive environments, it has greater potential to meet nursing home residents' emotional, cognitive, and social needs.

II. LITERATURE REVIEW

In examining how art therapy can be integrated into the design of spaces and socialization in older care homes, studies have been conducted that illustrate its emotional, cognitive, and environmental benefits. Different forms of art therapy, such as ceramic painting, pottery, music composition, and visual arts activities, have been shown to help older adults improve their mental health, reduce depression, and increase life satisfaction. For example, some studies have found that planned art activities can improve cognitive performance, especially in patients with mild cognitive impairment or dementia, which supports art therapy as an early approach to non-pharmacological treatment (Cetinkaya et al., 2019; Doric-Henry, 1997; Huang et al., 2023).

The architectural design of care homes is also important for older people's experience and sense of belonging. Research has shown that spatial familiarity, sensory stimulation, and environmental aesthetics in building design can make older adults feel more comfortable and secure (Eijkelenboom et al., 2017; Jee, 2024). When these designs are combined with elements of art therapy, such as creative installations or interactive art, they can make the environment more enjoyable for older adults and help those with cognitive decline to engage better and recall (Chang et al., 2013; Luyten et al., 2018).

Social interaction is also an important aspect of improving quality of life. Art-related group activities can help seniors communicate better, reduce isolation, and increase social connections (Aydin & Kutlu, 2021; Paolantonio et al., 2020; Ray & Götell, 2018). For example, using technology such as interactive displays can make it easier for seniors to participate in social activities, facilitate communication between generations, and enhance a sense of community (Kang et al., 2022; Li & Cao, 2023a).

These studies suggest that combining art therapy with new architectural and social design can create a more holistic and emotionally rich care environment. Future designs should not only consider accessibility and functionality but also emphasize the therapeutic and social benefits of art activities.

What are the current trends in art therapy in older adults nursing home design discussed in the literature from 2013 to 2024?

III. MATERIALS AND METHODS

This paper employs a thematic analysis approach to identify patterns and construct research themes through an in-depth study of relevant literature. This approach helps to capture research trends in art therapy design for the well-being of older adults. Thematic analysis is a flexible and practical research tool that can provide detailed and in-depth descriptions of the data and reveal the 'formulary' of meanings and terminology embedded in them (Braun & Clarke, 2019). This review aims to explain and analyze existing research on the impact of art therapy on geriatric nursing homes. This topic has been gaining academic attention in recent years. However, the current literature focusing on how art therapy practices can be applied in a geriatric nursing home setting is still relatively limited. Therefore, this study draws on the thematic review process proposed by (Zairul, 2020a) to extract information closely related to the research question by identifying key themes that represent the core

issue. The process included problem definition, initial scanning and retrieval of literature, literature screening, and information screening based on specific inclusion and exclusion criteria. Ultimately, representative thematic patterns were extracted by identifying repeated responses and implicit meanings in the literature to support further analysis and synthesis .

The focus of this paper is to analyze and interpret the results of the examination and to make recommendations. The study results recommend a grounded theory of art therapy design for future geriatric nursing homes. Documentation was based on the following criteria: (1) published between 2013 and 2024, (2) keyword at least "art therapy" and " older adults nursing home design," (3) identify the impact of art therapy and design on older adults nursing homes as keywords, (4) identify the influences of art therapy on older adults nursing home design and design influences on improving life in older adults nursing homes, and (4) Articles were limited to English. Based on the reviewed exclusion and inclusion criteria, the initial search resulted in 82 articles retrieved from the Web of Science database (see Table 1) . However, some articles were removed because they were inconsistent with the expected results for this topic (n = 52), and some were removed because they were incomplete or inaccessible. Some articles were incomplete or had fragmented, inaccessible links (n = 10). The final number of reviewed papers was reduced to 20 and uploaded as files(see Figure 1). These 20 valid documents were exported from Mendeley to ATLAS.ti 9 as raw files, and metrics were created for each document in the literature list, including 1) Author; 2) Title of the document; 3) Journal; 4) Year of publication; 5) Author's country; and 6) Subject. Literature title; 3) Journal; 4) Year of publication; 5) Author's country; 6) Subject area. Field. This allows current research trends to be analyzed based on factors such as publication date, country, and subject area of the literature.

Table 1: Search strings from the Web of Science

Web of Science	Art Therapy (all fields) AND Elderly Nursing Homes (all fields) AND 2013-2024 (Year of publication) AND English (Language) AND Article (Type of literature)	82 articles
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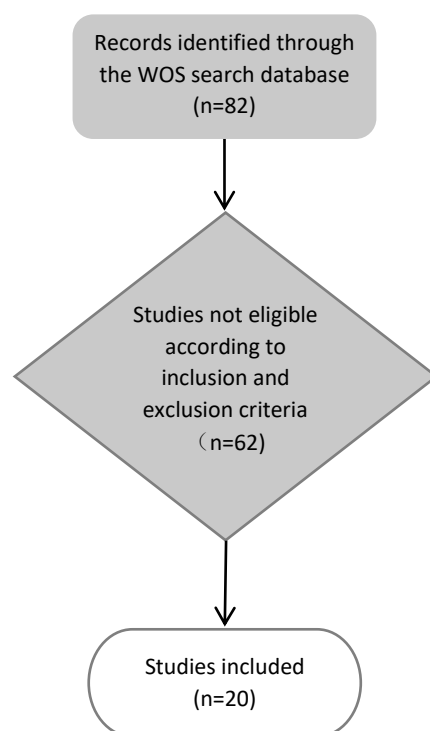


Figure 1. Inclusion and Exclusion criteria in the thematic review

The findings of this paper include both quantitative and qualitative analysis. In the quantitative analysis, a word cloud was constructed by analyzing the text of 20 original articles (see Figure 2). The word cloud presents keywords with high frequency, such as "older", "nursing home", "art", and so on. As stated at the beginning of this article, the core purpose of this study is to explore the research trends in the field of nursing home design for the older adults from the perspective of art therapy.

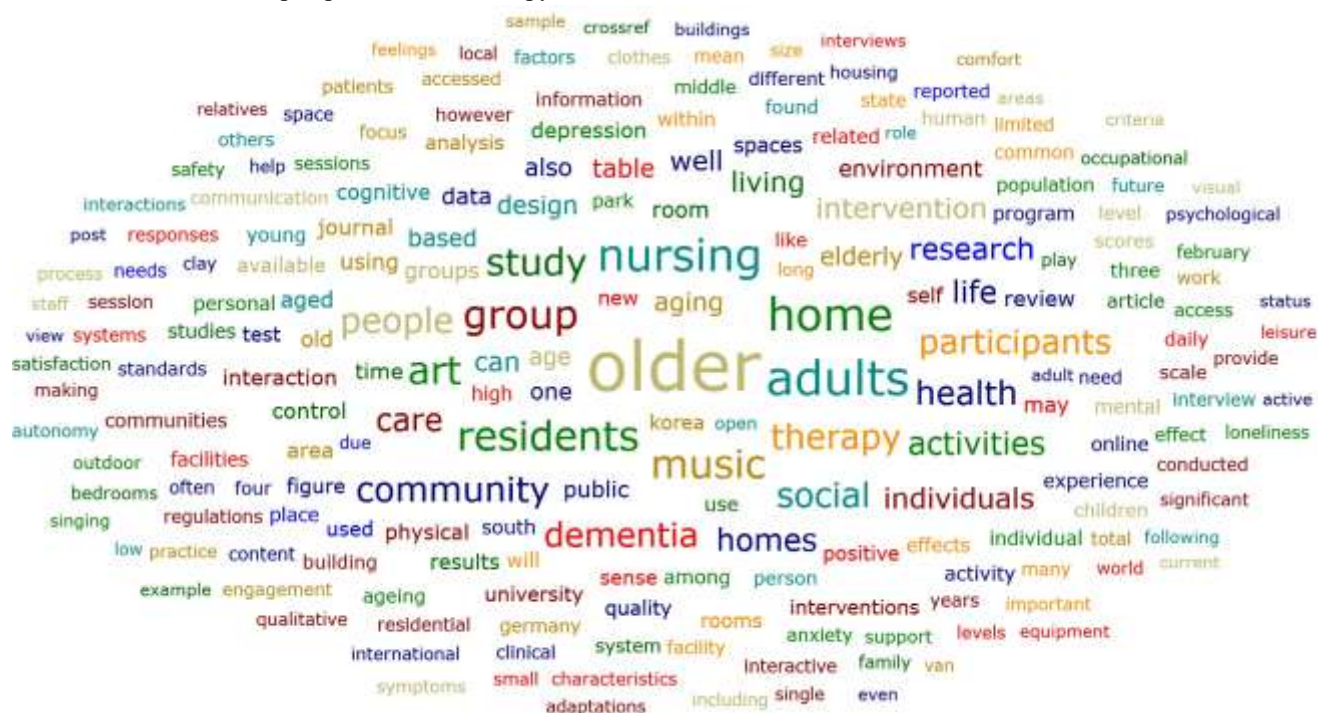


Figure2.word cloud generated from 20 articles.

Figure 3 shows the number of publications related to the topic: one in 2013, two in 2015, four in 2017, one in 2018, four in 2019, one in 2020, one in 2021, one in 2022, four in 2023 and two in 2024. There is a general upward trend in the number of papers on this topic, which may be attributed to increased ageing, leading to more attention being paid to older adults nursing homes as a research topic.

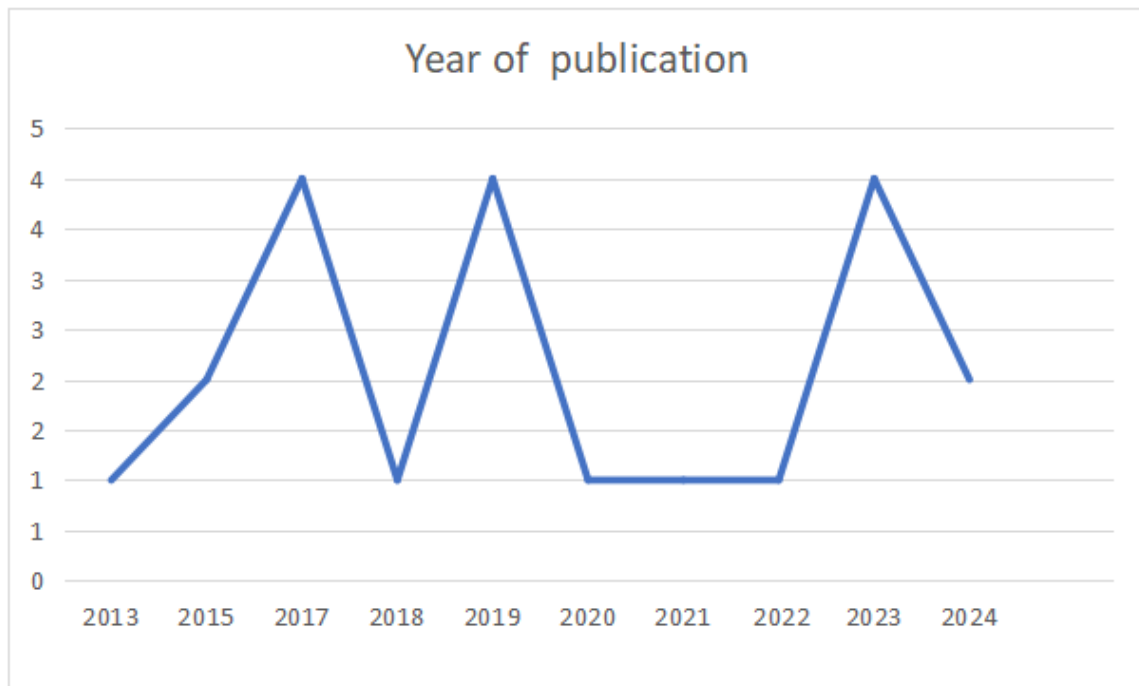


Figure 3. Year of publication

4.2. THEMATIC RESULTS

After reviewing the selected articles, the qualitative analysis section coded key factors that influence the design of senior nursing homes. The initial coding was revisited, combined, and categorized in multiple rounds, identifying three research themes widely discussed and noted in the relevant literature. Specific themes included (1) art therapy and well-being, (2) environmental design and home adaptation, and (3) social interaction and community participation. These themes may intersect and overlap across articles and are not independent.

Table 2. Articles according to themes

	Art Therapy and Well-being	Environmental Design and Home Adaptation	Social Interaction and Community Participation
Chang (2013) - The effectiveness of visual art on the environment in nursing home	√		
Black (2015) - Aging in community: Mobilizing a new paradigmos of older adults as a core social resource			√
Black (2015) - Community-Dwelling Older Adults'			√

Perspectives on What Matters

Most: Findings From an
Exploratory Inquiry

Eijkelenboom (2017) - Architectural factors influencing the sense of home in nursing homes: An operationalization for practice	√	√
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Luyten (2017) - How nursing home residents with dementia respond to the interactive art installation 'VENSTER': a pilot study	√	√
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Cesetti (2017) - The Promotion of Well-being in Aging Individuals Living in Nursing Homes: A Controlled Pilot Intervention with Narrative Strategies	√	
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Ray (2018) - The use of music and music therapy in ameliorating depression symptoms and improving well-being in nursing home residents with dementia	√	√
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Roswiyani (2019) - Art activities and qigong exercise for the well-being of older adults in nursing homes in Indonesia: a randomized controlled trial	√	
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Bailey (2019) - "What? That's for Old People, that." Home Adaptations, Ageing and Stigmatisation: A Qualitative Inquiry	√	√
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Cetinkaya (2019) - The Effect of Ceramic Painting on the Life Satisfaction and Cognitive Status of Older Adults Residing in a Nursing Home		√
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Ergin (2019) - The Effect of Music on the Comfort and Anxiety of Older Adults Living in a Nursing Home in Turkey	√	√	√
Paolantonio (2020) - Art for Ages: The Effects of Group Music Making on the Well-being of Nursing Home Residents			
Aydin (2021) - The Effect of Group Art Therapy on Loneliness and Hopelessness Levels of Older Adults Living Alone: A Randomized Controlled Study		√	√
Kang (2022) - Enhancing Social Interaction among Nursing Homes Residents with Interactive Public Display Systems	√		
Dalistan (2023) - Considering the home environment and planning for the future: A qualitative exploration of the views of older adults and individuals with older relatives		√	
Wulandari (2023) - The combination of occupational art therapy improves the quality of life for elderly in nursing homes			
Huang (2023) - Effect of self-determination theory-based integrated creative art (SDTICA) program on older adults with mild cognitive impairment in nursing homes: Study protocol for a cluster randomized controlled trial			

Li (2023) - Designing for
Intergenerational
Communication among Older
Adults: A Systematic Inquiry
in Old Residential
Communities of China's
Yangtze River Delta

Prick (2024) - Effects of a
music therapy and music
listening intervention for
nursing home residents with
dementia: a randomized
controlled trial

Jee (2024) - Enhancing
Dementia Nursing Homes in
South Korea: Lessons from
German Building Standards

Figure 4 below illustrates the themes, trends and patterns addressed in the selected literature. After reorganizing and merging the initial nine coded attributes, three core themes were eventually summarized: art therapy and well-being, environmental design and home adaptations, and social interaction and community participation. Some of the studies focused on exploring the role of art therapy in contributing to well-being in older adults nursing homes; others focused more on the interrelationships between environmental design and older adults nursing homes; and still, others focused on the role of community involvement in art therapy (see Table 2). The topics covered range from areas of relative concentration to some emerging topics. These themes will be discussed in detail next, and the research questions will be further answered in the context of research findings beyond the articles reviewed. Figure 4 illustrates the topics discussed in the literature that form a conceptual framework for designing older adults nursing homes from an art therapy perspective.

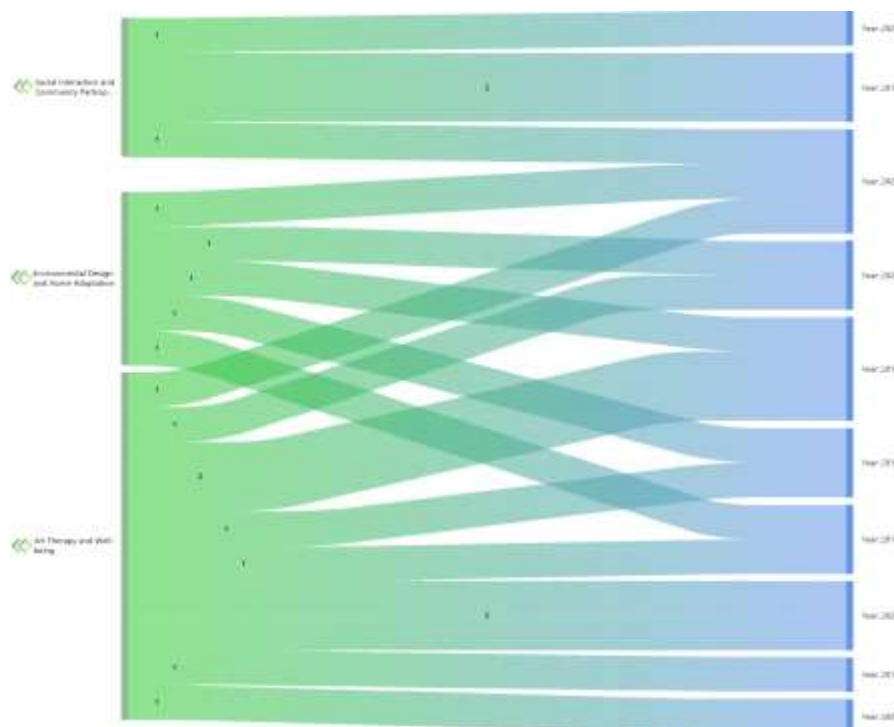


Figure 4. The types of topics addressed in the literature.

4.2.1 THEME 1: ART THERAPY AND WELL-BEING

Art Therapy has gradually become an important tool for improving the physical and mental health of the older adults in the spatial design of geriatric nursing homes. Art Therapy, as a non-pharmacological intervention, encompasses a variety of forms, such as painting, ceramics, music, etc., and aims to stimulate the emotional expression of older people through creative and perceptual activities, to enhance their sense of self-identity and to improve their mental and physical health (Anne Charron, 2001; Wulandari et al., 2023). Especially in long-term care settings, art therapy is beneficial because it can provide hospitalized older adults with a means of emotional comfort and social connection that promotes their cognitive and emotional development.

Several studies have demonstrated that the implementation of art therapy has had a positive psychological impact on older adults. For example, (Anne Charron, 2001) noted that art therapy can have a soothing and positive effect through visual or tactile stimulation, which can help to reduce moodiness and anxiety in older adults. By engaging in pottery or visual art activities, older adults can improve their self-esteem, reduce depression, and even alleviate feelings of loneliness (Aydin & Kutlu, 2021). In addition, (Huang et al., 2023) study showed that an art therapy intervention based on self-determination theory could significantly delay cognitive decline and improve the quality of life for older adults with mild cognitive impairment (MCI).

However, although the health-promoting effects of art therapy on older adults have been widely validated, its application in nursing homes still faces some challenges. First, research has shown that the effects of art therapy vary according to individual differences; for example, older adults who are emotionally withdrawn may take longer to derive benefits from art activities (Anne Charron, 2001). In addition, although art therapy has been shown to significantly affect mood improvement in older adults, most of the existing research has relied on self-reported scales. It lacks more in-depth quantitative analyses (Aydin & Kutlu, 2021). Therefore, future research needs to focus more on the long-term effects of art therapy and its sustainability, especially in improving cognitive functioning and life satisfaction among older adults (Cesetti et al., 2017; Wulandari et al., 2023).

Overall, art therapy, as an effective psychological intervention, not only enriches the daily life of older adults but also provides more possibilities for the design of nursing home spaces. Through rational planning and

design, art therapy activities can be integrated with the environment to create a more cosy and therapy living space, enhancing the overall well-being of older adults(see Figure 5).

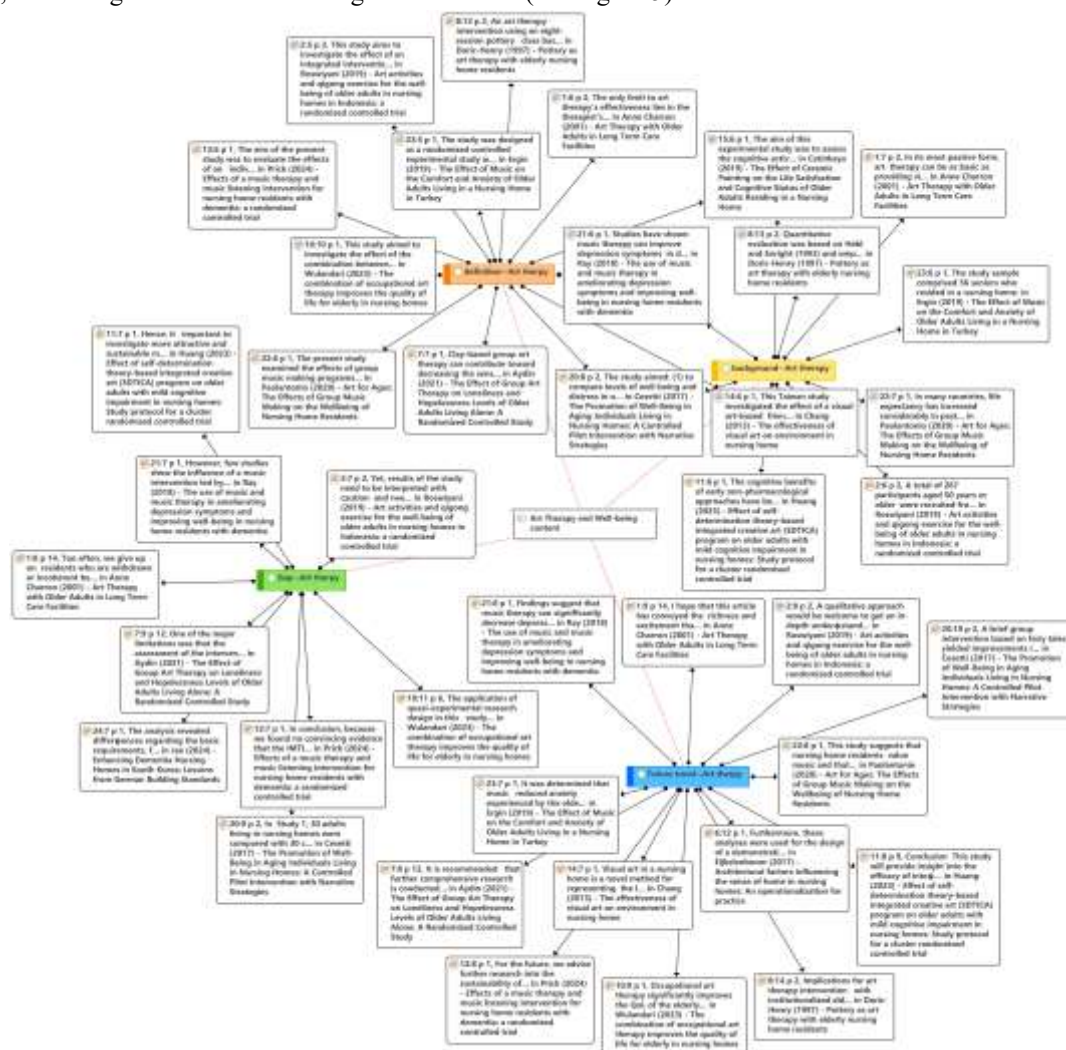


Figure 5. Art Therapy and Well-being theme network

4.2.2 ENVIROMENTAL DESIGN AND HOME ADAPTATION

Environmental design and home adaptations are important aspects of supporting healthy ageing and enhancing the quality of life for older adults. Research has shown that adapting homes to meet the changing needs of older adults, such as installing grab bars or accessible showers, is cost-effective and effective in preventing falls, reducing social isolation, and boosting older adults' self-confidence (Bailey et al., 2019). In addition, the architectural design of nursing homes can profoundly impact residents' sense of home, with good spatial layout and environmental design contributing to older people's sense of psychological security and belonging (Eijkelenboom et al., 2017). This is particularly critical for people with cognitive disabilities, and comparative studies such as the one between South Korea and Germany on architectural standards for dementia nursing homes emphasize the importance of design elements such as familiarity, sensory stimulation, and social interactions, which provide lessons for constructing appropriate cognitively friendly environments (Jee, 2024). Despite the gradual strengthening of policy support, there are still shortcomings in the understanding and acceptance of home remodelling among the older adults, and there is an urgent need to strengthen relevant education and information dissemination to help them plan their future living environments (Bailey et al., 2019;

Dalistan et al., 2023). Research has called for more assistive tools and educational platforms to promote the awareness and application of safe and accessible living environments for older adults to realize the goal of "a better home for the older adults and a better life for the older adults" (Dalistan et al., 2023). However, there is still limited research on older people's actual home modification experiences, and there is a clear research gap in this area where more empirical research is needed to support more effective environmental design and policy development (Bailey et al., 2019; Dalistan et al., 2023). In summary, environmental design is about physical space and profoundly affects older adults' quality of life and mental health. It is an important foundation for the design of nursing homes and home care spaces (see Figure 6).

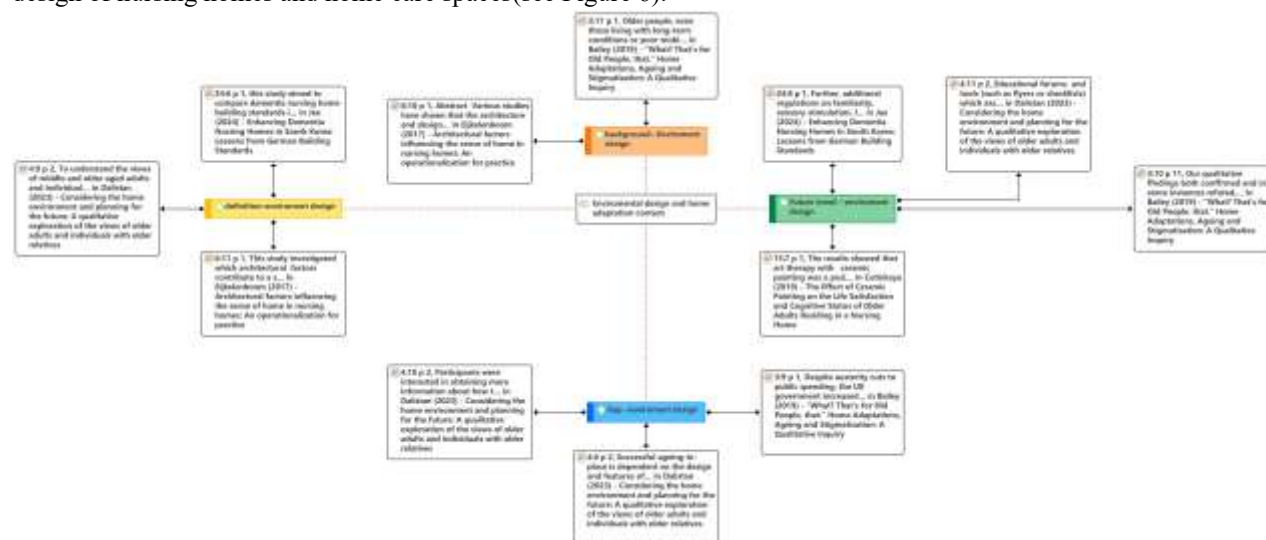


Figure 6. Environmental Design and Home Adaptation theme network

4.2.3 SOCIAL INTERACTION AND COMMUNITY PARTICIPATION

Social interaction and community involvement are important topics in the design of geriatric nursing home spaces. Research has shown that positive peer interactions are essential for enhancing the quality of life of nursing home residents (Kang et al., 2022). Technological tools such as interactive public display systems can effectively promote communication and connection between residents to enhance their social experience and sense of belonging (Kang et al., 2022). Such interactions are not limited to within nursing homes; older adults in community settings also emphasize the importance of social connections found through a multi-method qualitative study that dignified and independent ageing cannot be achieved without good community support. In the U.S., more than 95% of older adults aged 65 and older choose to live in the community, which underscores the community's social resources in the ageing process's central role (Black et al., 2015; Black & Dobbs, 2015). In China, older people are more likely to live in more traditional older residential communities, and intergenerational communication has become a complex issue that community design must focus on, reflecting the importance of facilitating intergenerational communication (Li & Cao, 2023b). In addition, interactive art installations such as "VENSTER" were able to elicit responses from people with cognitive disabilities, further illustrating the potential of interactive design in art spaces to enhance residents' social engagement and psychological state (Luyten et al., 2018). Overall, social interaction and community engagement not only enhance the psychological well-being of older adults but also create a more meaningful and connected living environment for them, which is a core dimension of spatial design in nursing homes that should not be ignored (see Figure 7).



Based on the collection of related literature in this study and the current research hotspots on art therapy and physical and mental health, environmental design and home adaptation, and social interaction and community participation, the following research directions are proposed: 1) Based on the collection of user feedback information, explore the user preferences and behavioural data, study how to provide personalized art therapy methods and recommendations through data analysis, and evaluate the effects of art therapy and user satisfaction with their physical and mental health, and explore different assessment methods (e.g., questionnaires, interviews, behavioural analyses, etc.). 2) Research on enhancing users' engagement, immersion, and emotional connection through interactive elements when they participate in art therapy or interactive design in the environment. 3) Research on the elements that affect users' experience of interacting with the devices in the environment, assess the impact of different design symbols on the interaction process of the users, and explore how user experience can be optimized through intuitive and easy-to-use interaction processes, especially in promoting social interaction and community engagement.

This review looks at how art therapy can help in designing nursing homes for older adults. It shows how art therapy can connect emotional healing with better spaces. But there are some limits in the current research.

Many studies use qualitative data or self-reported measures. For example, (Aydin & Kutlu, 2021) and (Wulandari et al., 2023) provide useful insights, but they lack rigorous quantitative assessments. Many findings are specific to certain contexts and can't be easily applied to different cultures or settings. For instance, the effectiveness of music therapy in reducing depression among nursing home residents with dementia (Ray & Götell, 2018) may vary depending on the region.

There's a gap in integrating art therapy with the physical environment. While studies like (Chang et al., 2013; Jee, 2024) highlight the importance of environmental design, they don't fully explore how to combine art therapy with it.

For future research, we need to combine quantitative and qualitative methods. We should also conduct cross-cultural studies to see how art therapy can be adapted to different contexts. Developing design guidelines that include art therapy principles in nursing home architecture is another area to explore. Additionally, we need to look at how art therapy can promote social interaction and community engagement.

VI. CONTRIBUTIONS AND BENEFITS OF STUDY

This paper uses a dual approach to conduct a literature review of art therapy perspectives in older adults care home design. The first quantitative approach analyses data from various research and scholarly sources extracted from ATLAS.ti 9 to identify patterns and trends. The increasing integration of art therapy techniques in elder care settings was highlighted. Despite the growing interest in this area, there is still a relatively small body of systematic review literature on the impact of art therapy on the well-being and emotional therapy of older adults residents in nursing homes. The second approach was qualitative, thematically coding the selected literature to explore the various ways art therapy affects the emotional and psychological needs of the older adults.

The findings indicate a clear trend towards integrating art therapy in nursing home design, suggesting an increased focus on creating spaces promoting emotional therapy. This study emphasizes the importance of incorporating therapeutic elements into the physical environment, which not only benefits the physical health of older adults residents but also their emotional well-being. The main theoretical contribution of this study is a comprehensive review of how art therapy can inform the design of nursing homes, providing a framework that links emotional therapy to spatial innovation. Systematically analyzing current trends in this interdisciplinary field provides an integrative perspective that informs future scholarship in older adults care and environmental design.

From a practical perspective, this study provides architects, designers, artists, and healthcare practitioners with valuable insights into improving elder care environments through art therapy. It encourages a more mindful approach to the design of nursing homes, emphasizing the need for spaces that cater to emotional well-being and personal therapy through art and creativity. In addition, the study highlights effective strategies and design approaches that can facilitate therapy environments, encouraging the harmonious integration of spaces with therapeutic activities. This paper synthesizes the key findings of the current study. It identifies potential avenues for future research, providing direction for researchers and practitioners to explore the impact of art therapy in older adults nursing home environments. By addressing the challenges facing nursing homes globally, this study provides practical recommendations for creating supportive, emotionally rich environments that promote the overall well-being of older adults in the digital age.

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