

Doll therapy en personas con demencia

Doll therapy in people with dementia

- ¹ Valeria Isabel Espin Lopez  <https://orcid.org/0000-0001-8888-3087>
Technical University of Ambato, Faculty of Health Sciences, Ambato, Ecuador.
vi.espin@uta.edu.ec



Scientific and Technological Research Article

Sent: 02/18/2024

Revised: 03/19/2024

Accepted: 04/16/2024

Published: 05/21/2024

DOI: <https://doi.org/10.33262/anatomiadigital.v7i2.3015>

Please
quote:

Espín López, VI (2024). Doll therapy in people with dementia. Digital Anatomy, 7(2), 131-146. <https://doi.org/10.33262/anatomiadigital.v7i2.3015>



DIGITAL ANATOMY is an electronic, quarterly journal that will be published in electronic format and has the mission of contributing to the training of competent professionals with a humanistic and critical vision who are capable of presenting their investigative and scientific results to the same extent that positive changes in society are promoted through their intervention. <https://anatomiadigital.org>
The journal is published by Editorial Ciencia Digital (a prestigious publisher registered with the Ecuadorian Book Chamber with membership number 663). www.celibro.org.ec

This journal is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. Copy of the license: <https://creativecommons.org/licenses/by-nc-sa/4.0/deed.es>

Palabras claves:

demenia, terapia con muñecas, no farmacológico, deambulación, conducta.

Keywords:

dementia, doll therapy, non-pharmacological, ambulation, behavior

Resumen

Introducción: La demencia afecta a millones de personas en todo el mundo y se espera que la cifra continúe aumentando a medida que la población envejece. La terapia con muñecas es una estrategia de manejo no farmacológico emergente para pacientes con demencia avanzada, especialmente en pacientes con conductas desafiantes. **Objetivo:** Describir los beneficios de la *Doll therapy* en personas con demencia. **Metodología:** Esta revisión empleó la declaración PRISMA. Las búsquedas se realizaron en las bases de datos: *Scopus, Cochrane, PubMed y Web of Science*. **Resultados:** En este artículo se identificaron y discutieron 9 estudios publicados (principalmente estudios de cohortes y observacionales). En la mayoría de los casos, se aliviaron los síntomas cognitivos, conductuales y emocionales y el bienestar general mejoró con la terapia con muñecas, y se descubrió que los pacientes con demencia podían relacionarse mejor con su entorno externo. **Conclusión:** A pesar de la relativa escasez de datos empíricos y dieciséis preocupaciones éticas, opinamos que la terapia con muñecas es eficaz para el cuidado de la demencia y está bien alineada con el espíritu de la atención centrada en la persona y debe aplicarse en el tratamiento de pacientes con demencia. **Área de estudio general:** Medicina. **Área de estudio específica:** salud y bienestar. **Tipo de estudio:** Artículos originales.

Abstract

Introduction: Dementia affects millions of people around the world and the number is expected to continue to increase as the population ages. Doll therapy is an emerging non-pharmacological management strategy for patients with advanced dementia, especially in patients with challenging behaviors. **Objective:** Describe the benefits of Doll therapy in people with dementia. **Methodology:** This review used the PRISMA statement. The searches were conducted in the databases: *Scopus, Cochrane, PubMed, and Web of Science*. **Results:** In this article, 9 published studies (cohort and observational studies) were identified and discussed. In most cases, cognitive, behavioral, and emotional symptoms were alleviated, and overall well-being improved with doll therapy, and it was found that dementia patients were better able to relate to their external environment.

Conclusion: Despite the relative paucity of empirical data and sixteen ethical concerns, we are of the opinion that doll therapy is effective for dementia care and is well aligned with the spirit of person-centered care and should be applied in treatment. of patients with dementia. General Study Area: Medicine. Specific area of study: health and well-being. Study type: Original articles.

Introduction

Dementia is a common geriatric syndrome in old age with an exponential progression; it is estimated that by 2030, 82 million people worldwide will have dementia.(1). Alzheimer's disease (AD) is a neurodegenerative disease of unknown etiology characterized by a progressive deterioration of memory and cognitive function, representing between 60 and 80% of dementia cases.(2). In the initial phase, it manifests itself in temporal-spatial disorientation and a tendency to frequently forget; in the intermediate phase, disorientation and memory problems increase, making communication difficult and increasing the need for help to carry out daily activities. The third stage is characterized by obstacles to orientation, walking, communicating or recognizing close relatives.

The course of AD can also be influenced by the appearance of psychological and cognitive symptoms of dementia, such as psychosis, apathy, agitation, sleep disturbances, changes in appetite, euphoria, irritability, abnormal motor behavior, depression and anxiety tend to occur in 90% of AD cases.(3)Aggression, agitation, delusions and irregular rhythm have been identified as a major cause of informal caregiver burden.(4)The effects are so intense and overwhelming that they cause severe burnout, stress, anxiety and depression in the patient, family and caregivers, and in most cases result in institutionalization. Several studies have found that agitation and aggressive episodes can provoke negative feelings and discomfort in professional caregivers.(5), leading to painful experiences(6), and a decrease in work motivation(1).

The development of non-pharmacological intervention programs such as reminiscence therapy, music therapy, animal therapy or sensory stimulation therapy seems to improve the emotional well-being of people with advanced dementia. The common denominator of these techniques is based on generating positive emotions through pleasant memories, music or contact with pets, which minimizes anxiety and reduces the risk of neuropsychiatric symptoms.(7).

Doll therapy is a non-pharmacological method that aims to develop attachment, companionship and helpfulness in people with dementia, improve their well-being and minimize the occurrence of problematic behaviors. It is based on a combination of three theories: attachment theory, transitional object theory and person-centered theory. Attachment theory postulates the need that people have to establish emotional bonds in the face of unknown situations, fear or danger.(8). Thus, people with dementia are prone to attachment behaviors and phenomenon fixation with their parents, who constantly seek them out. DT offers the opportunity to establish the necessary emotional connection in stressful situations, thus reducing arousal.

Transitional Object Theory is based on the calming properties that certain objects can have to relieve and reduce anxiety.(9)Two types of objects have been defined: transitional objects (known to the subject) and precursor objects (unknown to the subject).(10). In the case of a person with dementia, a pacifier may be a precursor object introduced into their environment by their caregiver to provide comfort, relief and reduce stress.(11, 12).

Person-centred theory was developed by Carl Rogers in 1961, and puts the person at the centre of attention, receiving support and teaching cooperation in the decision-making process. Combined with this positive personal training approach developed by Kitwood (13), DT can offer the opportunity to develop playful, facilitative and testing interactions, turning interaction with the doll into a positive activity and a way of communicating with others.

In this way, the use of dolls (newborn doll, reborn doll or empathy doll) generates greater patient participation than the use of stuffed animals and other types of dolls.(14)Systematic reviews on the subject conclude that DT has beneficial effects on people with dementia as long as it improves communication with the environment, alleviates neuropsychiatric symptoms and improves quality of life.(7). Mitchell(15) and Mitchell et al. (16)found higher levels of engagement, communication, and fewer episodes of distress, as well as the potential for DT to increase independence in everyday life. Mitchell &O'Donnell (17)concluded that people with dementia can interact better with their environment after benefiting from DT. Firstly, the best available evidence for DT will be considered, including only those clinical trials that meet most of the CONSORT (Consolidated Research Reporting Standards) criteria. Secondly, relevant information will be obtained for the development of treatment protocols and studies, which will allow setting clear parameters and facilitate the design of future DT studies.

Methodology

This review employed the PRISMA statement Figure 1. The searches were conducted in the following databases: Scopus, Cochrane, PubMed and Web of Science. No limits were established on date, language or study design in order to increase the number of records

obtained. The health descriptors were: lifelike doll, baby doll, doll therapy intervention, empathy doll, Alzheimer's disease, dementia, resident of a nursing home or long-term care or cognitive impairment.

Inclusion criteria were: diagnosis of dementia according to DSM-V; people over 65 years of age; intervention with DT; clinical trials. The use of various types of dolls such as empathy dolls, newborns or reborns was accepted. Exclusion criteria were: participants with severe sensory disorders who may not count due to minimal ability to communicate or those who used dolls before the start of the study; studies that used dolls that did not have a realistic appearance or were stuffed dolls (most previous studies emphasize the importance of the doll's appearance actually resembling that of a real baby).

Results

The search strategy yielded 200 records. Once duplicates were removed, 9 studies were screened by title and abstract according to the eligibility criteria. The articles were published between 2006 and 2023. The main objective of most articles was to determine the efficacy and benefits of doll therapy in the neuropsychiatric symptoms of elderly people with severe dementia.

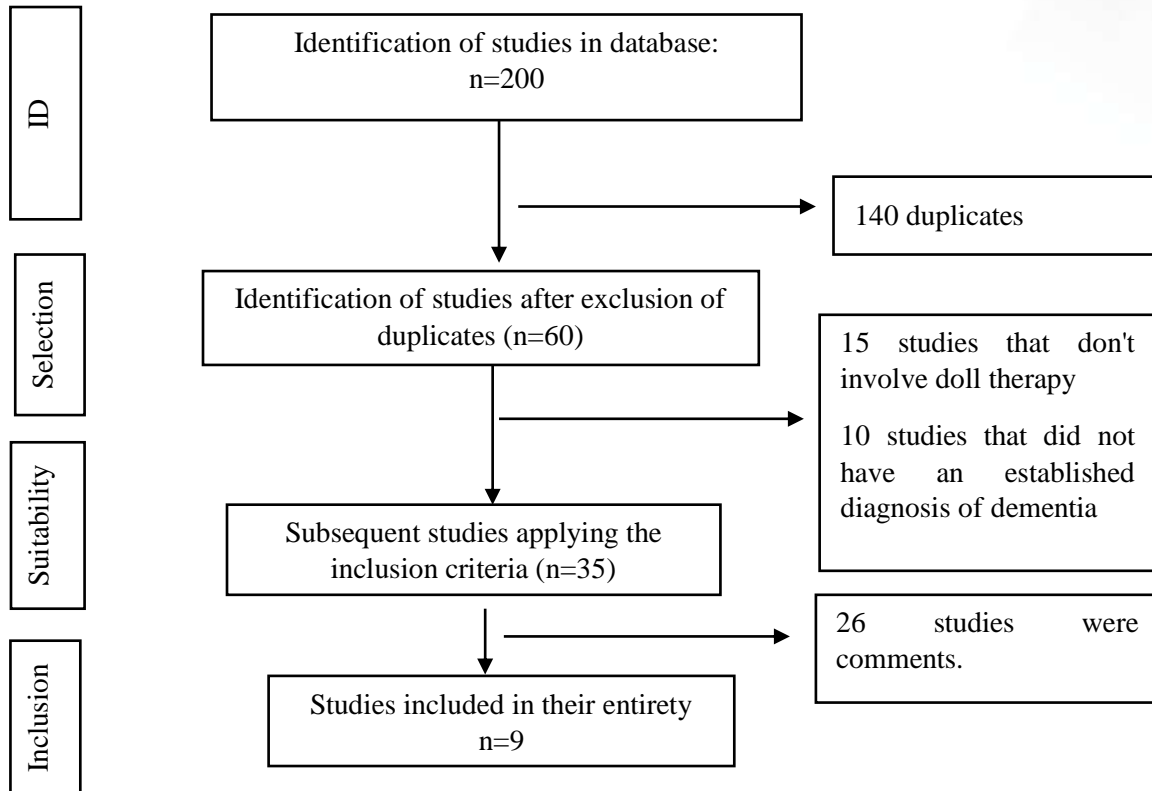


Figure 1.PRISMA method

Discussion

Previous systematic reviews have included qualitative studies that were primarily practitioner narratives about their impressions of the effect of DT, not measurement of the cluster randomization effect with valid assessment tools. This led to reporting conclusions that could be far from actual effectiveness due to methodological bias. To avoid this, our review (Table 1) collected information from studies that methodologically met the criteria for randomization and objective outcome assessment.

DT is a technique that began to be used in the 1980s, and since its inception it has provoked conflicting opinions and an ethical dilemma among professionals who work with people with dementia. Several authors(1, 18, 19)They express their concern about the ethical conflicts that may arise from this technique, considering it a practice that infantilises and could potentially undermine the dignity of the person. On the other hand, there are other authors who defend the use of this technique, alleging the benefits of its applications.(20, 21).

Table 1. *Effectiveness of doll therapy on emotions*

Author	Study design	Study population	Conclusions
Alander et al. (21) England	A grounded theory approach was used and participants were recruited from three nursing homes. 5 participants participated in a focus group and 11 participants were interviewed individually.	16 participants (4 male and 12 female residents). 11 of them had dementia and 4 actively used dolls	Residents generally support the use of dolls, believing that they can have a positive impact on some users. Both doll users and non-doll users felt that a doll promoted a sense of control. It also gave them a sense of pride, purpose, bonding, and kept them busy (protecting them from loneliness, boredom, or isolation).
Bisiani & Angus (1) Australia	A single case study. The case study used both a qualitative and quantitative research design and methodology (Aged Care Funding Instrument) to assess the well-being of the elderly.	1 female participant, with moderately advanced Alzheimer's disease	Significant reduction in the occurrence of anxiety, panic, tremors, hyperventilation and searching behavior; improved social interaction with staff and other residents and increased self-esteem following the introduction of doll therapy.
Cohen-Mansfield et al. (22) USA	Cohort study. Each participant was presented with 23 different, predetermined stimuli.	193 residents of 7 nursing homes with dementia. Average age 86 years. 42 men and 151 women.	Residents preferred realistic dolls to less realistic, animal-shaped dolls. Residents had significantly higher engagement, increased attention, and a significantly more positive attitude toward social stimuli than toward nonsocial stimuli.

Table 1. *Effectiveness of doll therapy on emotions (continued)*

Author	Study design	Study population	Conclusions
Ellingford et al. (23) England	Retrospective audit. Comparisons involved auditing three key variables: residents' (i) positive and (ii) negative behaviour, as recorded by staff in their daily communication logs; and (iii) incidences of aggressive behaviour (both physical and verbal) and (iv) antipsychotic use over a 6-month period (3 months before and 3 months after doll therapy).	Case notes from sixty-six residents (condementia) were reviewed (34 doll users and 32 non-doll users).	Significant improvement in all staff-recorded behavioural measures. Increase in positive behaviours in doll users and decrease in negative behaviours and incidences of aggression. No significant change in antipsychotic use.
Green et al. (19) USA	Cohort study. Staff observations of patient behaviour and haloperidol use were recorded in a logbook.	Median age 69 years. 29 of the patients had an as-needed order for haloperidol.	Patients who participated in doll therapy were less likely to require haloperidol compared to those who did not.
James et al. (24) England	Cohort study. Dolls and teddy bears were introduced into a nursing home for people with mental illness (NMI) as part of a non-pharmacological intervention. The impact of the toys was assessed across five domains over a 12-week period.	33 residents with dementia were offered a doll or a stuffed animal. 13 chose to use a doll and 1 chose a teddy bear.	Overall well-being increased for residents who interacted with dolls. Increased activity, interaction, and happiness were noted. Doll therapy did not make any residents worse, but improved the well-being of some residents.

Table 1. *Effectiveness of doll therapy on emotions (continued)*

Author	Study design	Study population	Conclusions
--------	--------------	------------------	-------------

Mackenzie et al. (25) England	Cohort study. Staff monitored the interaction of doll users over a period of 3 to 6 weeks. Staff were asked to	115 patients admitted to a psychogeriatric unit over a 3-month period. 43 men and 72 women.	35% of caregivers reported some conflict between residents over ownership of the doll. However, caregivers did report that the well-being of residents who used the doll was 'a little better' (30%) or 'much better' (70%).
Pezzati et al. (8) Italy	Controlled trial. 5 patients who have been treated with doll therapy for at least 24 months, while 5 patients who have never received doll therapy (control).	10 patients with dementia (1 male and 9 females, age range 72–94 years). Residents of a Special Care Unit for Alzheimer's disease in an Italian nursing home.	Measures of the relational dimension with the environment, such as gaze direction, exploratory and caregiving behaviors, were promoted in patients with advanced dementia who participated in doll therapy. The study suggests clinically significant improvements in the ability of patients with advanced dementia to relate to the external environment.
Stephens et al. (11) England	Focused ethnography. 30 hours of observation were completed over a 2-month period.	21 residents with dementia and 27 staff members of a nursing home were observed.	Patients with dementia often carried a plastic doll that resembled a small baby. Attachment was an important need that could be addressed through the use of dolls. Residents preferred the realistic dolls (which were thought to be a baby).

The results obtained in this literature review report that DT produces positive changes and statistically significant results in the reduction of disruptive behaviors such as erratic wandering, aggression, agitation, and negative verbalization. Also, most of the included studies report improvements in the emotional component of people with dementia, resulting in fewer episodes of suffering and the presence of more positive moods. These changes may be due to the interaction and meaning that the person with dementia has with the doll, corroborating the emotional benefits generated by attachment and person-centered attention found in previous studies.(16, 17, 26).

In relation to the intervention time, it was found that a prolonged duration contributes to obtaining positive results, even producing changes in food intake. The study developed

by(22)found that a 6-month intervention allows for the development of an initial phase of testing and familiarization with the doll in people with dementia, as well as in their families; and a subsequent phase in which the treatment was implemented to obtain more effective results on rejection behaviors towards the intervention and general behavioral symptoms.

In addition, a prolonged intervention allows for greater acceptance of the DT, as caregivers and families can observe the benefits more fully. On the other hand, it is also important to plan a post-intervention follow-up to observe whether participants maintain the behavioral changes after applying the therapy. Most of the studies in this review do not include any follow-up after the intervention with dolls ends.

However, interpretation of these data should be taken with caution and considered in the context of several methodological issues. The randomization sequence and concealment were only clear in half of the studies, and blinding of assessment was not clear in any study, so the results obtained may lead to estimates higher than the true effect of TD on psychological and behavioral symptoms of dementia. Previous reviews of(7), found methodological limitations similar to the DT and that is why we suggest additional studies that can design protocols that control possible confounding factors, as well as planning during and after the intervention. Regarding activities of daily living, only one article studied the impact of DT on the performance of activities of daily living, finding benefits at mealtimes.(27).

Related to the limitations of this review, it is likely that not all studies could be identified, despite using exhaustive search strategies. The methodological requirement of the inclusion criteria is the reason for the small number of studies included in the review; this could be a limitation, but it guarantees the reliability of the evidence obtained. In addition, the included studies had a small sample size, which could have conditioned the effect of the intervention. Furthermore, it has not been possible to know the lasting effect of DT on the psychological and behavioral symptoms of dementia, given the lack of subsequent follow-up in most of the studies.

The results obtained in this review have important implications for social and health professionals who provide care to people with dementia, as it reports the benefits that DT brings in improving behavioural symptoms and mood. At the same time, guidelines are provided for the implementation of this type of non-pharmacological therapy that can be summarised in four points:

- Doll therapy reduces psychological and behavioral symptoms of dementia.
- It is beneficial to follow a treatment program that includes six phases (assessment, introduction of the doll, assessment of reaction, presentation of the doll, care of the doll, and removal of the doll).

- Extended use of doll therapy allows for greater benefits.

Conclusions

- The findings suggest that doll therapy improved emotional state, decreased disruptive behaviors, and improved communication with the environment in patients with dementia. However, randomized studies with larger sample sizes and methodological rigor, as well as follow-up protocols, are needed to confirm these results.
- Any therapeutic approach that does not involve pharmacological debilitation that improves the well-being of the person with dementia is of great value and importance for clinical practice. The practice of doll therapy requires careful consideration for use and approach taking into account the preferences of each person to be used routinely in practice settings.

Conflict of interest

The authors declare that there is no conflict of interest in relation to the submitted article.

Authors' contribution statement

Conceptualization: Valeria Isabel Espin Lopez

Data curation: Valeria Isabel Espín López

Methodology: Valeria Isabel Espin Lopez

Analysis of results: Valeria Isabel Espin Lopez

Discussion: Valeria Isabel Espin Lopez

Conclusions: Valeria Isabel Espin Lopez

Bibliographic References

1. Bisiani L, Angus J. Doll therapy: A therapeutic means to meet past attachment needs and diminish behaviors of concern in a person living with dementia - a case study approach. *Dementia* [Internet]. 2013 [cited 2024 January 30], 12(4):447–62. Available from: Doi:10.1177/1471301211431362
2. Gómez-Virgilio L, Reyes-Gutiérrez GS, Silva-Lucero M del C, López-Toledo G, Cárdenas-Aguayo M del C. Etiology, risk factors, treatments, and current status of Alzheimer's disease in Mexico. *Medical Gazette of Mexico* [Internet]. 2022 [cited 2024 January 30], 158(4): 235 - 241. Available from: Doi:10.24875/GMM.M22000681

3. Radue R, Walaszek A, Asthana S. Neuropsychiatric symptoms in dementia, 1st ed. Vol. 167. Handbook of Clinical Neurology [Internet]. 2019 [cited 2024 January 30]. Available from: <http://dx.doi.org/10.1016/B978-0-12-804766-8.00024-8>
4. Chiao CY, Wu HS, Hsiao CY. Caregiver burden for informal caregivers of patients with dementia: A systematic review. International Nursing Review [Internet]. 2015 [cited 2024 January 30], 62(3): 340-350. Available from: <https://doi.org/10.1111/inr.12194>
5. Holst A, Skär L. Formal caregivers' experiences of aggressive behavior in older people living with dementia in nursing homes: A systematic review. International Journal of Older People Nursing [Internet]. 2017 [cited 2024 January 30], 12(4): 10.1111. Available from: <https://doi.org/10.1111/opn.12158>
6. Miyamoto Y, Tachimori H, Ito H. Formal caregiver burden in dementia: impact of behavioral and psychological symptoms of dementia and activities of daily living. Geriatric Nursing (Minneap) [Internet]. 2010 [cited 2024 January 30], 31(4):246–253. Available from: <http://dx.doi.org/10.1016/j.gerinurse.2010.01.002>
7. Ng QX, Xian Ho CY, Hong Koh SS, Chuan Tan W, Wuen Chan W. Doll therapy for dementia sufferers: A systematic review. Complementary Therapies in Clinical Practice [Internet]. 2017 [cited 2024 January 30], 26: 42-46. Available from: <https://doi.org/10.1016/j.ctcp.2016.11.007>.
8. Pezzati R, Molteni V, Bani M, Settanta C, Di Maggio MG, Villa I, Poletti B, Ardito RB. Can Doll therapy preserve or promote attachment in people with cognitive, behavioral, and emotional problems? A pilot study in institutionalized patients with dementia. Frontiers in psychology [Internet], 2014 [cited 2024 January 30], 5: 1-8, Art. 342. Available from: <https://doi.org/10.3389/fpsyg.2014.00342>
9. Santagata F, Massaia M, D'Amelio P. The doll therapy as a first line treatment for behavioral and psychological symptoms of dementia in nursing home residents: a randomized, controlled study. BMC Geriatrics [Internet]. 2021 [cited 2024 January 30], 21:1–9. Available from: <https://doi.org/10.1186/s12877-021-02496-0>
10. Martin-Garcia A, Corregidor-Sanchez AI, Fernandez-Moreno V, Alcantara-Porcuna V, Criado-Alvarez JJ. Effect of doll therapy in behavioral and psychological symptoms of dementia: a systematic review. Healthcare [Internet]. 2022 [cited 2024 January 30], 10(3):1–13, Art. 421. Available from:

- <https://doi.org/10.3390/healthcare10030421>
11. Stephens A, Cheston R, Gleeson K. An exploration into the relationships people with dementia have with physical objects: An ethnographic study. *Dementia*[Internet]. 2013 [cited 2024 January 30], 12(6):697–712. Available from: <https://doi.org/10.1177/1471301212442585>
 12. LoboPrabhu S, Molinari V, Lomax J. The transitional object in dementia: clinical implications. *International Journal of Applied Psychoanalytic Studies* [Internet]. 2007 [cited 2024 January 30], 4(2): 144-169. Available from: 10.1002/aps.131.
 13. Torres Artuto. Carl Rogers' client-centered therapy. *Psychology and Mind Portal* [Internet]. 2017 May 6 [cited 2024 January 30]. Available at: <https://psicologiyamente.com/clinica/terapia-centrada-cliente-carl-rogers>
 14. Shin, Juh Hyun. Doll therapy: an intervention for nursing home residents with dementia. *Journal of Psychosocial Nursing and Mental Health Services* [Internet]. 2015 [cited 2024 January 30], 53(1): 13-18. Available from: DOI:[10.3928/02793695-20141218-03](https://doi.org/10.3928/02793695-20141218-03)
 15. Mitchell G, McCormack B, McCance T. Therapeutic use of dolls for people living with dementia: A critical review of the literature. *Dementia*[Internet]. 2016 [cited 2024 January 30], 15(5): 976–1001. Available from: <https://doi.org/10.1177/1471301214548522>
 16. Mitchell G. Use of doll therapy for people with dementia:an overview. *Nursing Older People* [Internet]. 2014 [cited 2024 January 30], 26(4): 24–26. Available from: <https://doi.org/10.7748/nop2014.04.26.4.24.e568>
 17. Mitchell G, O'Donnell H. The therapeutic use of doll therapy in dementia. *British Journal of Nursing* [Internet]. 2013 [cited 2024 January 30], 22(6): 329–334. Available from: <https://doi.org/10.12968/bjon.2013.22.6.329>
 18. Cai X, Zhou L, Han P, Deng X, Zhu H, Fang F,Zhang Z. Narrative review: recent advances in doll therapy for Alzheimer's disease. *Annals of palliative medicine* [Internet]. 2021 [cited 2024 January 30], 10(4): 4878–4881. Available from: <https://doi.org/10.21037/apm-21-853>
 19. Green L, Matos P, Murillo I, Neushotz L, Popeo D, Aloysi A, Samuel J, Craig E, Porter C, Fitzpatrick JJ. Use of dolls as a therapeutic intervention: relationship to previous negative behaviors and pro re nata (prn) Haldol use among geropsychiatric in patients. *Archives of Psychiatric Nursing* [Internet]. 2011 [cited 2024 January 30], 25(5): 388–389. Available from: <https://doi.org/10.1016/j.apnu.2011.05.003>

20. Yilmaz CK, Aşiret GD. The Effect of doll therapy on agitation and cognitive state in institutionalized patients with moderate-to-severe dementia: a randomized controlled study. *The Journal of Geriatric Psychiatry and Neurology* [Internet]. 2021 [cited 2024 January 30], 34(5), 370–377. Available from: <https://doi.org/10.1177/0891988720933353>
21. Alander H, Prescott T, James IA. Older adults' views, and experiences of doll therapy in residential care homes. *Dementia* [Internet]. 2015 [cited 2024 January 30], 14(5): 574–88. Available from: <https://doi.org/10.1177/1471301213503643>
22. Cohen-Mansfield J, Thein K, Dakheel-Ali M, Regier NG, Marx MS. The value of social attributes of stimuli for promoting engagement in persons with dementia. *The Journal of Nervous and Mental Disease* [Internet]. 2010 [cited 2024 January 30], 198(8), 586–592. Available from: <https://doi.org/10.1097/NMD.0b013e3181e9dc76>
23. Ellingford L, Mackenzie L, Marsland L. Using dolls to alter behavior in people with dementia. *Nursing Times* [Internet]. 2007 [cited 2024 January 30], 103(5): 36–37. Available from: <https://www.nursingtimes.net/roles/mental-health-nurses/using-dolls-to-alter-behaviour-in-patients-with-dementia-30-01-2007/>
24. James IA, Mackenzie L, Mukaeowa-Ladinska E. Doll use in care homes for people with dementia. *International Journal of Geriatric Psychiatry* [Internet]. 2006 [cited 2024 January 30], 21(11): 1093–1098. Available from: <https://doi.org/10.1002/gps.1612>
25. Mackenzie L, James IA, Morse R, Mukaetova-Ladinska E, Reichelt FK. A pilot study on the use of dolls for people with dementia. *Age and Aging* [Internet], 2006 [cited 2024 January 30], 35(4), 441–444. Available from: <https://doi.org/10.1093/ageing/afl007>
26. Molteni V, Vaccaro R, Ballabio R, Ceppi L, Cantù M, Ardito RB, Adenzato M, Poletti B, Guaita A, Pezzati R. Doll therapy intervention reduces challenging behaviors of women with dementia living in nursing homes: results from a randomized single-blind controlled trial. *Journal of Clinical Medicine* [Internet]. 2022 [cited 2024 January 30], 11(21), 6262. Available from: <https://doi.org/10.3390/jcm11216262>
27. Moyle W, Murfield J, Jones C, Beattie E, Draper B, Ownsworth T. Can lifelike baby dolls reduce symptoms of anxiety, agitation, or aggression for people with dementia in long-term care? Findings from a pilot randomized controlled trial. *Aging & Mental Health* [Internet]. 2019 [cited 2024 January 30], 23(10):1442–1450. Available from: <https://doi.org/10.1080/13607863.2018.1498447>

The published article is the sole responsibility of the authors and does not necessarily reflect the thinking of the Anatomía Digital Journal.



The article remains the property of the journal and, therefore, its partial and/or total publication in another medium must be authorized by the director of the Journal of Digital Anatomy.



Indexaciones

