

# USING DOLLS TO ALTER BEHAVIOUR IN PATIENTS WITH DEMENTIA

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**ABSTRACT** Ellingford, J. et al (2007) Using dolls to alter behaviour in patients with dementia. *Nursing Times*; 103: 5, 36–37. This study examined the impact of doll therapy by conducting a retrospective analysis of the case notes of nursing home residents with dementia three months before and after introduction of the dolls. The results provide support for previous studies that have suggested doll therapy is an effective approach to use in the care of older adults with dementia. This is a summary: the full paper and reference list can be accessed at [nursingtimes.net](http://nursingtimes.net).

This study examined the impact of doll therapy by retrospective analysis of the case notes of residents with dementia before and after the introduction of the dolls. The aim was to determine if there were changes in residents' behaviour.

## METHOD

### Design

This was a retrospective audit of residents' case notes, examining data over a six-month period (three months pre- and three months post-doll introduction). A mixed design was used to compare the impact of the dolls on doll-users before and after introduction of the dolls and to compare those who used dolls with those who did not. The comparisons involved auditing three objective features:

- | Dosages of neuroleptic medication over the period specified;
- | Residents' positive and negative behaviour recorded by staff in their daily communication records;

- | Number of incidences of aggressive behaviours recorded by staff in their daily communication records.

The following hypotheses were examined. After the introduction of the dolls, those residents using dolls will have been: prescribed less neuroleptic medication (including as-required doses (PRN)); displayed less negative behaviours; and displayed more positive behaviours compared with pre-doll usage and with those not using dolls.

## Recruitment process

All residents living in four care homes in the Newcastle area, where dolls had previously been introduced, were asked to participate. The homes were approximately equal in size and registered as elderly mentally ill facilities. All residents were required to give consent or,

where necessary, assent was obtained from residents' families or the home manager.

The dolls were introduced to the residents indirectly, being placed on chairs or small tables in communal areas. This method allowed all residents to observe the dolls and, if they were so inclined, they could select a doll to use. Thus, in terms of the present study, the doll users were a self-selecting group based on their own desire to use a doll.

The dolls used in the study were all plastic with a soft torso. They were approximately 16–20 inches in length, had eyes that opened and closed, and did not have any additional auditory or kinetic functions, such as crying or breathing. The dolls had different faces and clothes to avoid potential disputes over ownership. For a rationale of the above, see Mackenzie et al (2007).

## BACKGROUND

- | It is estimated that more than 40% of people with dementia in care homes are prescribed neuroleptic medication (Dempsey and Moore, 2005), but recent evidence suggests it is of limited benefit (Sink et al, 2005) and may even increase the rate of the dementing process.

- | Using dolls in dementia care settings is a promising recent development. The ethics and impact of using dolls has been systematically investigated by the Newcastle Challenging Behaviour Service (NCBS) at Newcastle General Hospital (Mackenzie et al, 2006a; 2006b).

- | The findings have been favourable for both residents and staff, with care staff noting improvements in residents' interaction with staff and other residents, activity levels, happiness and contentment and amenability to care interventions and agitation.

## Participants

Sixty-six participants (mean age = 84.41; SD = 8.16) met the criteria and were recruited (34 doll users and 32 non-doll users).

## Measures

A keyword data sheet was used to record information on residents' positive and negative behaviours reported by staff. This involved reading the notes and each time a predetermined 'key' word was identified, a point was awarded to the relevant category. The categories were:

- i. Positive behaviour – there were four sub-categories: action/activity; positive verbalisations; positive mood state; and, positive physical appearance;
- ii. Negative behaviour – there were four sub-categories: action/activity; negative verbalisations; negative mood state; and, negative physical appearance;
- iii. Aggression – a sub-analysis examined aggression as a separate variable. Incidents of verbal aggression and physical aggression were combined from the sub-categories of action/activity and negative verbalisations;
- iv. Neuroleptic use: medical administration records were used to record the neuroleptic drugs and doses residents received.



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### IMPLICATIONS FOR PRACTICE

| This study provides further evidence that doll therapy brings positive effects to the residents who choose to use the dolls.

| Given these findings, it would be beneficial for future research to explore the impact of dolls for patients with dementia who reside on inpatient wards or in their own homes.

| The finding that neuroleptic drugs use did not change, despite the fact that challenging behaviours subsided, indicates a need to review current pharmacological treatment strategies for challenging behaviour in dementia.

### PROCEDURE

#### Data collection

After obtaining consent and assent, residents' case notes were examined in the four homes where dolls were used. The researcher and an assistant psychologist extracted information pertaining to medication and residents' behaviours from daily communication sheets. Ethical approval was given by the local mental health trust and the identities of participants remained confidential.

#### Data analysis

Wilcoxon signed-rank non-parametric tests were used to examine doll users' and non-doll users' scores on the dependent variables before and after introduction of the dolls. Mann-Whitney tests were used to compare doll users' scores against those of non-doll users at baseline and following doll introduction. ANOVAs (analyses of variance) were used to examine interactions between the two groups over time (pre/post). Examination of the data set revealed that very few changes were made to neuroleptic

use (two cases; 1% of the group). As such, further analyses were not undertaken with respect to this variable.

### RESULTS

There were significant differences between doll users and non-doll users in terms of gender (92% of doll-users were female; 66% of non-users were male) and diagnosis (97% and 56% with dementia respectively). All other comparisons were non-significant.

#### Doll users and non-doll users

There was an increase in doll users' positive behaviour following introduction of the dolls and a reduction in negative behaviours and aggression. There were no significant differences for non-doll users on all four of the behaviour measures. Hence, doll therapy can help to reduce doll users' negative behaviours and levels of aggression and can increase positive behaviours.

#### Comparison of doll and non-doll users

There were no significant differences between doll users and non-doll users in all four of the behaviour measures at baseline (pre-doll introduction). Following introduction the two groups showed significantly different scores for positive behaviour. However, there were no significant differences in scores for negative behaviour and aggression between the two groups.

There were significant interaction effects of group (user/non-user) and time (pre/post) on the three behavioural variables. This means that after the introduction of the dolls, all those who used a doll showed significant improvement in all of the behavioural measures compared with those who did not use a doll. Overall, these results indicate that the introduction of the dolls had a significant impact on these behavioural variables.

### DISCUSSION

The significant differences between doll users and non-doll users, in terms of gender and diagnosis, are consistent with the recent findings that being female and having a diagnosis of a dementia are associated with choosing a doll (James et al, 2006). Our findings in relation to medication are also consistent with the emerging literature that there is a general reluctance to stop using such drugs despite concerns about their use in this population. Hence, the results obtained in this study may reflect current

### REFERENCES

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pharmacological treatment practices. However, the continuing use of medication may be due to circumstances in the care homes; more specifically, low staffing and staffing training levels, and management as opposed to therapeutic cultures.

Doll users showed an increase in positive behaviour and a decrease in negative behaviour following the introduction of the dolls. These results support previous attitudinal studies, which have reported doll therapy to be an effective approach in reducing negative and challenging behaviours, and promoting more positive behaviours and mood (James et al, 2006; Mackenzie et al, 2006b).

The main limitation of the study was its naturalistic design. Variables that could not be controlled included the size of the homes, the number of residents choosing dolls, and staff procedures for recording information. Also, the care homes were selected on a voluntary basis, which may have resulted in a positive bias when compared with other dementia care settings. n

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