Baby Doll Therapy in Dementia Patients

A doctoral project submitted in partial fulfillment
of the requirements for the degree of
Doctorate of Nursing Practice

by

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Executive Summary

Dementia is a condition exhibited by emotional and physical states such as anxiety, agitation, sleeplessness, inability to care for oneself, wandering, defiant and sometimes violent behavior, and other unsafe actions. Chemical restraints are often used to control agitated behaviors, but are not always effective and produce untoward effects. A review of the literature for alternative therapies to chemical restraints indicated that doll therapy has provided purposeful activity that can help dementia residents feel useful. In most instances they are less agitated, sleep better, relate to others better, and have an over-all positive affect improvement (Baumann, 1990, Higging, 2010, & James, Mackenzie, & Mukaetova-Ladinska, 2006).

The PICOT question for this evidence based project was: In female residents over 65 with moderate to severe dementia (P), how does exposure to baby-doll therapy (I) compared to no baby-doll therapy exposure (C) influence behavior (O) over a one-week period (T)? The project was implemented using the Rosswurm and Larrabee framework (1999) "A Model for Change to Evidence-Based Practice. An "Implementation Protocol for Baby Doll Therapy in Dementia Residents" was developed based on the evidence found in the literature. Those residents who met the criteria, and with caregiver consent, were the participants in this protocol evaluation project.

The Project was implemented with 16 residents in a dementia care center. Their participation was garnered through identification by nursing staff using predetermined criteria and upon the resident's acceptance of the doll offered to them. Outcomes were measured by the residents' caretakers on their perceptions of the impact of the dolls in six areas of behavior; activity/liveliness, interaction with staff, interaction with other residents, happiness/contentment, agitation, and amenable to personal care. The behavioral outcomes were evaluated on a five-point

Likert-type scale with 5 being much more change and 1 being much less change. The Project Lead also evaluated the residents interaction with the doll using an adopted Engagement Observation Rating Tool (Cohen-Mansfieldabc, Marx, Dakheel-Alia, Regier, & Theina, 2010) , both upon introduction of the doll and approximately one-week later.

Participants had a statistically significant increase in the level of happiness with a similar trend for the behaviors of: activity/liveliness, interaction with staff, interaction with others, and ease of giving care. There was also a trend that indicated there was a reduction in anxiety level. Case studies provide the response and engagement of the participants to doll therapy. The evidence based protocol provided guidance on the implementation of doll therapy for those with dementia. Recommendations based on the outcomes of the project include use with female residents with moderate to severe dementia who have had or cared for young children in their past. Evaluation of the implementation of doll therapy protocol by staff caregivers and family members was positive and supportive of the findings in the literature. This cost effective non-pharmacological approach to improving the well-being of residents with dementia is a therapeutic option. The dementia center staff expressed interest in continuing use of baby doll therapy as an option for their residents. Introduction of the baby doll to future residents can be accomplished by the following the guidelines established by the Project Lead.

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The Problem

Dementia, especially of the Alzheimer's type, is prevalent in over 10% of people over 65 years old and in approximately 50% of people over 85 years old, in the United States (Alzheimer's & Dementia Weekly, 2014). It is one of the major reasons for long-term care facility (LTCF) placements of people over 65 years old. The risk of development of dementia increases with age and manifests itself in malnutrition, agitation, sleeping problems, wandering and depression. Over 80% of persons with dementia have problems with agitation. Additionally, approximately 50% of residents with Alzheimer's dementia also exhibit psychotic behavior such as hallucinations and delusions (Moses, 2011). "Imagine trying to button a shirt while wearing thick gloves and blurry goggles. Imagine trying to understand verbal instructions while sirens, static and voices ring in your ears. This is what dementia residents deal with on a daily basis"(Goodwin, 2010, p. 1).

According to Medical Subject Headings (2011), dementia is defined as, "An acquired organic mental disorder with loss of intellectual abilities of sufficient severity to interfere with social or occupational functioning. The dysfunction is multifaceted and involves memory, behavior, personality, judgment, attention, spatial relations, language, abstract thought, and other executive functions. The intellectual decline is usually progressive, and initially spares the level of consciousness (p.1)."

The signs of dementia are anxiety, agitation, sleeplessness, inability to care for oneself, wandering, defiant and sometimes violent behavior, and other unsafe actions. Historically, use of devices and techniques that restricted and restrained the movement of residents were common treatment approaches. The restraints were used to keep the resident safe from self harm and accidental injury and to save money and staff resources. Over time the use of restraints has

increasingly been viewed both as undesirable and abusive. As a result, chemical restraints to control agitated and other unsafe behavior are now being used for treatment. According to Blowcott (2009) use of chemical restraints, usually in the form of antipsychotic medications, to control behvior is not always successful and increases the possibility of adverse side effects, to include death, and furthers digression of cognitive faculties. Currently federal and state agencies have set a goal of reducing use of antipsychotic drugs in nursing home residents. Alternatives need to be explored.

Groulx (1998) states there are several types of agitated behaviors in individuals with dementia that are not well-managed with pharmaco-therapeutics. Groulx opines that this type of behavior may be the result of internal physical or mental problems, such as pain or unmet needs, and residents will respond best to attentive and respectful care by care providers and family members. Among the alternatives to the use of medications to address problem behaviors of nursing home residents who have dementia is baby doll therapy. Groulx further opines that baby doll therapy may assist the caregivers to reduce agitation among dementia residents.

According to Verity and Kuhn (2008) one of the biggest needs for seniors who have led a productive life is to feel needed and useful. Nightingale (2007), opines that attachment to others is vital for individuals with dementia, especially those living in long-term care. It can be as important for human development as the proper nutrients are for bodily growth. In people with dementia, attachment behavior is easily seen when a person seems to be searching for or talking about a deceased relative as if they were there. It can also be seen in outward behavior such as carrying around an object such as a slipper. Nightingale further states that caretakers of dementia residents may be able to rely less on pharmacological interventions if doll therapy can

assist residents in times of distress and agitation by using their inner abilities to cope with that distress.

Dementia Care, Australia (2012) defines doll therapy as, "… the wise and mindful use of dolls for their symbolic significance to help improve the well-being of people with dementia (P.1)." Higgins (2010) states that doll therapy can provide purposeful activity that can help dementia residents feel useful. Neuschotz, Green, and Matos (2009) conducted a Unit-based quality initiative with the use of baby doll therapy to comfort agitated residents with dementia. They found the benefits of the therapy were immediately evident in a dramatic change of behavior. The resident's mood improved, they experienced increased cooperation with feeding and toileting, and improved interaction with staff. The therapy was also beneficial in exploring resident histories as the resident would talk to the doll, relating incidents that had happened in the past, as if the doll could somehow relate to the resident's feelings. There was interdisciplinary involvement with the baby doll therapy program and the number of dolls used for therapy on the unit grew.

Alexa, (2006), opined that the use of dolls might present an ethical dilemma because of resident dignity. Using dolls, however, can be a successful method to managing difficult behavior. Bailey, Gilbert, and Herweyer (1992) stated that the staff in the convalescent center where doll therapy was instituted did not feel that the doll therapy was demeaning or condescending to the residents but rather they viewed the therapy, "…as a means of offering these patients comfort or diversion (pg. 64). According to Scott (2009), "Caregivers rightly have an aversion to treating older adults like children, even when the effects of dementia render them child-like. But here's a wonderful exception that Alzheimer's residents enjoy: Try giving a woman in the later stages of dementia a baby doll" (p. 1).

The author had personal experience with her own mother who recently succumbed to advanced dementia. While resident in an assisted living facility the author's mother "adopted" two baby dolls that were available in the facility, as her own. Upon transfer to another facility the dolls did not go with the author's mother. Noticing that her mother seemed to be more agitated than before the transfer, she brought a baby doll to her mother. Upon receipt of the baby doll, the author's mother seemed much calmer and staff at the facility began to notice the difference in the mother's behavior when she was in the company of the baby doll. She was much calmer and more accepting of daily care. The mother took the baby doll everywhere with her in the basket on her walker and treated it as her own real baby. The staff reported this to the mother's daughters, including the author. This experience provided personal evidence and served as an impetus for the current project.

The PICOT Format

The purpose for the proposed project entitled, "Baby Doll Therapy in Dementia Patients," was to implement a non-invasive evidence-based intervention to decrease problem behaviors of seniors with dementia, as described in the following PICOT question: In female residents over 65 with moderate to severe dementia (P), how does exposure to baby-doll therapy (I) compared to no baby-doll therapy exposure (C) influence behavior (O) over a one-week period (T)?

Project Objectives

1. Develop a practice guideline for the implementation and evaluation of baby doll therapy for a long term care unit that provides care to individuals with moderate to serve dementia.
2. Determine the efficacy of implementation of the baby doll practice guideline for residents with moderate to servere dementia at one long term care unit.

3. Evaluate the feasibility of the implementation of the baby doll practice guideline for residents with moderate to serve dementia to:
    a. Prevent long-term complications in elderly residents with dementia
    b. Increase the residents self-confidence
    c. Improve the resident's behavior during routine and special care
    d. Increase the resident's social interaction with staff, family members, and other residents
    e. Improve the resident's participation in activities of daily living
    f. Improve the resident's sense of well-being
    g. Decrease agitation and assist the resident in times of stress
4. Develop recommendations for implementation of the doll therapy practice guideline.

Framework Guiding the Project

The framework used to guide the Project was "A Model for Change to Evidence-Based Practice," developed by Rosswurm and Larrabee (1999). There are six progressive steps involved in the framework that was developed to assist nurses in defining and using evidence-based practice protocols. The first three steps are identification of the problem, identification of interventions, and a search of the literature to gather the best evidence. Steps four and five propose the design for practice change with subsequent implementation and evaluation. Team input is invaluable. The team members must have buy-in as to the value of the Project because they will implement the intervention. Caregivers will be much more willing to participate in a project they feel is their own. Step six is the integration and maintenance of this change into the day-to-day operations of the facility. This will occur if the intervention is successful and staff

realize the benefit of the practice change. Table 1 demonstrates that all of these steps fit well with the current Project.

The original time-frame for the Project implementation was set as three weeks, which was the time-frame used in the pilot project from which the Baby Doll Therapy Evaluation Tool was adopted (Mackenzie, James, Morse, Makaetova-Ladinska, & Reichett, 2006). When the Project was moved from the Clarksville area, where the Project Lead resides, to Toledo, Ohio, the ultimate location of the project implementation, time constraints reduced the total time to two weeks during which only one-week observations were possible. One week captured the immediate change in behavior of the majority of the participants. It is unknown if their response to the baby doll will continue in the future. Observation of their response over time would add to the outcome data.

Establishing the Evidence

The Rosswurm and Larabee Model guiding this project indicates that once the problem has been identified the synthesis of the evidence needs to occur. This step was initiated through a search for guidelines related to the implementation of baby doll therapy. No guidelines specific to the intervention of baby doll therapy were located through a search of NIH guidelines, Cochran Reviews, or of other literature reviewed.

Melnyk and Fineout-Overholt (2011) state that when using keywords to search the literature, all forms of the words, including synonyms, must be used in the search, to avoid missing important articles. Keywords used in the search, alone or in combination, are presented in Table 2. The keywords selected reflect the therapy (doll therapy), general terms for the therapy (non-chemical therapy), and the population of interest. In addition to the key terms identified MeSH terms were used to compliment the search of the databases.

Table 1

"A Model for Change to Evidence-Based Practice" (Rosswurm and Larrabee, 1999)

PROGRESSIVE STEPS	IMPLEMENTATION
1. Assess Need for change in practice	Use of chemical restraints to control behavior of the elderly resident with dementia in skilled nursing facilities is not always successful and increases the possibility of adverse side effects and furthering digression of cognitive faculties. The condition exhibits itself in anxiety, agitation, and sleeplessness, inability to care for oneself, wandering, defiant and sometimes violent behavior, and other unsafe actions.
2. Link Problem interventions & outcomes	Find evidence-based non-pharmacologic therapy to modify harmful behavior.by using a standardized term literature search. Answer the PICOT question, "In female residents with dementia (P), how does exposure to baby-doll therapy (I) compared to no baby-doll therapy exposure (C) influence behavior (O) over a one-week period (T)?"
3. Synthesis Best evidence	The available literature on the subject of doll therapy in dementia demonstrates positive outcomes. Several case reports show significant gains in self-confidence and social abilities when residents are allowed to create a caring role for themselves in relation to a doll or stuffed toy. The doll becomes real to them and they are able to relate to it as if it is actually a child of their own. In many instances they sleep better, relate to others better, and have an over-all positive affect improvement.
4. Design Practice change	Design of the project was done by the Team Leader and implemented with the staff in the facility where it was introduced. Following is the design used. As an evidence-based practice change initiative, lifelike baby dolls were made available to elderly female senior residents, with a documented diagnosis of moderate to severe dementia. Those who accepted and related to the dolls were observed over a period of one week for changes in behavior. Participating staff received one-on-one education on current strategies of working with residents with dementia, baby doll therapy, and evaluation techniques.
5. Implement & evaluate Change in practice	Implementation was done by the Team Leader, offering a baby doll to a resident with a diagnosis of moderate to severe dementia in the nursing facility where the resident is residing. Those who accepted the dolls and treated them as real were monitored by their caretakers and evaluated on a five-point Likert-type scale on their perceptions of the impact of the dolls in six areas of behavior. Results are reported in descriptive and statistical format. Case studies are reported.
6. Integrate & Maintain Change in practice	The Project was successful in modifying untoward behaviors to a moderate extent and doll therapy is being considered for continued use at the facility. Dissemination will be by submission for publication, presentation at appropriate conferences, and through petitioning the American Alzheimer's Society for adoption.

Rosswurm, M., & Larrabee, J. (1999). A Model for Change to Evidence-Based Practice. Image: *Journal of Nursing Scholarship*, 31: 317-322.

The controlled MeSH terms used were dementia, Alzheimer's disease, therapy, dementia (vascular), Lewey Body disease, CNS disease, and brain disease. These MeSH terms were identified while searching the MeSH Index to find suitable articles in PubMed. No terms were available in MeSH for "doll," "soft/stuffed toy," or "Teddy bear." The search was continued without the MeSH terms, using only the keywords.

Table 2

Keywords used in the search

Keywords	
Dementia	Therapy
Alzheimer' Disease	Non-Chemical Therapy
Elderly	Non-Chemical Restraints
Aging	Play Therapy
Doll(s)	Stuffed Toys
Psychological Symptoms	Soft Toys
Measurements	Behavioral Therapy

According to Burns and Grove (2009), before beginning a literature search a written strategy should be formulated to save time and resources. The search strategy for this project was developed following directions given in the Mulford Library at the University of Toledo, such as, Library Tutorial, Guides to the Research Process, Guides to the Library Databases & Resources, and consult with the Librarian. Strategies included developing tables to portray various aspects of the search, to include tracking of searches and inclusion and exclusion criteria. The databases searched were PubMed, CIHAHL, Cochran Library (CDSR), and individual searches in the National Library of Medicine database. The World-Wide Web was searched as few articles meeting selection criteria were located. One of the journals located in

the search of the World-Wide Web , Journal of Dementia Care, a British journal, produced eight articles. Review of the abstracts of these 8 articles indicate they were appropriate for this Project, however the Journal was not available from any of the resources searched. An email was sent to the point-of-contact given in the Journal website but no response was received until several months later when the Journal editor emailed copies of the articles that were subsequently included in the review

Table 3 presents the inclusion criteria and index limits used for selection of the literature. The most important inclusion criterion was that the article described some aspect of using doll therapy with dementia residents and the results of their use provided quantitative or qualitative results. In the initial review the only criteria that would exclude an article dealing with baby doll therapy from being used was if it was older than 10 years. Subsequent to the initial review it was found that there was a paucity of literature during that timeframe so the limit was revised to include the previous 20 years of articles dealing with baby doll therapy.

The search yielded 215 articles that were reviewed for quality and for the inclusion and exclusion criteria. Ten articles were initially retained as being relevant to the project. Three of the studies were cohort studies without controls, and the remaining seven were expert opinion only. The seven were case-based reports of elderly individuals with dementia who had adverse behavioral problems. Other articles were retained for background information only.

Following the previously mentioned search on the WWW, nine more articles were added to the evidence review. A total of 20 articles that addressed the use of baby doll therapy for individuals with dementia became the evidence for this Project. No review was found in the search. The tables that capture the search process are presented in Appendices A through D.

Table 3

Inclusion Criteria and Index Limits for Article Selections

Inclusion Criteria	Index Limits
English language	Date: Published in the last 20 years*
Published within the past 20 years*	Species: Human
Published in a journal	Language: English
Residents with dementia	Type of Article:
Use of doll therapy	• Clinical Trials
Outcome measurement tool	• Meta-Analysis
Studies done on:	• Practice Guidelines
• All races	• Randomized Controlled Trial
• All genders	• Review
• > 65 years old	• Controlled Clinical Trials
	• Journal Articles

(*20 years was used subsequent to setting the search criteria due to paucity of literature within the 10-year window.)

Exclusion criteria were not specified since adherence to the inclusion criteria excluded articles by default. There were no preconceived limits set for gray literature.

Design of the retained articles was rated using the Levels of Evidence proposed by Stillwell, Fineout-Overholt, Melnyk, and Williamson (2010). The 20 retained articles were rated as Level IV and Level VII based on their design. Although these levels of evidence are not at the highest level, the results all supported the use of doll therapy for individuals with dementia with few, if any, untoward effects. Table 4 presents the levels of evidence and rationale for the rating.

Table 4

Levels of Evidence and Rationale

Levels of Evidence & Rationale	
Level of Evidence	Rationale
Level IV	Four of the studies are cohort studies: Cohort studies are observations of a group or groups (cohort) to determine the development of an outcome or outcomes such as a disease.
Level VII	Sixteen of the articles are authoritative opinions of an expert.

Adapted from Stillwell, S., Fineout-Overholt, E., Melnyk, B.M., & Williamson, K. (2010, May).Searching for the Evidence. American Journal of Nursing, 110: 41-47

.**Summary of Literature Review**

The publication dates of the 20 articles retained spanned the years from 1990 to 2010. As mentioned previously, the majority of the studies were categorized as expert opinion, with only four using a cohort design. Eight of the studies were published in journals outside of the United States in Great Britain. This may reflect the greater acceptance of the use of baby doll therapy in Britain. Appendix B, Literature Evaluation Table, contains a summary of the content for each of the articles reviewed and selected for use. The Table includes the level of evidence for each article.

Synthesis of the Literature

The expert reviews provided an overall favorable effect on the use of baby doll therapy with elderly dementia residents. There were individual and group case histories in each of the expert opinion articles. The literature was replete with descriptions of the immediate change in behavior of elderly dementia residents receiving baby dolls and treating them as if they were real babies. Neushotz et al. (2009) presented a case where the baby doll offered to the resident was made of towels, not resembling a real baby at all. The resident took the makeshift doll and had an immediate change in affect and behavior toward the staff around her. The effect was not only immediate, but lasted throughout the duration of the resident's stay. James et al. (2006),

mentioned the added effect of baby dolls being used as a means of communication between the staff and the resident. For example, the resident could communicate to the staff that she was hungry or cold, by saying, "my baby is cold," or "my baby is hungry." In addition, some of the residents talked to their baby dolls revealing historical facts in their background, such as a traumatic event related to their own family members.

Higgins (2010), Alexa (2006), and Verity (2008) mentioned the only negative statement related to use of baby doll therapy. The statements suggest that some geriatric professionals, caretakers, and family members feel that the use of baby dolls in geriatric residents is "demeaning" to the resident. Neushotz et al. (2009) also mention this as a drawback, however, they state that after introducing this therapy to the resident, the same persons that were opposed to it found that it worked amazingly well and agreed that it did not seem to be demeaning to the resident. All of the other referenced articles also suggested that what seems to be an ethical issue, when baby doll therapy is actually implemented the therapy did not seem to be demeaning to residents at all. Alexa (2006) stated that, "the use of doll therapy could be seen as preserving the person's dignity, rather than diminishing it" (p. 419) because, "…baby doll therapy is preferable to physical or chemical restraints" (p.419).

Miller (2010) sums up the positive effects of baby doll therapy as, increased activity and focus, improved communication when carrying a doll, improved attitude towards other residents and caretakers, decreased agitation during routine care, and keeping the resident's hands busy. Additionally, the resident is less likely to do harm to themselves because of the improvement in behavior. Other positive effects of doll therapy found by Minshull (2009) are that the therapy helped to improve speech, well-being, and communication. Minshull also found that dolls that cry could cause distress in residents.

Five of the articles that were retained described measurements of positive change in behavior towards staff and others, improvement in mental well-being, self-esteem, activity, and affective states (Cohen-Mansfield et al. 2010; James et al. 2006; Mackenzie, James et al. 2006; Minshull, 2009; Ready, & Ott, 2003). Sixteen of the articles were case studies of individuals or groups of dementia residents. Bailey et al. (1992), show a definite improved behavior change before and after introduction of doll therapy. Baumann (1990), documents the experience of one resident with dementia and shows the potential for doll therapy as "potent psychological supports for correcting maladaptive behavior" (p. 1132). Godfrey (n.d.) described the effect of a doll given to a woman with dementia who, prior to the therapy became quite distressed and sometimes violent. The staff reported an immediate behavior change of the resident after introduction of the doll. Groulx (1998) presented 12 non-pharmacologic treatment modalities to use with Alzheimer's disease residents, including doll therapy. Higgins (2010) presented a review of over 20 articles on the use of dolls to increase well-being in residents with dementia. Eighteen of the articles showed anecdotal evidence of the effect of doll therapy on improved behavior of dementia residents, as discussed below.

James, Mackenzie, Pakrasi, and Fossey (2008) presented expert opinion of non-pharmacological therapies for residents with dementia. In regard to doll therapy the authors stated, "The findings from these investigations have been favorable for both residents and staff" (p. 230). Gibson (2005) presented a case history of his mother's experience with doll therapy that helped her to be more relaxed, with resultant improved behavior. It also helped the resident's children realize how much their mother had cared for them.

James, Reichelt, Morse, Mackenzie, and Mukaetova-Ladinska (2005), Mackanzie, Wood-Mitchell, and James (2007), Moore (2001), Nightingale (2007), and Stevenson (2010) studied

the impact of the introduction of a dolls on the behavior and affect of residents with dementia. They showed the potential and utility of doll therapy for dementia residents with challenging behavior in several different settings. Dolls were also important as they play rolls other than as a baby, such as other significant persons in the residents life , a parent, sibling, or a spouse. Several other aspects of implementation of doll therapy were noted by the above cited authors. It was recommended that the caretaker should use the same name as the resident uses for the doll. The doll is not an inanimate object to the resident but represents a real person with whom the resident can relate. The doll cannot be taken away without causing real stress to the resident. Dolls can also be useful in relating historical and significant events in the resident's life and shows that it is important to consider the resident's history before deciding on an appropriate therapy for that particular resident.

Gaps in Clinical Knowledge:

Not one of the abstracts or articles reviewed for this project that were related to baby doll therapy were above an evidence level IV (cohort studies). The majority of the articles were descriptive in nature, directly based on expert opinions or the clinical experience of a respected authority. They present the opinions of authorities on the subject or editorials presenting case reports of one or more individuals' experience with the use of baby doll therapy. The highest level of evidence found in a literature search is of a quasi-experimental study. There was no evidence at the level of a controlled trial or higher. A practice guideline for implementation of doll therapy for individuals with dementia had not previously been developed. The development and evaluation of a guideline, by the Project Lead, based on the current evidence was the first step for ensuring the provision of this intervention.

Design Practice Change

The fourth step of the Rosswurm and Larrabee model guiding this project is the design of the practice change**.** A Statement of Recommendations was developed based on the evidence of the cohort studies reviewed. Table 5 presents the recommendation along with the supporting references. The recommendations along with the synthesis of all retained articles were used in the development of the Practice Guidelines for Doll Therapy for Individuals with Dementia. This Practice Guideline was implemented to determine efficacy and feasibility of baby doll therapy in residents with dementia.

The Guidelines give practical steps to implementing baby doll therapy. A copy of the Practice Guidelines is provided in Appendix E. Included in the Practice Guidelines is a PowerPoint presentation and a flyer that were developed to inform key stakeholders about the project, presented in Appendix F. The change process is included as part of the Practice Guidelines in the implement and evaluate step of the project.

Implement and Evaluate

The Practice Guidelines for Doll Therapy for Individuals with Dementia provides the process for implementation of the Project. The entire Practice Guidelines contains the important aspects of implementation of the Project and was developed using the Centers for Disease Control and Prevention (n.d.), Developing a Protocol. Components of the protocol include the purposes of the project, participation criteria, role and responsibilities of key stakeholders, addressing ethical issues, procedures, outcome measures, data entry, establishment of conclusions and recommendations and dissemination. The Practice Guidelines are critically analyzed and synthesized as shown in Table 6, using the AGREE Instrument (Agree Collaboration, 2001).

Table 5

Statement of Recommendations (Based on Retained Cohort Studies)

Statement of Recommendation	References	Level of Effectiveness
Elderly female dementia residents will accept are relate to a doll when offered to them. Dolls can help improve behavior in activities, interactions with others, happiness, & agitation. They can be introduced to the resident by placing them on a table the resident has access to. The preferred method is to offer a doll to the resident by handing it to them.	James, I., Mackenzie, L., & Makaetova-Ladinska, E. (2006, April 5). Doll Use in Care Homes for People with Dementia. *International Journal of Geriatric psychiatry*, 21:1093-1098.	Level IV: cohort study
Provide directors, staff, and caretakers of female dementia residents with information and planning for introduction of baby doll therapy for residents with dementia, within the facility.	Cohen-Mansfield, J., Marx, M., Dakbeel-Ali, Regier, N. & Theina, K. (2010, April). Can Persons with Dementia Be Engaged With Stimuli? *American Journal of Geriatric Psychiatry*, 18: 351-362.	Level IV: cohort study
Provide baby dolls to elderly female residents of LTCFs, with diagnosed dementia, in an appropriate manner acceptable to residents and staff.	Mackenzie, L., James, I., Morse, R., Makaetova-Ladinska, E., & Reichett, F. (2006, July). A pilot study on the use of dolls for people with dementia. *Age & Aging*, 35:441-444.	Level IV: cohort study
Residents who are offered a doll and accept the doll will be treated as the caretaker of the doll. The doll will be handled with care as if a real baby, as perceived by the resident.	Minshull, K. (2009, Mar/Apr). The impact of doll therapy on well-being of people with dementia. *Journal of Dementia Care*, 17:35-38.	Level IV: cohort study

Table 6

Project Protocol for Baby Doll Therapy in Dementia Residents

Content	Role and Responsibilities of Select Stakeholders		
	Project Lead	Staff/Caretakers	Participants
Players	DNP Student	Team members: Project Lead Director of Nursing Physical Therapy Staff Activities Staff Nursing Personnel Nursing Assistants working with the residents Additional personnel as indicated	Nursing home residents.
Scope/Applicability	DNP Student	**1.** Administrative Personnel **2.** Healthcare Personnel **3.** Nursing home staff caretakers **4.** All health care personnel in contact with the resident	Elderly Female Dementia Residents
Ethical/Legal Issues	Apply for Expedited IRB	Determine if any ethical/legal issues exist within the Center.	Residents with dementia unable to determine participation for self. Resident representatives/guardians must give verbal consent for resident to participate.

Content	Role and Responsibilities of Select Stakeholders		
	Project Lead	Staff/Caretakers	Residents
Question	PICOT: In female residents over 65 with moderate to severe dementia (P), how does exposure to baby-doll therapy (I) compared to no baby-doll therapy exposure (C) influence behavior (O) over a one week period (T)?		
Purpose	**1.** Prevent long-term complications in elderly residents with dementia **2.** Increase the residents self-confidence **3.** Improve the resident's behavior during routine and special care **4.** Increase the resident's social interaction with staff, family members, and other residents **5.** Improve the resident's participation in activities of daily living **6.** Improve the resident's sense of well-being **7.** Decrease agitation and assist the resident in times of stress		
Inclusion Criteria	1. Elderly female residents at least 65 years old or older. 2. Documented diagnosis of moderate to severe dementia. 3. Manual dexterity sufficient to hold or caress a baby doll. 4. Visual acuity sufficient to recognize the form of a baby doll. 5. Difference in language spoken is no barrier.	Agree to inclusion and exclusion criteria	Meet all criteria.
Exclusion Criteria	1. Residents with mild dementia 2. Residents who do not accept and relate to the doll after two attempts 3. Residents who immediately accept the doll but leave it a short time later. 4. Residents who, in rare instances, the doll invokes negative irritated reactions.		

Content	Role and Responsibilities of Select Stakeholders		
	Project Lead	Staff/Caretakers	Participants
Procedures	1. Educate staff and caretakers on therapy. 2. Introduce baby doll by handing to the resident two times. 3. Administer if resident qualifies for project, at inception of the Project. 4. Visit caretakers and residents each week for education, support and assistance with evaluation forms.	1. Receive Lead's education. 2. Enable Lead to introduce baby doll to resident. 3. Assist Lead to perform QOL Scale. 4. Perform initial assessment and at one week. 5. Reinforce baby doll therapy with resident and treat baby doll with respect.	1. Accept or reject baby doll. 2. Treat doll as own. 3. Interact with doll.
Focus	The focus of all care provided to the residents: 1. Should be on the person with dementia, not on the disease itself. 2. The personality and character of the resident should be considered. 3. It is the person's reality that should be considered, not that of the caretaker. 4. Care should be person-centered. 5. Having dementia increases the need for security.		
Data Collection of Outcome Measures	1. Determine outcome measures 2. Add the outcome measures 3. Collect data from all evaluation forms.	Staff and caretakers support and complete evaluation forms with help from Lead.	Continue to interact with the doll by resident preference.
Data Entry	Develop data entry format and enter all data for the 4 different evaluations to be completed	Support the Lead in data entry as indicated.	Continue to interact with the doll by resident preference.
Project Development of Conclusions and Recommendations	Results of the study will be evaluated by the Project Lead using the output from the evaluation forms and included in a written submission to the University of Toledo and for publication	Determine whether or not to continue baby doll therapy with their residents, depending on positive behavior change by the resident.	Continue to interact with the doll by resident preference.
Dissemination	Dissemination of the results of the Project will be determined by the Project Lead and faculty members on the Project Committee.		

Outcome Measures

A change in behavior of the participants following the implementation of doll therapy was the primary outcome of the project. The evaluation tool used to measure participant behavior was an adaptation of the instrument developed by Mackenzie et al. (2006), and used with permission. The instrument has two scoring sheets, one to record initial data and the second to record the change in behavior that was observed. The two scoring sheets were adapted to measure behavior change in dementia for the baby doll therapy intervention. The instrument was selected for use because it fit well with the proposed Project. The instruments contain six areas of behavior that are to be rated by the resident's caretaker prior to baby doll therapy and again at one week after introduction of the doll to the resident. The instrument was adapted to be completed by the main resident caretaker with the assistance of the Project Lead instructing the caretakers, usually nursing assistants, in the documentation of the instruments. The instruments are shown in Appendix H.

The instruments were easy to understand and to document. Instructions included on the document are as follows,

> *Dear Staff Member. Thank you for completing this form for the Baby Doll Therapy Project. The Project is designed to determine if the use of baby dolls has a positive effect on people with dementia. Please complete this brief description form before the baby doll is introduced to the resident you are caring for.*

The demographics requested were the resident's race/ethnicity and the residents' age in years. The caretaker was then requested to give a, "Brief description of the resident's frequent behaviors before the use of the doll (such as rocking, shouting, anxious, withdrawn, etc.)," as listed in Table 7. One week after introduction of the baby doll, the six items were

scored using a five-point Likert-type scale that used “much less” to “much more” as the anchors for the observed behavioral change.

Table 7

The six areas of behavior included in the instrument:

1) Activity/liveliness	4) Happiness/contentment
2) Interacting with staff	5) Agitation
3) Interacting with other residents	6) Amenable to personal care

A second evaluation tool used by the Project Lead was the Engagement Observation Rating Tool for Doll Therapy. This instrument was designed for the observer to evaluate the resident’s interaction with the doll over a 10 minute time period, both at the initial introduction of the doll to the resident and at approximately one week after introduction of the doll to the resident. The same instrument was used to document the level of engagement at both times. The instrument was adapted from a rating tool used by Cohen-Mansfield et al. (2010). Components of the instrument include the time of engagement over 10 minutes, attention to the doll, and attitude and action toward the doll. A copy of the instrument is at Appendix N

Setting and Population for Implementation of the Project:

The population for implementation of the “Baby Doll Therapy in Dementia Patients” was elderly female residents in LTCFs, with documented diagnosis of moderate-to-severe dementia. This population was similar to the populations reported in the literature. There were case studies of residents in LTCFs. Table 8 presents criteria for resident inclusion in the Project. While the inclusion criteria stated that the baby doll therapy would be made available to residents who were 65 years old or older, residents were referred by the staff and the age was unknown by the Project Lead until after consent was obtained. One of the residents that was entered into the study was only 60 years of age. It was subsequently realized that age was not

the important criteria for participation, rather cognitive ability was the important criteria. It was anticipated that 16 residents and their caretakers would participate in the Project. Caretakers were the primary caretaker in the LTCF. In the dementia center the primary caretakers for the residents are usually the nursing assistants that work with the resident on a daily basis.

Table 8

Criteria for Participant Inclusion in Project

Inclusion Criteria
Residence: Resident's in a Long-term Care Facility (LTCF)
Gender: Female
Age: 65 years old or older
Diagnosis of Moderate-to-Severe Dementia
Manual dexterity to hold or caress baby doll
Visual acuity to see baby doll
Ability to accept baby doll offered to her

Contributors and Rationale to the Process of Change

Dicenso, Guyatt, and Ciliska, (2005), define stakeholders of a research project as, "…individuals, groups, or organizations that can directly or indirectly effect the decision to adopt the intervention and its implementation" (p. 186). The biggest obstacle to gaining stakeholder support for the Baby Doll Therapy in Dementia Residents Project was finding a facility that would agree to implement the Project. At the outset it was the Author's mistaken opinion that, because baby doll therapy had an excellent evidence-base and great outcomes, that potential facilities would be more than willing to have their facility participate in the Project. Most of the facilities contacted indicated that the corporations managing them had restrictions about doing "research" in their facilities. Only one corporation of a hospice facility near to the

Project Lead would agree to implement the Project. The initial attempt to implement the Project was not successful at identifying enough patients to complete the Project. Subsequently a suitable site was located in upstate Ohio, near the University of Toledo. Contact was made with the Director of Nursing who liked the Project and contacted the Director for permission to implement the project at the facility.

According to Burns and Grove (2009) in order to facilitate a broad base of support for a research project, development of a team with concerned stakeholders will help to distribute the work and to generate new ideas. It is important to identify stakeholders and identify team members early in the project. There should be a core group within the team to act as planners and encouragers of the project. The team will initially engage in understanding the problem and generating new ideas.

Stakeholders represented various staff members of the facility as well as the participants. Table 9 shows the active and supportive stakeholders for the Project and their developed roles. The Director of Nursing agreed to be the mentor for the Project Lead. Other commitments limited the mentor's presence in the facility, however, she had instructed her staff to cooperate fully with the Project Lead and the staff was very helpful in the implementation of the Project. Additional stakeholders, most of who were briefed on the Project were interested in helping facilitate wherever possible. Their role is supportive.

Table 9

Active and Supportive Stakeholders in the Project with Role and Rationale

Active Stakeholders		
Positions	Role	Rationale
DNP Student,	Team leader	Has the knowledge and skills to implement the Project.
Nursing Director	Mentor	Can grant access to facility, staff, and residents. Has oversight of the quality of care. Has overall knowledge of the organization and access to the nursing staff.
Physical Therapy and Activities Staff	Team Members	Knowledge of workflow and residents.
Staff Nurses	Team members	Improve workflow
Nursing Assistants	Team members	More knowledgeable about resident. Evaluate Resident.
Participants	Beneficiary	Satisfaction
Supportive Stakeholders		
Family Members	Beneficiary	Knows resident/grants permission
Corporation	Beneficiary	Increased profits
DNP Faculty	Overseers	Pride

Barriers: Anticipated and Actual

There were numerous barriers related to the Project. Some of these barriers were anticipated and addressed prior to implementation. Other barriers were noted during implementation. The barriers that were identified existed in relation to the Corporation, the staff, caretakers, residents, and family members. The Nursing Director suggested there might be a problem with the nursing staff perceiving an increase in workload but that was not expressed by the staff. At times it was difficult to get enough staff time to do the resident evaluations and many times the Project Lead would help out with the residents waiting for an opportunity to get with the caretaker to fill out

the evaluation form, especially during the second week. An important barrier during implementation was that the Project Lead was not able to give an in-service to the staff members due to corporate requirements that staff members be paid for that time. Each staff member needed to be informed about the Project separately and there was staff turnover for different wards within the facility each day. While the staff was briefly informed in the change-of-shift report on a few of the wards, many new staff members appeared each day without knowledge of the Project. Another significant barrier was that the facility had already provided baby dolls on each ward and the residents were used to holding dolls during the day. Table 10 shows barriers to implementation that were anticipated as well as those that occurred during implementation of the Project.

Table 10

Barriers to Implementation of Project with Rationale

Barrier	Rationale
Corporate requirements	May block participation of the facility in this effort.
Competing priorities	Facilities have priorities competing for time and resources.
Nursing staff perceptions	May view project as increased workload
Nursing staff turnover	Maintaining knowledge of project during all shifts and on all units
Family members perceptions	May view project as demeaning to their loved-one
Facility staff resistance	Resistance to change, doing things the way they are used to and lack of knowledge about baby doll therapy
Commitment of facility to participate	Corporate and financial requirements may restrict this
Outcome measurement	Obtaining a developed evaluation tool for measurement of outcomes.
Dolls	Cost and finding the right ones (includes safety issues)

Facilitators

There are several facilitators to implementation of the Project. These facilitators encompass the same categories of the barriers presented; corporate, staff, family, and participants. The facilitators were used to address some of the anticipated barriers. For example, the dolls purchased for the Project are very lifelike and attractive. Table 11 shows anticipated facilitators to implementation.

Table 11
Facilitators to implementation with Rationale

Facilitator	Rationale
Literature	Shows immediate and positive results to baby doll therapy
Dolls	Dolls are to be purchased by the student and left with residents
Facility director	Can give permission for project and impetus to staff
Facility Staff	Can reinforce the therapy by treating dolls as real "babies."
Family Members	Can reinforce the therapy with the resident
Committee Chair	Can give valuable information on project, encouragement, and ideas for implementation
Participant outcomes	Chance to make a dramatic improvement in resident care.

The Setting

The final setting for this Project was a dementia care center for Alzheimer's Disease, a 60-bed skilled nursing facility located in northwestern Ohio. The center provides both permanent and temporary services for residents with both Alzheimer's and other types of dementia. The facility is located on the campus of a general hospital, providing easy access to the hospital campus with emergency and other hospital services. The center also provides transition services to residents requiring a higher level of care, provided within the hospital campus. Table 12 depicts the services that are offered at the dementia care center.

Table 12

Services Offered at the dementia care center

Services Offered
• Long-term and day-care facilities
• Care to individuals in all stages of Alzheimer's and dementia.
• Constant resident care by a staff member with a permanent assignment to each resident.
• All staff is trained in validation therapy.
• Dementia-certified licensed nurses administer all medication to residents.
• All nursing assistants are state-tested.
• The center has a high staff-to-resident ratio.
• A permanent dietitian, physical therapy assistant, and activities coordinator are on staff.

The Dolls

Dolls used for the project were obtained by the Project Lead at a retail store. These dolls met the criteria for use in doll therapy reference criteria. The criteria were that the dolls were realistic looking and safe for the residents to handle. The dolls had soft bodies and were light weight. They were life-sized infant baby dolls with eyes that opened and closed according to the position of the doll. The dolls had plastic heads and limbs and were dressed in pink overalls. shirt, and matching hat. They were all blue-eyed, blond-haired, female Caucasian dolls. Sixteen dolls were purchased as it was felt that sixteen would be an adequate number of residents to demonstrate effectiveness of the baby doll therapy. The dolls feet were bare and there were no other accoutrements with the doll. They had manufacturer's tags on them identifying them as a "New Born Baby" that were removed once the resident accepted the doll and was entered into the project. A picture of the dolls is at Figure 1.

Figure 1. Picture of the baby dolls used for the Project

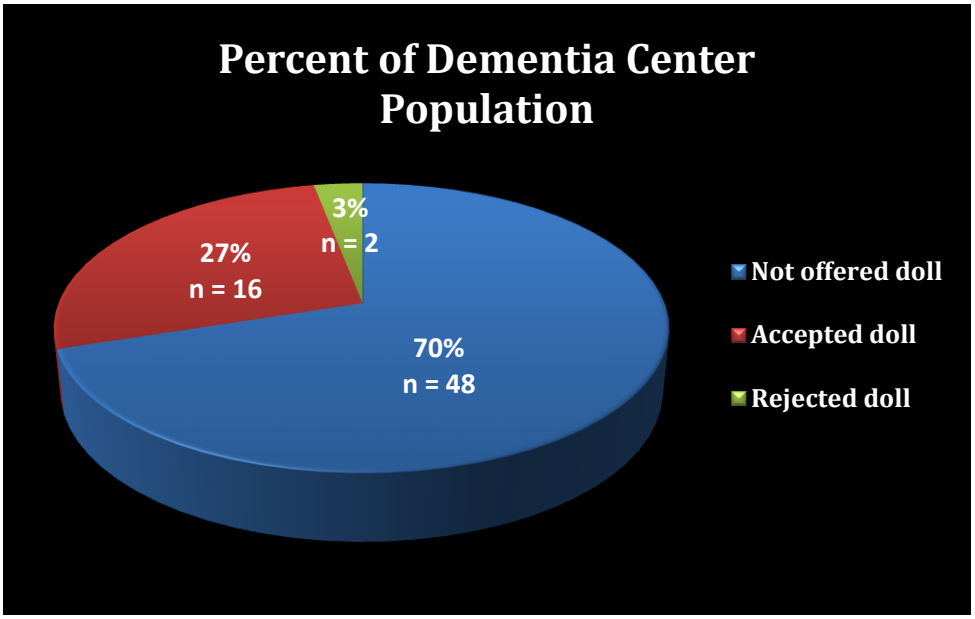
Selection of Participants

Participants were selected from the residents of the facility. A maximum number of 16 residents were able to be participants in the Project as there were 16 baby dolls, purchased by the Project Lead, to distribute. The ages of the participants range from 60 – 86. The criteria for inclusion into the Project was at least 65 years of age but one 60-year-old resident was included, as described below.

Participants were selected by asking the major resident caretakers at the dementia care center to recommend residents who they felt met the inclusion criteria and by the Project Lead observing resident's behavior during the time spent in the center. This introduced the possibility of bias on the part of the caretakers, many of whom were working part-time and who, many times, were designated to work in other areas than usual. The situation introduced a confounder

into the selection of appropriate residents. The final outcome was that a total of 18 residents were introduced to the doll with 16 ultimately included in the Project, as shown in Figure 2 .

Figure 2. Percent of dementia care centered residents by whether or not offered a doll (n=16)



Data Analysis

Data were entered into an Excel database for analysis. The data were analyzed by descriptive statistics, nonparametric tests for ordinal data, using data from the Likert-type Baby Doll Evaluation Tool (forms 1 and 2) rating scale, and categorized data from the Engagement Observation Rating Tool for Doll Therapy. The data collected using the Baby Doll Evaluation Tool were converted to represent a change from the first documentation of the behavior rating using Form 1 to the rating on Form 2. If the caretaker stated there was no change in the behavior the same rating was given. If there was an increase by one level in the behavior then an increase in the original level was given that value. The same was done for a deduction if the level decreased by one level.

Project Outcomes

Behavior Changes

The scores of the caretakers rating of the participant's behavior on the Baby Doll Therapy Evaluation Tools ranged from 1 to 5 with an average score of just under a rating of 3 to a little over a 4 rating. The average scores along with the minimum, maximum, and mode ratings for each behavior are presented in Table 13. The overall trend was for a positive change in the behaviors, following the intervention, for the majority of the participants. Note that the score for "The client becomes agitated" declined but it is considered a positive change. A Wilcoxon Signed-Rank Test was conducted to determine if a significant change in behavior occurred (Lowry, 2013). The change in the happiness behavior showed a statistically significant improvement.

Figure 3 shows the change in activity/liveliness level after one week of interaction with a baby doll, as evaluated by the caretaker. Those that originally showed "a lot" of activity/liveliness did not change their status. Of the seven residents that originally showed "some" activity/liveliness, one client showed an improvement, and of the five residents that showed only "a little" activity/liveliness one client showed an improvement. The changes were subjected to the Wilcoxon Signed-Rank Test for matched pairs. There was no statistical significance between the before and after behavior at the $P = 0.05$ level.

Table 13.

Scores for the Six Main Categories of the Resident's Behavior on a Scale of 1 to 5 Before and One Week After Introduction of the Doll

Client Behavior Items	Average Scores Before the Doll	Min	Max	Mode	Average Scores One Week After Doll Therapy	Min	Max	Mode	Sign Test (p =)
The Client's activity level or liveliness is good:	3.63	2	5	4	3.81	2	5	4	0.68
The Client interacts with you (the caretaker):	4.06	2	5	4	4.13	2	5	4	0.32
The Client interacts with other people or residents:	3.44	2	5	4	3.94	2	5	4	1.00
The Client is happy or content:	3.53	2	5	4	3.93*	1	5	5	0.01*
The Client becomes agitated:	3.81	1	5	4	3.63	1	5	4	0.25
It is easy to give personal care to the Client:	2.94	1	5	2	3.25	1	5	2	0.10

*Statistically significant value.

Figure 3. Change in activity/liveliness prior to and one week following doll therapy initiation (n=16)

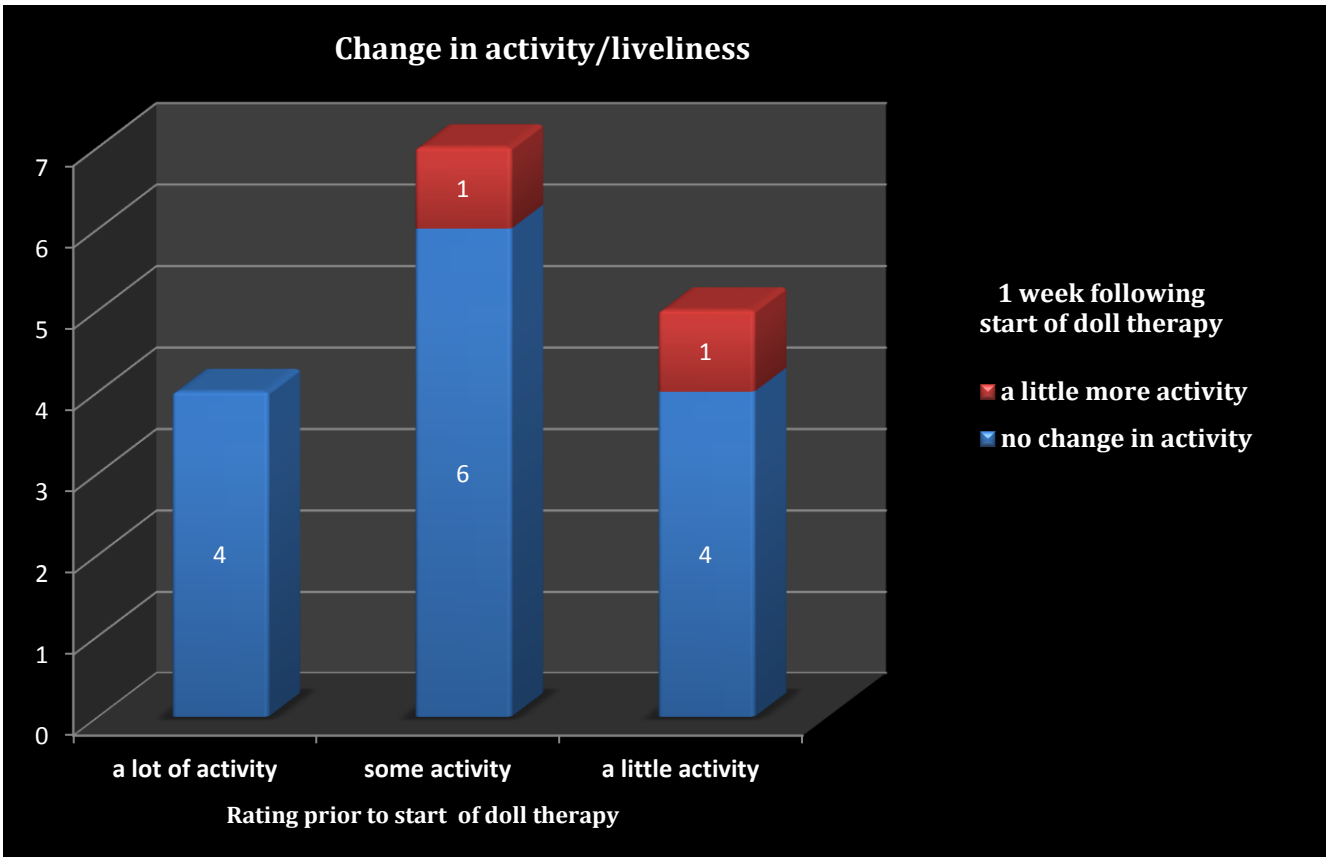


Figure 4 shows the change in interaction with the caretaker after one week of interaction with a baby doll, as evaluated by the caretaker. As can be seen, only one of the residents was perceived as demonstrating a "little more" interaction with the caretaker after interacting with the baby doll. The changes were subjected to the Wilcoxon Signed-Rank Test for matched pairs. There was no statistical significance between the before and after behavior at the P = 0.05 level.

Figure 4. Change in Interaction with caretaker prior to and one week following doll therapy initiation (n=16)

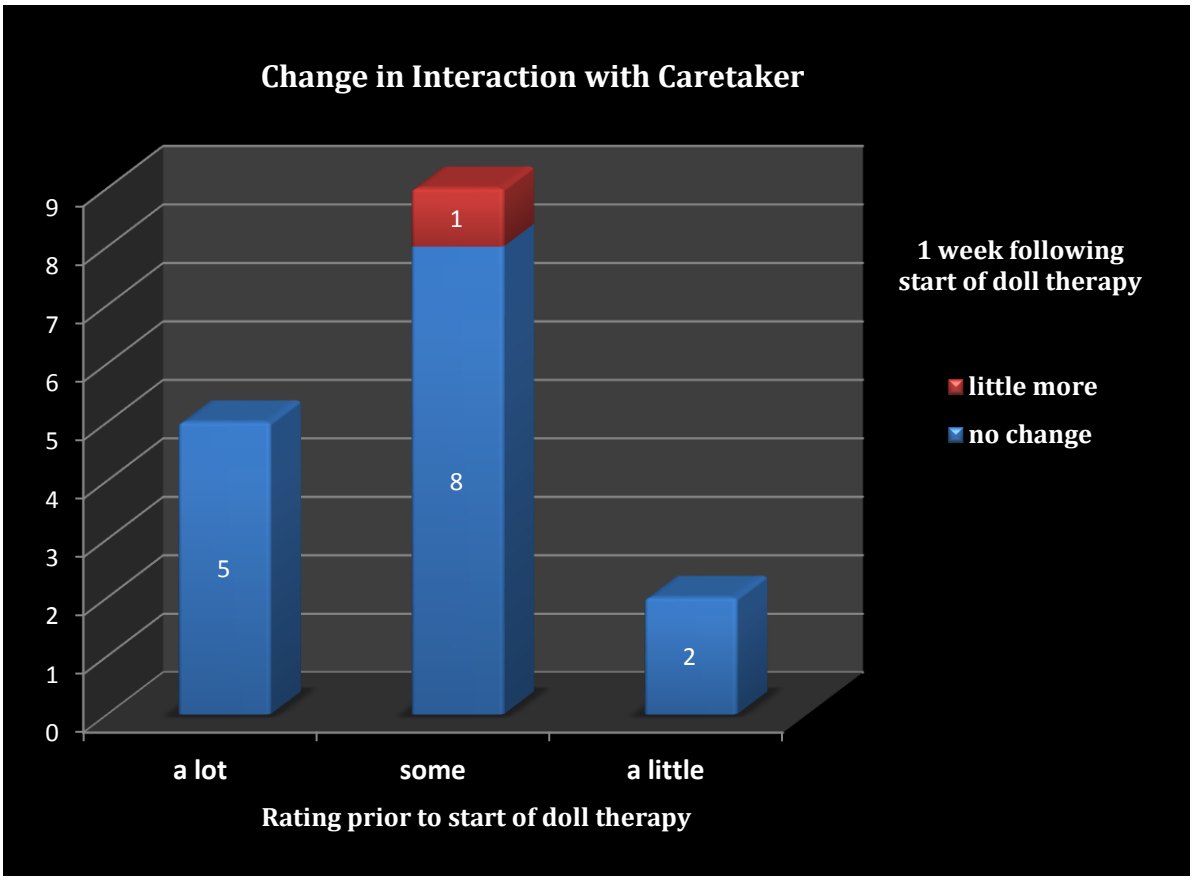


Figure 5 shows the change in interaction with others after one week of interaction with a baby doll, as evaluated by the caretaker. As can be seen, only one of the residents was perceived as demonstrating a "little more" interaction with others after interacting with the baby doll and one client was perceived as demonstrating a "little less" interaction with others. The changes were subjected to the Wilcoxon Signed-Rank Test for matched pairs. There was no statistically significant difference between the before and after behavior at the P = 0.05 level.

Figure 5. Change in interaction with others prior to and one week following doll therapy initiation (n=16)

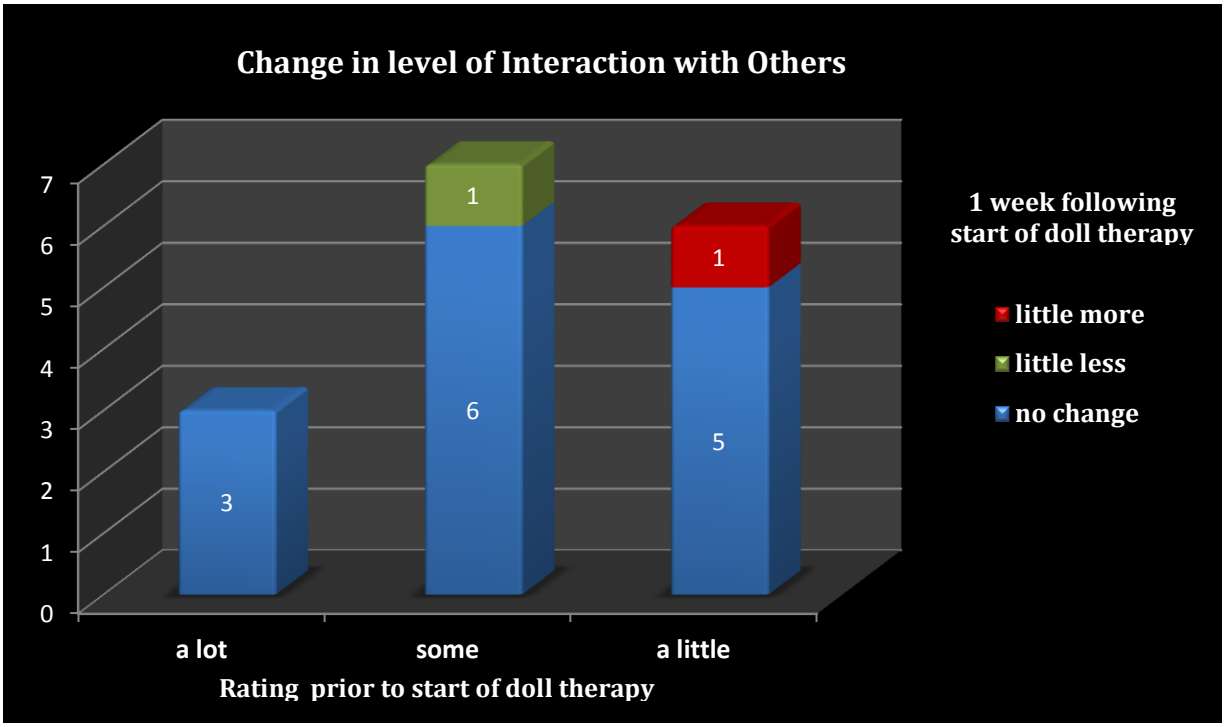


Figure 6 shows the change in the client's level of happiness after one week of interaction with a baby doll, as evaluated by the caretaker. As can be seen the caretakers perceived that seven of the residents demonstrated a "little more" interaction after interacting with the baby doll. The changes were subjected to the Wilcoxon Signed-Rank Test for matched pairs. There was a statistically significant difference for a directional test between the before and after behavior at the P = 0.01 level.

Figure 6. Change in level of happiness prior to and one week following doll therapy initiation (n=16)

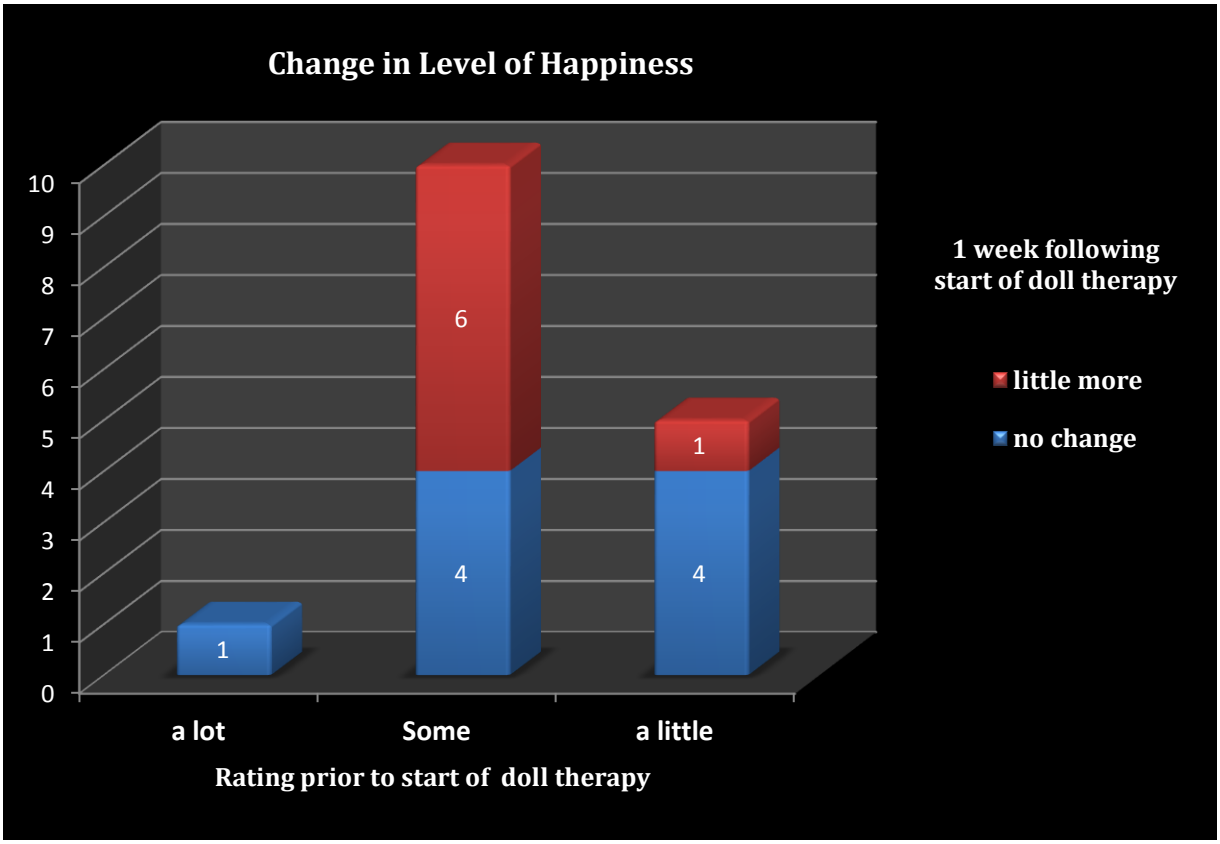


Figure 7 shows the change in level of agitation after one week of interaction with a baby doll, as evaluated by the caretaker. As can be seen, one of the residents was perceived as demonstrating a "little more" agitation after interacting with the baby doll. Two of the residents who initially were percieved as demonstrating "a lot" of agitation were perceived as demonstrating a "little less" agitation after interacting with the baby doll and one resident who originally was perceived as having "some" agitation was perceived as demonstrating a" little less" agitation. The changes were subjected to the Wilcoxon Signed-Rank Test for matched pairs. There was no statistically significant difference between the before and after behavior at the P = 0.05 level.

Figure 7. Change in level of agitation prior to and one week following doll therapy initiation (n=16)

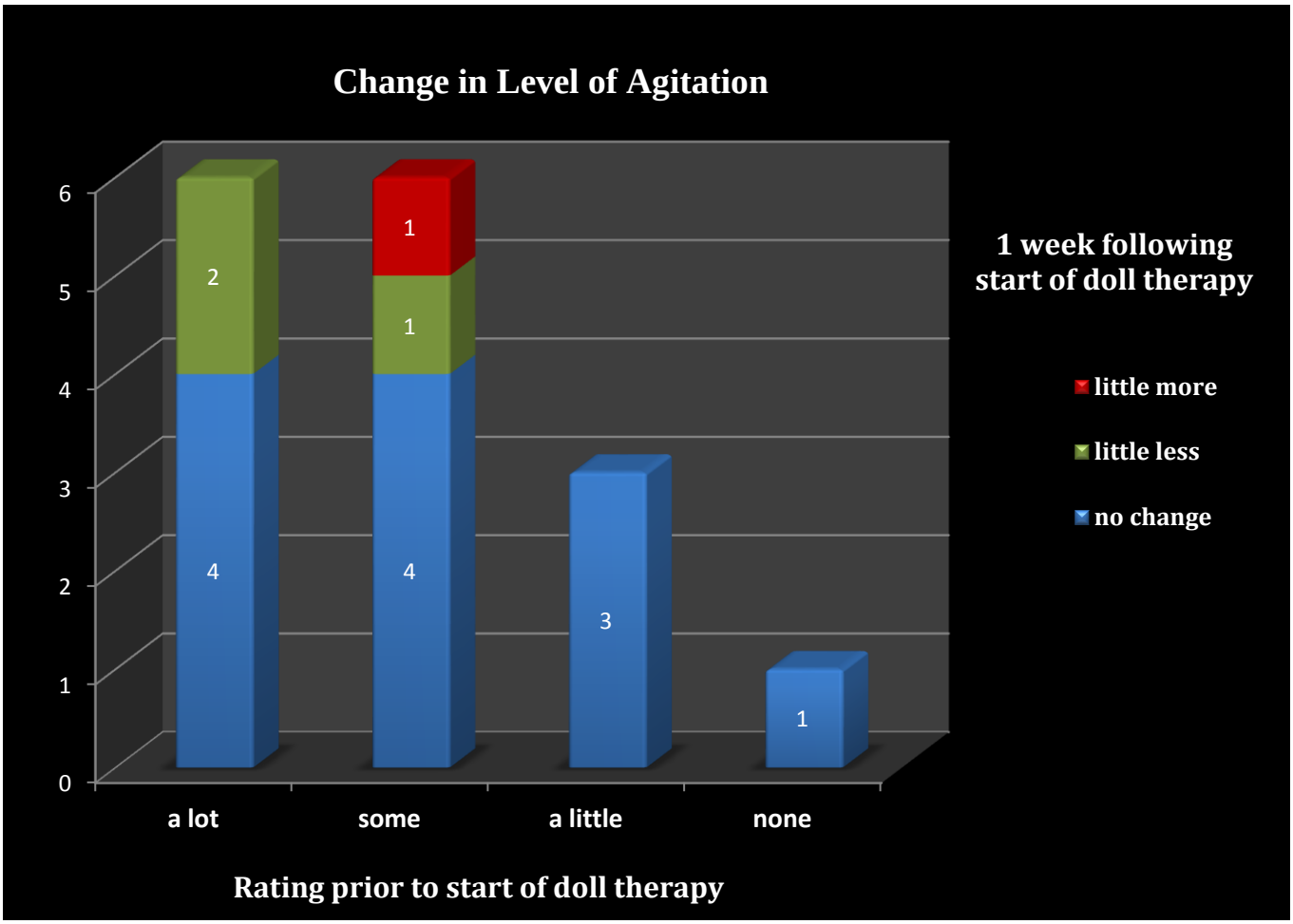
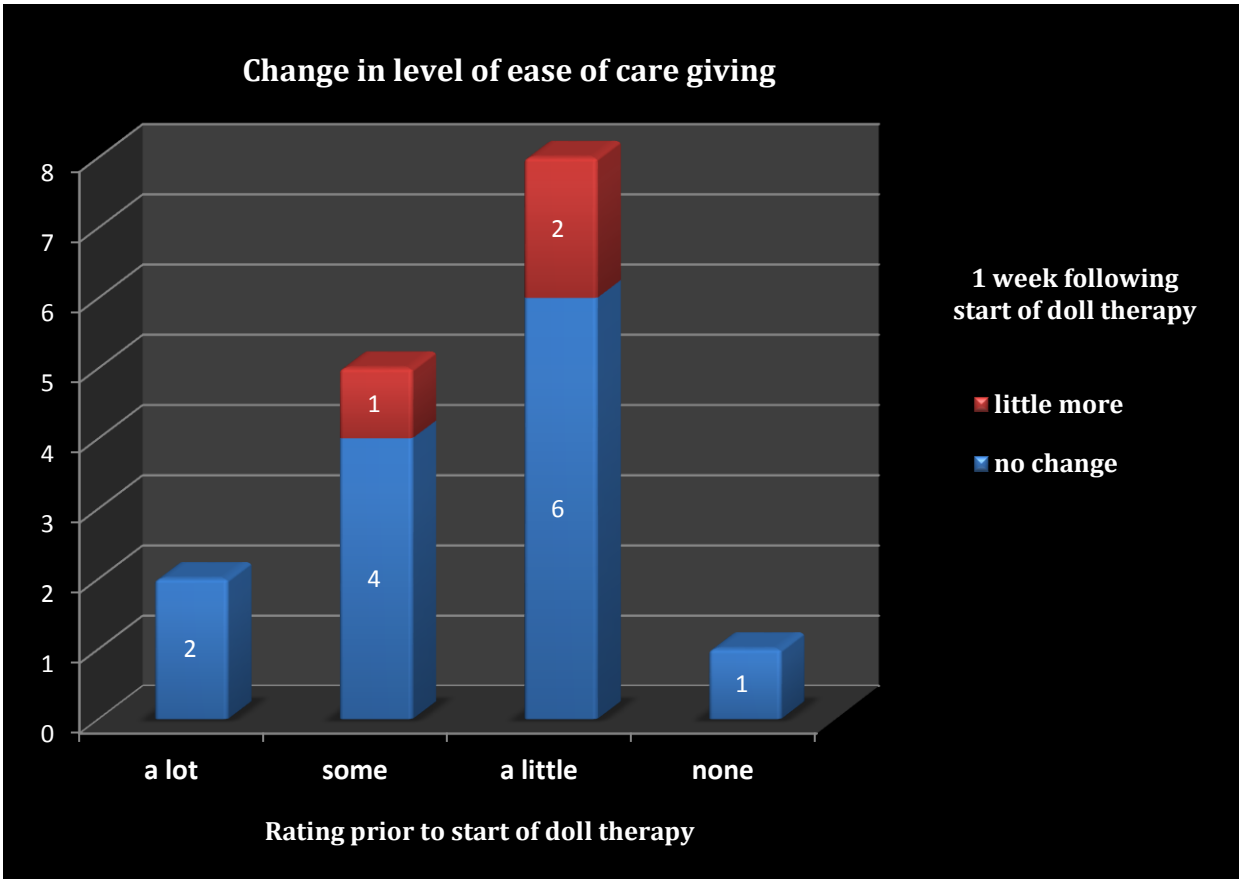


Figure 8 shows the change in level of ease of giving care after one week of interaction with a baby doll, as evaluated by the caretaker. As can be seen, three of the participants were perceived as demonstrating a "little more" ease of giving care after interacting with the baby doll. The changes were subjected to the Wilcoxon Signed-Rank Test for matched pairs. There was no statistically significant difference between the before and after behavior at the P = 0.05 level.

Figure 8. Change in level of ease of giving care prior to and one week following doll therapy initiation (n=16)



Engagement

The Project Lead was responsible for evaluating the resident's reaction to the doll using the Engagement Observation Rating Toll for Doll Therapy. The evaluation was done by observing the resident with the doll for approximately ten minutes after handing the doll to the resident and again for another approximately ten-minute period one-week after initiation of doll therapy.

Review of the data from the Engagement Observation Rating Tool for Doll Therapy resulted in categorization of the engagement of the participant into one of 4 categories. These categories are pictured in Table 14.

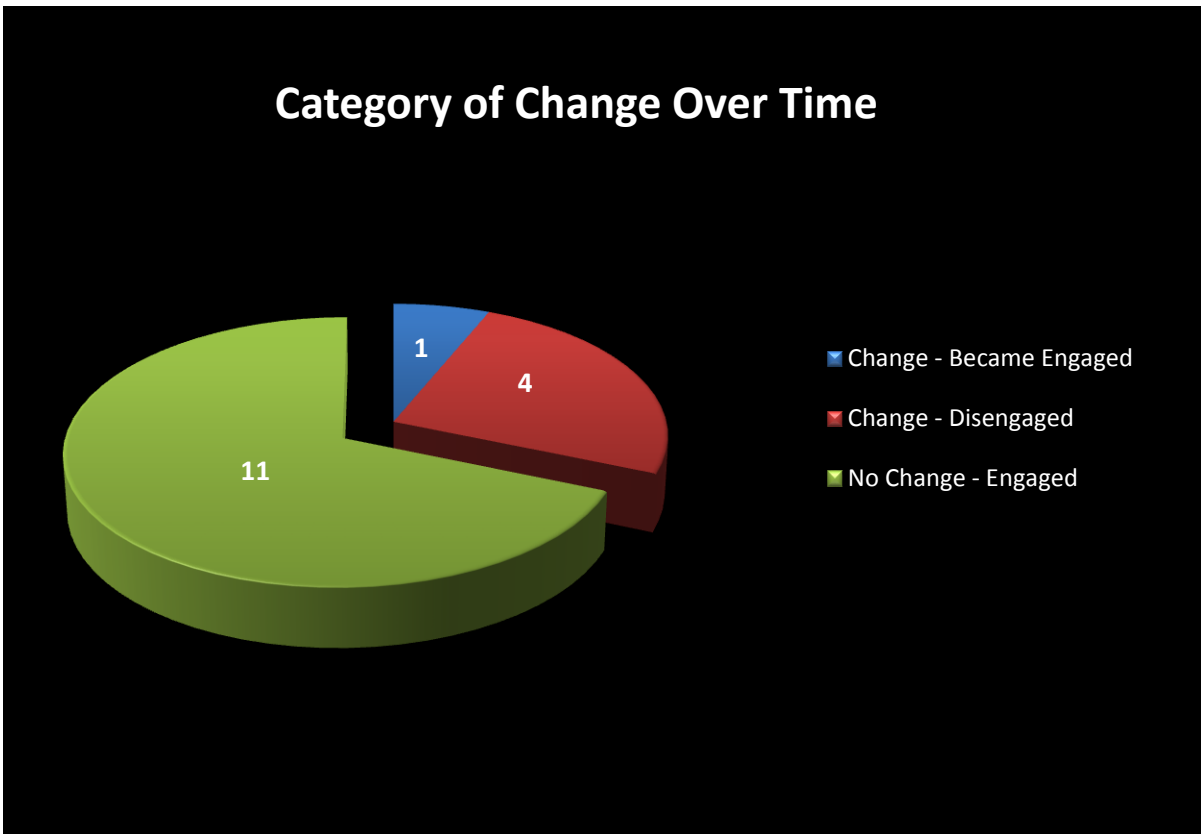
Table 14.

Categories of Engagement of the Participants with the Dolls Over One Week

1. = no change over time – engaged;
2. = no change over time – not engaged;
3. = change over time – became engaged; and
4. = change over time = became less engaged.

Eleven of the 16 participants who were immediately engaged with the doll, continued to be fully engaged with the doll one week later. Four of the 16 participants were initially engaged and at the one week follow-up refused the doll. Only one of the participants changed from not engaged to be being engaged at follow-up. It is interesting to note that this participant's behavior was greatly modified at the end of the week, as noted by the Project Lead, in Figure 9.

Figure 9. Change Over Time in the Resident's Engagement with the doll (n=16)



Case Histories

Eleven of the sixteen residents that were originally engaged with the doll had no change during the one-week period. They stayed fully engaged with the doll. Presented here are the brief case histories of several of the participants. The names of the residents have been changed to provide for privacy. Guardian permission was secured for presentation of the pictures.

Judy:

When first given the doll, Judy's behavior became hard to manage. She would not put the doll down for personal care or to eat. She became very belligerent and the nursing assistant took the doll away and gave it back to the Project Lead, refusing to reintroduce doll. The following day Judy found someone else's doll (the other resident had left the doll in a chair) and started caring for it and the nursing assistant eventually accepted Judy having the doll because she became easier to manage at that time. Judy became compliant with therapy. Judy's husband was elated with the doll therapy and he offered to pay the Project Lead for the doll. He stated that Judy was much happier with the doll.

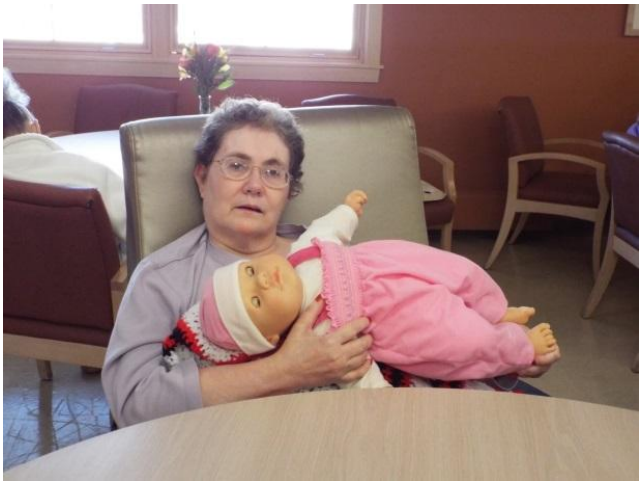
Julie:

Julie suffered a stroke and cannot speak or move much except for her arms. It was unclear at first if Julie accepted the doll because of that. She did start mouthing the doll to show she had accepted it. The nursing assistant said that Julie was always "eating her baby." Julie appears to be very attached to the doll and her husband states she is happier since getting the doll and she smiles a lot when with the doll.

Julie with her husband:

Julie's husband visited every day at least twice a day to feed Julie. He is very supportive with her and the doll therapy. He always made sure she had her doll when not eating. He was very pleased with the results of the doll therapy.

Anna:



Anna does not appear to have dementia when you first talk with her but the staff members allege she has moderate dementia. They stated that Anna "makes up stories about her life that are not true and, although she sounds convincing, most of what she says is not true. Though only 60 years old, the staff strongly recommended her for the doll therapy and she, herself, requested a doll, so she was entered into the program. As noted previously, the age of the residents was unknown to the Project Lead until after consent for participation was obtained. Anna's husband states she appears happier with the doll.

Audrey:

Audrey accepted the doll when held out to her and kissed it. She spent a few minutes contemplating the doll and for about half of the time during the first observation period she continued to hold the doll but paid no attention to it. During the second observation period the doll was on the chair in Audrey's room and Audrey was laying in her bed. When given the doll she put it at the end of her bed and proceeded to ignore it. When she was asked what she thought of the doll she stated, "it's all right." She then laid down and went to sleep.

Nancy:

Nancy's family members stated that she would never accept a doll because she always made fun of the other residents who carried a doll or a stuffed animal. They requested the Project Lead try giving her a doll anyway. Nancy accepted the doll right away and carried it into the dayroom with the other residents. She has taken to hiding her doll so other residents can't hold it. She knows right where she has hidden the doll when asked, "where is your baby?"

Phyllis:

Phyllis is a single lady who has never had children but she seemed interested in another resident's doll and the caretaker said she thought she would like a doll. She took the doll immediately when offered to her and said, "a pretty doll, she is pretty." She said, I can't keep her. I don't know what to do with her. Will you help me get her home. I don't think I can do this." Phyllis continued to hold the doll during the full observation period and she was entered into the program. During the next week, Phyllis was not seen with the doll and the staff members said she didn't seem interested in it. During the second observation period the doll was found in her room. When offered the doll she folded her arms and refused the doll. She then

asked what she owed for the doll and she closed her eyes and would not give any verbal response after that. She subsequently walked away.

Ellen:

Ellen initially refused the doll when first offered to her but was seen later in the day holding another resident's doll in an appropriate manner. She was highly recommended as a good candidate for doll therapy so she was given a doll and entered into the program. During the week she was seen holding the doll appropriately. During the second observation period she was in the dayroom without the doll. Ellen would not accept the doll when offered to her and she said she was not feeling well and she exhibited severe head and hand tremor. She was seen later in the day with the doll in her lap in an appropriate position.

Carol:

Carol was sitting next to the chair that another resident, Doris, had set her doll in walking off and leaving it. Carol was very concerned about the doll, that someone would leave it there. Doris was not entered into the program so the doll did not belong to her. Carol continued to ask about the doll so her guardian was contacted and permission granted to offer her the doll. The guardian (Carol's daughter) stated that she did not think Carol was a good candidate but granted permission. After the second attempt to offer the doll Carol took it and held it appropriately for the full observation time. Later the caretaker asked what the baby's name was and Carol stated, "I'm not going to pretend." Eventually Doris took over the doll and Carol was not seen with it again. During the second observation period, when Carol was asked about her "doll" she stated, "I don't have a doll, someone else does," referring to Doris's doll.

Doris:

As also presented in Figure 9, one participant, who originally was not engaged with the doll, became engaged during the first week. Doris was a very active resident. She continually moved, picked up things, and talked almost constantly. Doris originally accepted and kissed the doll then set it in a chair after a short period and walked away. She was not entered into the program. A few days later, Doris was frequently observed walking and holding Carolyn's doll. At that time Doris was entered into the program and given Carolyn's doll, since Carolyn had rejected the doll during the week. During the second week, Doris carried the doll frequently. Near the end of the second week, Doris was sitting quietly in a chair holding the doll almost all day, a considerable change in her usual behavior.

Caretaker Evaluation

Caretakers were asked to provide short comments regarding their perception of the participant's response to baby doll therapy. The caretaker's comments about the residents both before and one week after introducing the baby doll are listed in Table 15. Half of the eighteen comments suggested a positive reaction by the resident toward the doll and three of the comments suggested that the residents did not interact well with the doll. In most cases these comments closely reflect the engagement noted by the Project Lead and recorded on the Engagement Observation Rating Tool for Doll Therapy. The Project Lead's comments on the Rating Tool about participant's behavior are at Appendix P. When questioned about their evaluation of the baby doll therapy after one week, most of the caretakers agreed that the therapy had helped to modify many aspects of the residents' behavior and that, "…the dolls have been good for the residents."

Table 15.

Staff Caretaker's Comments on Participant Behavior

Code	Comments (Prior to Introduction of the baby doll)	Comments (One week after Introduction of the baby doll)
1	She wanders and gets aggressive with care. She likes to be left alone and do her own thing.	She really pays attention to her baby. Treats it as it is real. Noticed it doesn't have socks.
2	Resident has been sleeping a lot lately.	Resident not entered into the Project.
3	She has periods of aggressiveness and a lot of crying off and on!	Steadily declining!
4	Silent. Anxious. Sun Downer.	She enjoys the baby. It is good for her.
5	She loves to take things and loves to drink. She pouts a lot when she doesn't get her way. She can go either way. She is changeable!	She really doesn't interact with the baby too much at all.
6	Resident is quiet, withdrawn and sleeps a lot. Likes to watch others, which is sometimes a distraction when dining. Interaction: resident does not interact much with anyone. Does not talk much and doesn't really carry on a conversation, even when family visits.	Resident not entered into the Project.
7	She's up at night, wanders and has combative behavior and sleeps in daytime if up at night. She gets combative when giving care!	She doesn't interact well with the baby!
8	Resident occasionally becomes agitated and combative. When she becomes agitated she goes into her room and won't have anything to do with others.	No change in behavior when with doll.
9	Resident has been yelling and cursing a lot.	I have seen her with the baby sometimes.
10	Resident is very active and oftentimes difficult to redirect.	(Resident) does go pick up the baby on her own.
11	Resident is mostly pleasant but withdrawn from other residents most of the time.	Mainly because she rejects the baby.
12	Resident is a pleasant Polish speaking human who is sometimes hard to communicate with and redirect. Can become agitated.	(Resident) talks and looks at her baby. Seems pleased with it.
13	She is quiet and sleeps a lot. She is bossy and very critical. She can become hostile even with family members.	She sometimes holds her doll but no change in behavior.
14	Joanne has been mellow and not anxious but has a habit of eating clothes.	She smiles with the baby doll and eats the baby.
15	Geneva has been crying a lot lately and very talkative.	The doll doesn't make any difference in (Client's) behavior.
16	Mary has been speaking of dyeing a lot lately.	It (the doll) helps her keep her fingers out of her mouth.
17	She is in last stages of dementia. She's quiet seems to be happy. She mumbles her words!	I think (the Client) is happier because she has the baby all the time.
18	Resident is generally calm, but does get anxious; constantly asks if she can help.	(The Resident) enjoys the baby. She talks to it and cares for it. So, I believe it's beneficial.

Limitations of the Project

A limitation and possible confounder to the project was that the dolls were all female Caucasian dolls with blue eyes. Ultimately this did not turn out to be a problem because only one of the residents entered into the Project was not Caucasian. The client, an African American woman, accepted the doll and treated as if it were her own "baby".

At the time of acceptance of this location for the project, it was unknown to the Project Lead that the facility had already instituted a type of baby doll therapy within several months of inception of the project. Several dolls had been purchased by the facility and were available in the common areas for the residents to hold and interact with during the day. This proved to be a major confounder to implementation of the Project because many of the residents were used to holding and interacting with a baby doll. The staff used this previous experience with dolls to indicate whether or not the resident would be a good candidate for the baby doll therapy.

During the implementation of the Project, there was a large turnover of personnel and, although several attempts were made to assure that the nursing assistant filling out the pre-survey was the same one to fill out the post-survey, this was not always possible. Additionally, one of the nursing assistants had a bad experience with the initial resident accepting the baby doll, that appeared to prejudice her perception of the effect of the baby doll therapy on the residents in her charge. The nursing assistant also admitted to the Project Lead during the second evaluation period that she did not understand the rating system at first, although she had been thoroughly briefed several times during the initial introduction period. She had stated each time questioned if she understood how to rate the resident that she did understand. The nursing assistant was responsible for rating seven of the 18 residents.

The IRB requirements for the Project Lead limited access to the resident's medical record and knowledge of the actual diagnosis of type and severity of dementia was limited. The main caretakers for the residents were nursing assistants and they were unable to determine actual severity of dementia. The caretakers were the major source of suggestions for candidates for the program. Access to the resident's medical record to obtain participant characteristics would be helpful in future projects in order to determine the resident's diagnosis of type and severity of dementia. Every candidate for care in the dementia care center has a thorough evaluation of their cognitive function and entry into the facility is limited to those who cannot function in a non-structured environment. The evaluation is part of the medical record. Carol was a case in point, since she was in the facility temporarily, unbeknownst to the Project Lead.

The project was implemented at only one location. The setting specializes in dementia care of all types. They provide both adult-day-care and residential care. The majority of the articles that were included in the Project were accounts of introduction of baby doll therapy into a mixed setting of nursing home residents, to include both physical and mental/emotional disabilities. The dolls were equally well-accepted in all settings. For the most part, the residents who accepted and treated the dolls as "real babies" were those with cognitive function compromise. Those residents showed success with the baby doll therapy. There was only one account in the literature of other residents making "fun" of the resident with the baby doll.

The number of participants enrolled in the Project was limited by the available baby dolls purchased for the project. Even though there were only 16 participants in the project their response was diverse and helped in the generation of the recommendations for future implementation.

Recommendations

The Implementation Protocol for Baby Doll Therapy in Dementia Residents captures the current evidence in implementation of doll therapy. It is recommended that facilities consider implementation of this practice guideline for those residents who meet the criteria developed for the Project. Recommendations for the implementation of the baby doll therapy were developed based on the outcomes and evaluation data.

An important part of success of the Project was staff buy-in. Because of financial constraints of the dementia care center, the planned in-service's by the Project Lead for the staff members were not possible. Participating staff received one-on-one education on current strategies of working with residents with dementia, baby doll therapy, and evaluation techniques. Nursing assistants played a crucial role in identification, evaluation, and implementation of baby doll therapy and they have an annual requierment for completing continuing education credits. "According to the Bureau of Labor Statistics, a certified nursing assistant training program must be a minimum of 75 hours to meet federal regulations for assistants in nursing homes and facilities" (Kelchner, 2014). Given enough lead time for project implementation, it is feasible that educational programs on baby doll therapy could be made available to the NAs as part of fulfillment of that requirement.

At least one of the residents recommended to the Project Lead for inclusion in the Project was found to have mild dementia. The therapy was not found to be acceptable for those with mild dementia. Residents with mild dementia realize that the therapy tool is a doll and not a real baby and may cause other residents who believe their "baby" is real to become disillusioned with the therapy. The resident with mild dementia may also make fun of a baby doll, causing

embarrassment to other residents. Access to the resident's medical record might provide greater insight into the type and severity of diagnosed dementia.

The doll used for therapy should be a "forever" baby for the resident. The doll becomes the resident's baby and should not be shared with other residents. One husband of a resident who became a participant was very concerned that his wife kept the doll with her because she became upset when the available dolls in the day room were taken away from her when she went to her room. The resident had very limited cognitive function. In her earlier years, the resident had been a pediatric nurse and she and her husband had been foster parents to over 30 children. The couple also had children of their own. She responded very well to having the baby doll as her "forever baby." The staff reported that the doll was very calming to her and she slept most of the day holding the doll.

Another reason for residents having their own baby doll is possible sepsis from shared dolls. "The patients who accept the offer of the dolls keep them, so there is no sharing or issues with infection control. Furthermore, there are no adverse side effects" (Mount Sinai Inside, 2010, p. 3)

Use of real-size infant baby dolls with eyes that opened and closed work best with female residents. Gender or ethnicity did not seem to matter to the participants as all of the dolls were female and Caucasian The one participant who was African American accepted the Caucasian baby doll with no indication of bias. One of the literature articles gave an account of a resident who became very upset because the doll used had its eyes permanently closed and she thought her "baby" was dead because she could not get the baby to wake up and open her eyes.

Criteria for participation may include women who have raised children, especially small infants, as good candidates for baby doll therapy. As presented in the case study reports, Phyllis

was the one participant who had no previous history with babies. She totally refused to look at or talk about the doll at all by the end of the week. Having the doll caused her some stress.

The doll is a real person to the resident and should not be taken away without causing extreme mental and emotional stress to the resident. Judy was a good case in point as she became very belligerent and difficult to do any care with the initial introduction to the doll. This may have been a function of the current doll program at the facility where the dolls were taken away from the residents and put on a shelf in the day-room when a resident went to her room.

The cost for implementation of doll therapy to a facility would be the cost of the doll and time and education to train staff members on proper introduction and handling of the doll. Purchase of dolls that are made specifically for baby doll therapy can range from inexpensive to costly. The Project Lead was able to purchase the dolls from a chain discount store at a lower price but the dolls are no longer manufactured. An internet search shows baby dolls made specifically for therapy range from $59 US, for non-moving baby dolls, to dolls that move like a real baby at $200.00 US (The Ashton Drake Galleries, 2014), or higher.

The cost-benefit of doll therapy compared to a medication alternative is positive. For example, Haloperidol is a medication that was frequently used for anxiety in dementia patients. The medication may cause heart failure, sudden death, or pneumonia in older adults with dementia-related conditions (Haloperidol, 2014). Haloperidol as weall as other anxiolytics currently in use for dementia, such as lorazepam, buspirone, clonazepam, oxazepam, diazepam and alprazolam have average costs close to $100 US per month per patient (Simone, Mancoux, & Quillian, 2014). Not only are the medications costly they also have the potential for adverse events, such as impaired thinking or reactions, which can increase cognitive decline. The cost

of a baby doll is negligible compared to the foregoing and it is a durable item. Also, the cost of the baby doll may be the responsibility of the guardian or the resident's estate.

A positive change in the resident's behavior after introduction of the doll can be considered as a therapeutic success. Conversely, a negative change in the resident's behavior may be interpreted as the therapy being unsuccessful.

In summary, the recommendations that need to be included in the guidelines are:

1. Adherence to the original criteria of moderate to severe dementia
2. Realistic looking baby dolls with eyes that open and close
3. Dolls that are safe, with soft bodies and not used by other residents
4. Treatment of the doll as a "real" baby
5. Realistic looking baby dolls
6. The dolls should be offered to the resident by handing it to them and allowing the resident to accept or reject the doll
7. Dolls should stay with the patient as their "forever baby"
8. Any major negative behavior change in a resident should indicate withdrawal of the doll

Discussion

The evidence in the literature suggests that baby doll therapy is an easy, non-threatening, and non-toxic method of controlling untoward behavior in dementia residents. The literature is replete with case histories of immediate change upon receipt of the doll by the residents/patients of the facilities where doll therapy was introduced. A more recent research study, not included in this Project, performed on the psychiatric dementia ward at the Mount Sinai Hospital in New York demonstrated a reduction in the use of Haloperidol (Haldol) among dementia residents using baby doll therapy. "The most important finding was that the dolls prevented the more

prevalent negative emotions and agitations like throwing things or combative behavior," (Green, et.al., 2011, p. 3).

Although the results of the Baby Doll Project did not demonstrate as dramatic effects as the reports from Mount Sinai hospital, the participants of the study did show less agitation (not at a statistically significant level) and demonstrated an increase in their level of happiness (statistically significant) as rated by their caretakers and family members. Also, the husbands of at least three of the participants stated that their wives were happier and smiled more while holding their dolls. Bailey et al. (1992) reported that dolls provided much comfort and companionship to residents with severe dementia in a LTCF.

The study reported in Mount Sinai Inside (2010) stated that even dementia residents who had never had children could still respond favorably toward the doll. However, the only participant in the Baby Doll Project who had not had children became agitated when faced with caring for the doll. Godfrey (n.d.) states that doll therapy is not for everyone. Some of the residents in the dementia facility where he reported a success story of a resident with her baby doll, were not interested in the dolls for themselves but were concerned about the other resident's happiness with the doll. If introduction or possession of a doll invokes a negative reaction in a resident such as the reaction of Phyllis with her doll, the doll should be withdrawn. During the week after introduction of the doll, the Project Lead did not see Phyllis with her doll. The staff stated that she did not seem at all interested in the doll and they did not offer the doll nor talk about it with her. Her reaction with the Project lead during the second evaluation indicated that the doll was causing her some stress and it should have been taken away from her as stated in the recommendations. In the case of Judy, the NA removed the doll because her behavior was becoming more difficult, which was appropriate.

There was an important difference between the dolls used in the Project and the dolls made available by the dementia care center to their residents. The Project doll was the full-time "baby" for the resident and not just a baby-sitting function performed during the day, sometimes with another "baby" than the one used the day-before. The activities director at the dementia care center expressed her favor of the doll therapy as practiced during the Baby Doll Project at the Center and stated they would try to continue the therapy.

The Project Guidelines developed by the Project Lead for introduction of the baby doll to the residents provides an evidence-base that can be used for future use of baby doll therapy with moderate to severe dementia. Handing the doll to the patient rather than leaving it on a table, brought the resident's attention to the doll and every resident who was offered a doll took the doll initially, with the exception of the patient who was unable to move because of a previous stroke. The Project was successful in modifying some behaviors in female dementia residents and doll therapy is being considered for continued use at the facility. It is unknown how the baby doll therapy might affect male dementia patients and there were not many comments about male dementia patients with doll therapy in the literature.

According to Saddichha and Pandey (2008) reality orientation is an intervention that can help to improve temporal and spacial orientation in dementia patients but it has not proven effective in improving well-being, communication, or memory in those individuals. Reality orientation is used for individuals who understand the reality of the environment and it makes a difference in how they function. Being a resident of a dementia unit usually is indicative that reality orientation is not purposeful and was not considered in this Project.

It is recommended that a project of this type should be attempted in a residential dementia setting where the residents have not been used to having and holding baby dolls during

the day. Baby doll virgins may respond differently to the baby doll therapy than those who have had and held baby dolls frequently. Additionally no observation of demeaning response to the participants who had the baby dolls, by the staff or visitors, was observed. Family members were supportive of the therapy as they indicated it provided comfort to their loved ones. As well, every guardian who was petitioned for permission to introduce a baby doll to their loved-one, gave immediate permission. The implementation of the therapy in a mixed care unit could potentially generate more negative response from other residents and their family members as they may not have the an understanding of the needs and the cognitive level of those with moderate to severe dementia.

Conclusion

Dementia in elderly residents and their resultant recalcitrant and sometimes dangerous behavior to self and others is problematic in LTCFs. In many LTCFs chemical restraints are used to control these behaviors. The chemical restraints are not always successful and can produce untoward side effects and accelerate the progression of dementia. Based on several anecdotal articles and reports of four cohort studies that were retained for the Project, a quality improvement questions was developed to facilitate a search for a non-pharmaceutical evidence-based therapy for untoward behavior in moderate to severe dementia patients. The therapy was to be instituted as a quality improvement project with dementia residents in a LTCF. The search revealed "baby doll therapy" as an effective therapy with no identified negative side-effects or outcomes.

Although three reports indicated that some geriatric professionals and family members might view use of baby dolls as being demeaning to elderly residents, Scott (2009), opines that, "Caregivers rightly have an aversion to treating older adults like children, even when the effects

of dementia render them child-like. But here's a wonderful exception that Alzheimer's residents enjoy: Try giving a woman in the later stages of dementia a baby doll (P. 1)." The therapy did not appear to present any ethical concerns to staff or family members in the facility where the current Project was implemented. The therapy offers life-like looking baby dolls to female residents of LTCFs with a diagnosis of moderate to severe dementia. The therapy was introduced in the form of a Capstone Project in a dementia-care-center with a census of approximately 60 residents with documented dementia.

The Project was completed over a two-week timeframe with 16 participants and demonstrated a positive change in some of the resident's untoward behavior, as rated by staff caretakers, on a five-point-Likert-type scale. The baby dolls were left with the residents as their "forever babies" when the project was finished. Baby doll therapy, using the evidence based protocol developed for this project, was simple to institute, cost-effective, time-saving, and demonstrated some immediate results in behavior improvement. Dissemination of the results of this evidence-based Project will be achieved by submission of an evidence-based paper for publication and presentation at appropriate conferences, such as the annual conference of the American Academy of Nurse Practitioners. Finally, the Project will be presented to the American Alzheimer's Society with a request for endorsement, based on the currently available evidence.

References

Alexa, A., (2006, Sep). The ethics of using dolls and soft toys in dementia care. *Mental Health: Nursing and Residential Care*, 8: 419-421

Agree Collaboration (2001). AGREE instrument. Retrieved from www.openclinical.org/appInstrument_agree.html.

Alzheimer's & Dementia Weekly. (2014). The 10 most common types of dementia. Retrieved from http://www.alzheimersweekly.com/2013/07/10-types-of-dementia.html#Alzheimers

Ashton Drake Galleries. (2014) Retrieved from http://www.ashtondrake.com/category/1282_so-truly-real_pg3.html.

Bailey, J, Gilbert, E., Herweyer, S. (1992). To Find a Soul. Nursing92: 63-64.

Baumann (1990). Baby dolls in dementia. *Archives of Internal Medicine*, 150: 1132.

Blowcott, O., (2009). Chemical restraints killing dementia residents. *The Guardian*, Retrieved from http://www.guardian.co.uk/society/2009/nov/12/anti-psychotic-drugs-kill-dementia-residents.

Burns, N. & Grove, S. (2009). *The practice of nursing research: appraisal, synthesis, and generation of evidence,* Sixth Edition. St. Louis, MO: Saunders Elsevier.

Centers for Disease Control and Prevention (n.d.). Developing a protocol. Retrieved from http://www.cdc.gov/niosh/nas/mining/pdfs/Protocol%20Checklist.pdf.

Cohen-Mansfield, J., Marx, M., Dakbeel-Ali, Regier. N., & Theina, K. (2010, April). Can persons with dementia be engaged with stimuli. *American Journal of Geriatric Psychiatry*, 18: 351-362

Dementia Care, Australia, (2012). Retrieved from http://www.dementiacareaustralia.com/index.php/library/doll-therapy.html

DiCenso, A., Guyatt, G., & Ciliska, D. (2005). *Evidence-based nursing*: *A guide to clinical practice.* St. Louis, MO: Elsevier Mosby.

Gibson, S. (2005, May/June). A personal experience of successful doll therapy. *Journal of Dementia Care*, 13:22-23.

Godfrey, S. (n.d.). Doll therapy. *Australian Journal on Aging*, 13: 46.

Goodwin, A. (2010, Jan 22). A day in the life of a dementia resident. Turlock Journal. http://www.bing.com/images/search?q=DEMENTIA+CARE+PICTURES&view=detail&id=0341E5B2D31BF7E38B10F89B0E60FA99B7F36AF3&first=61&FORM=IDFRIR&qpvt=DEMENTIA+CARE+PICTURES.

Green, L., Matos, P., Murillo, I., Neushotz, L., Popeo, D., Aloysi, A., Samuel, J., Craig, E., Porter, C., & Fitzpatrick, J. (2011). Use of dolls as a therapeutic intervention relationship to previous negative behaviors and pro re nata (prn) Haldol use among Geropsychiatric Inresidents. *Archives of Psychiatric Nursing, 25: 388-389.*

Groulx, B. (1998, March). Nonpharmacologic treatment of behavioral disorders in dementia. *The Canadian Alzheimer's Disease Review,* pp. 7-8.

Haloperidol. (2014). Retrieved from http://www.everydayhealth.com/drugs/haloperidol

Higgins, P. (2010, October). Using dolls to enhance the wellbeing of people with dementia. *Nursing Times*, 106: 39.

James, I., Mackenzie, L., & Makaetova-Ladinska, E. (2006, April 5). Doll use in care homes for people with dementia. International Journal of Geriatric psychiatry, 21:1093-1098.

James, I., Mackenzie, L., Pakrasi, S., & Fossey, J. (2006). Non-pharmacological treatments of challenging behaviours. *Nursing and Residential Care*, 10:268-232

James, I., Reichelt, F., Morse, R., Mackenzie, L., & Mukaetova-Ladinska, E. (2005, May/June). The therapeutic use of dolls in dementia care. *Journal of Dementia Care*, 13:19.

Kelchner, L. (2014). Certified nursing assistant education requirements. Retrieved from http://www.ehow.com/info_8003465_certified-nursing-assistant-education-requirements.html.

Lowry, R. (2013). Wilcoxon Signed-Rank Test. Retrieved from http://vassarstats.net/wilcoxon.html

Mackanzie, L, Wood-Mitchell, A., & James, I. (2007, Jan/Feb). Guidelines on using dolls. *Journal of Dementia Care*, 15: 25-27.

Mackenzie, L., James, I., Morse, R., Makaetova-Ladinska, E., & Reichett, F. (2006, July). A pilot study on the use of dolls for people with dementia. Age & Aging, 35:441-444.

Medical Subject Headings. (2011). Dementia. National Library of Medicine. Retrieved March 27, 2011 from http://www.nlm.nih.gov/cgi/mesh/2011/MB_cgi.

Melnyk, B. & Fineout-Overholt, E. (2011). *Evidence-based practice in nursing and healthcare: A guide to best practice, Second Edition*. Philadelphia, PA: Wolters Kluwer Health/Lippincott Williams & Wilkins.

Miller, B. (2010, May 14). Doll therapy & dementia. Retrieved from Doll Therapy & Dementia | eHow.com http://www.ehow.com/about_6515768_doll-therapy-dementia.html#ixzz1Icsm8ajh.

Minshull, K. (2009, Mar/Apr). The impact of doll therapy on well-being of people with dementia. *Journal of Dementia Care*, 17:35-38.

Moore, D. (2001, Nov/Dec). 'It's like a gold medal and it's mine' – dolls in dementia care. Journal of Dementia Care, 9:21-22.

Moses, S. (2011, Feb 20). Neurology book, cognitive disorders. Dementia. Family Practice Notebook, LLC. Retrieved from http://www.fpnotebook.com/Neuro/Cognitive/Dmnt.htm.

Mount Sinai Inside, (2010). Ordinary dolls prompt extraordinary results. Retrieved from www.mountsinai.org/static_files/MSMC/Files/Inside%20Mount%20Sinai/.

Neuschotz, L., Green, L., & Matos, P. (2009). How dolls can help people with dementia. *American Nurse Today*, 4: 36-37.

Nightingale, d. (2007, Apr). The therapeutic use of doll therapy in dementia care. Retrieved September 21, 2011 from http://www.dementiadoctor.co.uk/dolltherapy.html.

Ready, R., & Ott, B., (2003). Quality of Life measures for dementia. *Health and Quality of Life Outcomes*, 1:1-13

Rosswurm, M., & Larrabee, J. (1999). A model for change to evidence-based practice. *Image: Journal of Nursing Scholarship*, 31: 317-322.

Saddichha, S., & Pandey, V. (2008). Alzheimer's and non-Alzheimer's dementia: A critical review of pharmacological and nonpharmacological strategies. *American Journal of Alzheimers Disease and Other Dementia*, 23(2), 150-161.

Scott, P. (2009, Sep 29). Baby Love: Therapy for Alzheimer's sufferers. *Caring.com*. Retrieved from www.caring.com/blogs/caring-currents/alzheimers-baby-dolls.

Simone, J., Mancoux, R. & Quillian, B. (2014). Cost and utilization of behavioral health medications associated with rescission of an exemption for prior authorization for severe and persistent mental illness in the Vermont Medicare Program. *Journal of Managed Care Pharmacy*, 16:317-328.

Stevenson, A. (2010, Sep/Oct). Dolls: handle with care. *Journal of Dementia Care*. 18:16-17.

Stillwell, S., Fineout-Overholt, E., Melnyk, B.M., & Williamson, K. (2010, May). Searching for the evidence. *American Journal of Nursing*, 110: 41-47.

Verity, J. & Kuhn, D. (2008, January 1). *The art of dementia care*. New York, New York: Rittenhouse Book Distributors.

Verity, J. (2008, Jan/Feb). Dolls in dementia care: bridging the divide. *Journal of Dementia Care*. 14:25-27.

APPENDIX A

Databases Searched and Data Abstraction

Date of Search	Keyword Used	Database/Source Used	# of Hits		
			Listed	Reviewed	Used
3/24/11	Dementia & Alzheimer's Disease	Cochran Central Register	2,217	0	0
3/24/11	Dementia therapy	PubMed	10	10	0
3/24/11	Secondary search of ref	PubMed	5	5	1 Ref
32411	Find similar	PubMed	112	10	0
3/2411	Dementia + Treatment + Dolls	CINHAL	12	12	0
3/24/11	Dementia + Play + Treatment	CINHAL	95	7	0
3/24/11	Therapy + Dementia	PubMed	42,022	5	0
3/24/11	Therapy + Dementia + Doll	PubMed	6	2	1 Ref
4/4/11	Doll	J. Dementia Care	8	8	NA
4/4/11	Doll	Age & Aging	44	10	2
4/4/11	J. Dementia Care	NLM	144	4	0
4/8/11	Doll Therapy	NLM	6	6	0

Date of Search	Keyword Used	Database/Source Used	# of Hits		
			Listed	Reviewed	Used
4/8/11	Dementia + Doll Therapy	NLM	0	0	0
4/8/11	Dementia	NLM	1443	3	0
4/8/11	Therapy	NLM	78,940	5	0
4/8/11	Dementia Therapy	NLM	1026	8	0
4/8/11	Dementia + Therapy	NLM	78	10	1 Ref
4/8/11	Alzheimer's + Therapy	NLM	667	5	0
4/911	Dementia + Behavioral Therapy	NLM	316	10	1 Ref
4/911 - 4/15/11	Searched articles found in references	Article References	32	32	5 + 2 Ref
4/15/11	Doll Therapy & Dementia	World Wide Web	100s	23	4

* NA = Not Available
* REF=Use for Background

APPENDIX B

LITERATURE EVALUATION TABLE

Citation	Method & Rating	Sample/ Setting	Major Variables Studied and their Definitions	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Alexa, A., (2006, Sep). The ethics of using dolls and soft toys in dementia care. *Mental Health: Nursing and Residential Care*, 8: 419-421	Level VII: Expert opinion or consensus	Dementia care settings	Explores potential benefits and detriments of doll therapy with dementia residents along with the dignity of the resident	None	None	Use of dolls can present an ethical dilemma because of resident dignity. Using dolls, however, can be a successful method to managing difficult behavior.	Shows value of the use of doll therapy in residents with dementia.
Bailey, J, Gilbert, E., Herweyer, S. (1992). To Find a Soul. *Nursing92*: 63-64.	Level VII: Expert opinion or consensus	Dementia care setting. Five residents with dementia.	Several case studies of behavior change before and after introduction of doll therapy	The author report of improved behavior change after introduction of doll.	None	The doll therapy project was successful but did not work well with all Dementia residents.	Shows value of the use of doll therapy in residents with dementia.
Baumann, T., (1990). Baby Dolls in Dementia. Archives of Internal Medicine, 150: 1132.	Level VII: Expert opinion or consensus	Dementia care setting. One resident with dementia	A case study of effects of doll therapy an 80-year-old female with behavior problems and diagnosed with "severe senility of the Alzheimer's type."	Staff report of improved behavior change after introduction of doll.	None	The case shows the potential for doll therapy as "potent psychological supports for correcting maladaptive behavior.	Shows value of the use of doll therapy in one resident with dementia.

Citation	Design/ Method	Sample/ Setting	Major Variables Studied and their Definitions	Measurement	Data Analysis	Findings	Worth to Practice
Cohen-Mansfield, J., Marx, M., Dakbeel-Ali, Regier, N, & Thein, K. (2010, April). Can Persons with Dementia Be Engaged With Stimuli? American Journal of Geriatric Psychiatry, 18: 351-362.	Level IV: Case-control or cohort study	Residents in Seven Maryland nursing home with diagnosis of dementia. 193 residents	Introduced 25 predetermined stimuli over a three-week period and determined which were the most engaging and most often refused by dementia residents in a nursing home.	Administered self-identify questionnaire and had six Observational Measures of Engagement.	Used correlation rankings and post-hoc Bonferroni test.	Stimuli with low social engagement (appropriate for children) showed 83.6% preferred. (Dolls & stuffed animals were 55.8%) Women showed greater positive attitudes for social stimuli and artistic tasks than men did.	Shows statistical results of the value of the use of doll therapy
Godfrey, S. (n.d.). Doll Therapy. Australian Journal on Aging, 13: 46.	Level VII: Expert opinion or consensus	A small hospital with 40 beds for aged care. Studied one resident with dementia.	Studied effect on behavior (dependent variable) of a doll given to a woman with dementia who, prior to the doll therapy (independent variable) became quite distressed and sometimes violent.	Staff reported behavior change of resident after introduction of doll.	None	Having the doll to concentrate affection on ameliorated the woman's behavioral problems. The remainder of the residents showed moderate interest in the doll.	Shows the value of doll therapy to one resident of an aged care facility.
Groulx, B. (1998, March). Nonpharmacologic Treatment of Behavioral Disorders in Dementia. The Canadian Alzheimer's Disease Review: 6-8.	Level VII: Expert opinion or consensus	Working with Alzheimer's Disease residents.	Determinates of agitation and non-pharmacologic treatment modalities	No measurements taken, gave the Global Deterioration Scale to be used by future studies	None	Gave 12 non-pharmacologic treatment modalities to use with AD residents	Background information and look at Global Deterioration scale.

Citation	Design/ Method	Sample/ Setting	Major Variables Studied and their Definitions	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Higgins, P. (2010, Oct 1). Using Dolls to Enhance the Well-being of People with Dementia. Nursing Times: 1-4.	Level VII: Expert opinion or consensus	A double-blind peer reviewed, review of articles	reviewed over 20 articles on the use of dolls to increase well-being in residents with dementia	Descriptive review of articles.	None	Most articles showed anecdotal evidence of the effect of doll therapy on improved behavior of dementia residents. There remains little empirical proof.	Shows value of the use of doll therapy in residents with dementia.
James, I., Mackenzie, L., & Makaetova-Ladinska, E. (2006, April 5). Doll Use in Care Homes for People with Dementia. International Journal of Geriatric psychiatry, 21:1093-1098.	Level IV: Case-control or cohort study	In an "Elderly Mentally Ill home," Studied 14 residents with dementia.	Studied the effects of dolls and a teddy bear on self-esteem of elderly residents with "Alzheimer's disease."	Questionnaire indicating levels of activity, agitation, perceived happiness, & interaction with others completed by staff (Impact Sheet) done at 1,2,4,8 & 12 weeks.	93% chose dolls. Descriptive statistics given in form of a table with the Likert Score (1-5) listed at each time-period for each resident.	Women, in particular, reverted to their role in earlier years as mothers, which resulted in improved self-esteem. "…this largely descriptive study has replicated and extended previous positive findings regarding the efficacy of doll usage by people with dementia.	Descriptive statistical evidence of the value of the use of doll therapy in residents with dementia. May use the Questionnaire on levels of activity.
James, I., Mackenzie, L., Pakrasi, S., & Fossey, J. (2006). Non-pharmacological treatments of challenging behaviours. Nursing and Residential Care, 10:268-232.	Level VII: Expert opinion or consensus	Description of non-pharmacological therapies for residents with dementia	Outlines 12 non-pharmacologic therapies for use with "challenging behaviours" in residents with dementia. Includes brief discussion of doll therapy.	Includes table of 9 therapies as assessed through Cochran Reviews. Doll therapy not included.	None	Discussion only of generic psychological interventions and alternative treatments, such as doll therapy. In regard to doll therapy states, "The findings from these investigations have been favorable for both residents and staff."	Shows value of the use of doll therapy in residents with dementia.

Citation	Design/ Method	Sample/ Setting	Major Variables Studied and their Definitions	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Mackenzie, L., James, I., Morse, R., Makaetova-Ladinska, E., & Reichett, F. (2006, July). A pilot study on the use of dolls for people with dementia. Age & Aging, 35:441-444.	Level IV: Case-control or cohort study	Pilot project in 2 Elderly Mentally Ill homes. Sample was 14 residents with dementia, 2 males, 12 females.	Staff impression of the use of dolls and the benefits. Raters were 46 staff and 14 key workers.	Questionnaire with 6 items on impact of doll use on activity and effective states (activity, interaction staff and residents, happier, agitation, cooperation. Key workers had 14-item questionnaire including same 6 items + qualitative questions	Table showing results of 6-item questionnaire staff's qualitative responses also presented in form of a table	93% of the key workers felt doll therapy helped with residents' communicating skills. There was a perceived benefit of reduction of wandering, improvement in interactions with staff, improvement in speech and improved attitude of staff toward residents.	Shows value of the use of doll therapy in residents with dementia, additionally showed improved staff attitude towards residents.
Neushotz, L, Green, L., & Matos, P. (2009, Sep-Oct). How dolls can help residents with dementia. American Nurse Today, 4:36-37.	Level VII: Expert opinion or consensus	Geriatric Psychiatry unit at the Mount Sinai Medical Center, NY	"…a unit-based quality initiative to comfort agitated geriatric residents by offering them dolls."	Report by staff of improved mood and affect of residents with dolls.	None	"The therapeutic benefits for residents who accepted dolls were immediate…." An improved mood and affect was achieved.	Shows value of the use of doll therapy in residents with dementia

Citation	Design/ Method	Sample/ Setting	Major Variables Studied and their Definitions	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Gibson, S. (2005, May/June). A personal experience of successful doll therapy. Journal of Dementia Care, 13:22-23.	Level VII: Expert opinion or consensus	Case history of the author's mother in a nursing home setting	Variable studied was the impact of the introduction of a doll on the behavior and affect of the resident.	Observation of behavior change. No tool used.	Reported behavior change of the resident	The doll therapy helped the resident to be more relaxed with resultant improved behavior. It also helped the resident's children realized how much their mother had cared for them.	Shows value of the use of doll therapy in residents with dementia.
James, I., Reichelt, F., Morse, R., Mackenzie, L., & Mukaetova-Ladinska, E. (2005, May/June). The therapeutic use of dolls in dementia care. Journal of Dementia Care, 13:19.	Level VII: Expert opinion or consensus	Case histories of two residents in a nursing home setting.	Variable studied was the impact of the introduction of a doll on the behavior and affect of the resident.	Observation of behavior change. No tool used.	Reported behavior change of the two residents that were observed.	Doll therapy is a potentially useful therapy to use with dementia residents with challenging behavior. Developed guidelines on using dolls with dementia residents.	Shows value of the use of doll therapy in residents with dementia. The guidelines developed may be useful in the fielding of the therapy.
Mackenzie, L, Wood-Mitchell, A., & James, I. (2007, Jan/Feb). Guidelines on using dolls. Journal of Dementia Care, 15: 25-27.	Level VII: Expert opinion or consensus	A team report to share guidance for use of doll therapy in several settings.	A variable study was the use of doll therapy and the guidance the authors had developed by using doll therapy in several different settings.	No observation or measurement was used.	No data analysis done.	Guidelines for use of doll therapy, such as, when speaking about the doll, caretakers should use the same name that the resident uses for the doll.	The guidelines developed may be useful in the fielding of the therapy.

Citation	Design/ Method	Sample/ Setting	Major Variables Studied and their Definitions	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Minshull, K. (2009, Mar/Apr). The impact of doll therapy on well-being of people with dementia. Journal of Dementia Care, 17: 35-38.	Level IV: Case-control or cohort study	Study carried out on Wards 1&2 of the Royal Victoria Hospital, Edinburgh. Sample size was 9 residents.	"The study aimed to identify whether doll therapy improved well-being in residents with dementia. If the results were positive the plan was to seek funding… (P.36)" for future use of doll therapy.	Used the Bradford Dementia Group Wellbeing Profiling-Individual Profile Sheet, using 14 indicators.	Bar charts showing results of observations for one, two, and three, and four weeks of therapy. Descriptive statistics only.	One finding was that dolls that cry could cause distress in pts. Another incidental finding was that the staff liked to play with the dolls. Another finding was the doll therapy helps to improve speech, well-being and communication.	Shows value of the use of doll therapy in residents with dementia.
Moore, D. (2001, Nov/Dec). 'It's like a gold medal and it's mine' – dolls in dementia care. Journal of Dementia Care, 9:21-22.	Level VII: Expert opinion or consensus	Setting is a specialist residential home in England. Resident sample not specified.	The author, a psychology research assistant, observed use of baby doll therapy in the home to discover why the dolls had a beneficial effect on dementia residents.	Observation of behavior change while holding a doll. No measurement tool used.	Reported observed resident, staff, and family members only. No formal analysis.	Found that dolls can play a number of rolls other than a baby, such as parent, spouse, teacher, or other significant person. Staff and relatives also interact with the dolls.	Shows other functions doll therapy can have with dementia residents.
Nightingale, d. (2007, Apr). The therapeutic use of doll therapy in dementia care. Retrieved September 21, 2011 from http://www.dementiadoctor.co.uk/dolltherapy.html.	Level VII: Expert opinion or consensus	Setting is the houses that provide care to people with dementia visited by the author. No sample size given.	"…Aim to describe the possible benefits of doll therapy…by considering the principles in relation to person focused and person centered care (P. 1)."	No measurement tool used.	Expert opinion given, no observations or analyses.	The doll is, "…not just an inanimate object to a particular person…you can't simply take it away and replace it with something else…to do so leads to distress and agitation…(P. 1)."	Shows expert opinion on how care should be provided. Useful for guidance in implementation of therapy.

Citation	Design/ Method	Sample/ Setting	Major Variables Studied and their Definitions	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Ready, R., & Ott, B., (2003). Quality of Life measures for dementia. Health and Quality of Life Outcomes, 1:1-13.	Level VII: Expert opinion or consensus	A narrative literature review of quality of life (QOL) measures for dementia/Alzheimer's disease (AD).	Studied 9 Quality of Life measurement tools for appropriateness for dementia residents by type of resident population. Reviewed instruments developed for use with AD residents	Measurement given in terms of appropriateness of instrument for severity of dementia.	Quality of life measurement tools reviewed, no data analyzed	Three of the nine instruments reviewed were found appropriate to measure QOL AD residents for the current project. Two were appropriate for mild to severe AD and one was appropriate for moderate to severe AD.	Described three possible instruments to use to measure QOL in the residents for the current project.
Stevenson, A. (2010, Sep/Oct). Dolls: handle with care. Journal of Dementia Care. 18:16-17.	Level VII: Expert opinion or consensus	Case history of Mrs. B, resident of a Scottish care home.	Description of, "… a situation where dolls caused distress to one resident and led us to discover traumatic events in her life (P. 16)."	Observation only, no measurement tool used.	Case history presented, no data collected.	An individualized approach to the resident based on observation is an effective approach to using dolls with dementia residents. It is important to consider the resident's personal history.	Showed staff interaction with dementia resident and how their reaction to the doll may impact the resident. Useful for guidance in implementation of therapy.

APPENDIX C.1
PICOT Variables of Interest per Article Retained
Synthesis Table

VARIABLES OF INTEREST (PICOT)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
USE OF DOLL THERAPY	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X
MEASUREMENT OF RESULTS				X				X		X					X			X		

1. Alexa, A., (2006, Sep). The ethics of using dolls and soft toys in dementia care. *Mental Health: Nursing and Residential Care*, 8: 419-421.
2. Bailey, J, Gilbert, E., Herweyer, S. (1992). To Find a Soul. *Nursing92*: 63-64.
3. Baumann, T., (1990). Baby Dolls in Dementia. *Archives of Internal Medicine*, 150: 1132.
4. Cohen-Mansfield, J., Marx, M., Dakbeel-Ali, Regier, N., & Thein, K. (2010, April). Can Persons with Dementia Be Engaged With Stimuli? *American Journal of Geriatric Psychiatry*, 18: 351-362.
5. Godfrey, S. (n.d.). Doll Therapy. *Australian Journal on Aging*, 13: 46.
6. Groulx, B. (1998, March). Nonpharmacologic Treatment of Behavioral Disorders in Dementia. *The Canadian Alzheimer's Disease Review:* 6-8.
7. Higgins, P. (2010, Oct 1). Using Dolls to Enhance the Well-being of People with Dementia. *Nursing Times*: 1-4.
8. James, I., Mackenzie, L., & Makaetova-Ladinska, E. (2006, April 5). Doll Use in Care Homes for People with Dementia. *International Journal of Geriatric psychiatry*, 21:1093-1098.

9. James, I., Mackenzie, L., Pakrasi, S., & Fossey, J. (2006). Non-pharmacological treatments of challenging behaviours. *Nursing and Residential Care*, 10:268-232

10. Mackenzie, L., James, I., Morse, R., Makaetova-Ladinska, E., & Reichett, F. (2006, July). A pilot study on the use of dolls for people with dementia. *Age & Aging*, 35:441-444.

11. Neushotz, L, Green, L., & Matos, P. (2009, Sep-Oct). How dolls can help residents with dementia. *American Nurse Today*, 4:36-37.

12. Gibson, S. (2005, May/June). A personal experience of successful doll therapy. *Journal of Dementia Care*, 13:22-23.

13. James, I., Reichelt, F., Morse, R., Mackenzie, L., & Mukaetova-Ladinska, E. (2005, May/June). The therapeutic use of dolls in dementia care. *Journal of Dementia Care*, 13:19.

14. Mackanzie, L, Wood-Mitchell, A., & James, I. (2007, Jan/Feb). Guidelines on using dolls. *Journal of Dementia Care*, 15: 25-27.

15. Minshull, K. (2009, Mar/Apr). The impact of doll therapy on well-being of people with dementia. *Journal of Dementia Care*, 17:35-38.

16. Moore, D. (2001, Nov/Dec). 'It's like a gold medal and it's mine' – dolls in dementia care. *Journal of Dementia Care*, 9:21-22.

17. Nightingale, d. (2007, Apr). The therapeutic use of doll therapy in dementia care. Retrieved September 21, 2011 from http://www.dementiadoctor.co.uk/dolltherapy.html.

18. Ready, R., & Ott, B., (2003). Quality of Life measures for dementia. *Health and Quality of Life Outcomes*, 1:1-13.

19. Stevenson, A. (2010, Sep/Oct). Dolls: handle with care. *Journal of Dementia Care.* 18:16-17.

20. Verity, J. (2008, Jan/Feb). Dolls in dementia care: bridging the divide. *Journal of Dementia Care.* 14:25-27.

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APPENDIX C.2

Articles Retained by Level of Evidence

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Level I: Systematic review or meta-analysis																				
Level II: Randomized controlled trial																				
Level III: Controlled trial without randomization																				
Level IV: Case-control or cohort study				X				X		X					X					
Level V: Systematic review of qualitative or descriptive studies																				
Level VI: Qualitative or descriptive study (includes evidence implementation projects)																				
Level VII: Expert opinion or consensus	X	X	X		X	X	X		X		X	X	X	X		X	X	X	X	X

1. Alexa, A., (2006, Sep). The ethics of using dolls and soft toys in dementia care. *Mental Health: Nursing and Residential Care*, 8: 419-421.

2. Bailey, J, Gilbert, E., Herweyer, S. (1992). To Find a Soul. *Nursing92*: 63-64.

3. Baumann,T., (1990). Baby Dolls in Dementia. *Archives of Internal Medicine*, 150: 1132.

4. Cohen-Mansfield, J., Marx, M., Dakbeel-Ali, Regier, N., & Theina, K. (2010, April). Can Persons with Dementia Be Engaged With Stimuli? *American Journal of Geriatric Psychiatry*, 18: 351-362.

5. Godfrey, S. (n.d.). Doll Therapy. *Australian Journal on Aging*, 13: 46.

6. Groulx, B. (1998, March). Nonpharmacologic Treatment of Behavioral Disorders in Dementia. *The Canadian Alzheimer's Disease Review:* 6-8.

7. Higgins, P. (2010, Oct 1). Using Dolls to Enhance the Well-being of People with Dementia. *Nursing Times*: 1-4.

8. James, I., Mackenzie, L., & Makaetova-Ladinska, E. (2006, April 5). Doll Use in Care Homes for People with Dementia. *International Journal of Geriatric psychiatry*, 21:1093-1098.

9. James, I., Mackenzie, L., Pakrasi, S., & Fossey, J. (2006). Non-pharmacological treatments of challenging behaviours. *Nursing and Residential Care*, 10:268-232

10. Mackenzie, L., James, I., Morse, R., Makaetova-Ladinska, E., & Reichett, F. (2006, July). A pilot study on the use of dolls for people with dementia. *Age & Aging*, 35:441-444.

11. Neushotz, L, Green, L., & Matos, P. (2009, Sep-Oct). How dolls can help residents with dementia. *American Nurse Today*, 4:36-37.

12. Gibson, S. (2005, May/June). A personal experience of successful doll therapy. *Journal of Dementia Care*, 13:22-23.

13. James, I., Reichelt, F., Morse, R., Mackenzie, L., & Mukaetova-Ladinska, E. (2005, May/June). The therapeutic use of dolls in dementia care. *Journal of Dementia Care*, 13:19.

14. Mackanzie, L, Wood-Mitchell, A., & James, I. (2007, Jan/Feb). Guidelines on using dolls. *Journal of Dementia Care,* 15: 25-27.

15. Minshull, K. (2009, Mar/Apr). The impact of doll therapy on well-being of people with dementia. *Journal of Dementia Care*, 17:35-38.

16. Moore, D. (2001, Nov/Dec). 'It's like a gold medal and it's mine' – dolls in dementia care. *Journal of Dementia Care,* 9:21-22.

17. Nightingale, d. (2007, Apr). The therapeutic use of doll therapy in dementia care. Retrieved September 21, 2011 from http://www.dementiadoctor.co.uk/dolltherapy.html.

18. Ready, R., & Ott, B., (2003). Quality of Life measures for dementia. *Health and Quality of Life Outcomes*, 1:1-13.

19. Stevenson, A. (2010, Sep/Oct). Dolls: handle with care. *Journal of Dementia Care.* 18:16-17.

20. Verity, J. (2008, Jan/Feb). Dolls in dementia care: bridging the divide. *Journal of Dementia Care.* 14:25-27.

APPENDIX C.3
STUDY DESIGN, INTERVENTION, AND OUTCOMES
SUMMARY TABLE OF ARTICLES RETAINED

Study	Design	Intervention	Outcome
Alexa, A., (2006, Sep). The ethics of using dolls and soft toys in dementia care. *Mental Health: Nursing and Residential Care*, 8: 419-421	Level VII: Expert opinion	Explores potential benefits and detriments of doll therapy with dementia residents along with the dignity of the resident	Use of dolls can present an ethical dilemma because of resident dignity. Using dolls, however, can be a successful method to managing difficult behavior.
Bailey, J, Gilbert, E., Herweyer, S. (1992). To Find a Soul. *Nursing92*: 63-64.	Level VII: Expert opinion	Several case studies of behavior change before and after introduction of doll therapy	The doll therapy project was successful but did not work well with all Dementia residents.
Baumann, T., (1990). Baby Dolls in Dementia. Archives of Internal Medicine, 150: 1132.	Level VII: Expert opinion	A case study of effects of doll therapy an 80-year-old female with behavior problems and diagnosed with "severe senility of the Alzheimer's type."	The case shows the potential for doll therapy as "potent psychological supports for correcting maladaptive behavior.
Cohen-Mansfield, J., Marx, M., Dakbeel-Ali, M., Regier, N., & Thein, K. (2010, April). Can Persons with Dementia Be Engaged With Stimuli? American Journal of Geriatric Psychiatry, 18: 351-362.	Level IV: cohort study	Studied stimuli that are most engaging and most often refused by dementia residents in a nursing home.	Stimuli with low social engagement (appropriate for children) showed 83.6% preferred. (Dolls & stuffed animals were 55.8%) Women showed greater positive attitudes for social stimuli and artistic tasks than men did.
Godfrey, S. (n.d.). Doll Therapy. Australian Journal on Aging, 13: 46.	Level VII: Expert opinion	Studied effect on behavior of a doll given to a woman with dementia who, prior to the therapy became quite distressed and violent.	Having the doll to concentrate affection on ameliorated the woman's behavioral problems. The remainder of the residents showed moderate interest in the doll.

Study	Design	Intervention	Outcome
Groulx, B. (1998, March). Nonpharmacologic Treatment of Behavioral Disorders in Dementia. The Canadian Alzheimer's Disease Review: 6-8.	Level VII: Expert opinion	Determinates of agitation and non-pharmacologic treatment modalities	Gave 12 non-pharmacologic treatment modalities to use with AD residents
Higgins, P. (2010, Oct 1). Using Dolls to Enhance the Well-being of People with Dementia. Nursing Times: 1-4.	Level VII: Expert opinion	reviewed over 20 articles on the use of dolls to increase well-being in residents with dementia	Most articles showed anecdotal evidence of the effect of doll therapy on improved behavior of dementia residents. There remains little empirical proof.
James, I., Mackenzie, L., & Makaetova-Ladinska, E. (2006, April 5). Doll Use in Care Homes for People with Dementia. International Journal of Geriatric psychiatry, 21:1093-1098.	Level IV: cohort study	Studied the effects of dolls and a teddy bear on self-esteem of elderly residents with "Alzheimer's disease."	Women, in particular, reverted to their role in earlier years as mothers, which resulted in improved self-esteem. "…this largely descriptive study has replicated and extended previous positive findings regarding the efficacy of doll usage by people with dementia.
James, I., Mackenzie, L., Pakrasi, S., & Fossey, J. ( ). Non-pharmacological treatments of challenging behaviours.	Level VII: Expert opinion	Outlines 12 non-pharmacologic therapies for use with "challenging behaviors" in residents with dementia. Includes brief discussion of doll therapy.	Discussion only of generic psychological interventions and alternative treatments, such as doll therapy. In regard to doll therapy states, "The findings from these investigations have been favorable for both residents and staff."
Mackenzie, L., James, I., Morse, R., Makaetova-Ladinska, E., & Reichett, F. (2006, July). A pilot study on the use of dolls for people with dementia. Age & Aging, 35:441-444.	Level IV: cohort study	Staff impression of the use of dolls and the benefits. Raters were 46 staff and 14 key workers.	93% of the key workers felt doll therapy helped with residents' communicating skills. There was a perceived benefit of reduction of wandering, improvement in interactions with staff, improvement in speech and improved attitude of staff toward residents.
Neushotz, L, Green, L., & Matos, P. (2009, Sep-Oct). How dolls can help residents with dementia. American Nurse Today, 4:36-37.	Level VII: Expert opinion	"…a unit-based quality initiative to comfort agitated geriatric residents by offering them dolls."	"The therapeutic benefits for residents who accepted dolls were immediate…." An improved mood and affect was achieved.

Study	Design	Intervention	Outcome
Gibson, S. (2005, May/June). A personal experience of successful doll therapy. Journal of Dementia Care, 13:22-23.	Level VII: Expert opinion or consensus	Studied the impact of the introduction of a doll on the behavior and affect of the resident.	The doll therapy helped the resident to be more relaxed with resultant improved behavior. It also helped the resident's children realized how much their mother had cared for them.
James, I., Reichelt, F., Morse, R., Mackenzie, L., & Mukaetova-Ladinska, E. (2005, May/June). The therapeutic use of dolls in dementia care. Journal of Dementia Care, 13:19.	Level VII: Expert opinion or consensus	Studied the impact of the introduction of a doll on the behavior and affect of the resident.	Doll therapy is a potentially useful therapy to use with dementia residents with challenging behavior.
Mackanzie, L, Wood-Mitchell, A., & James, I. (2007, Jan/Feb). Guidelines on using dolls. Journal of Dementia Care, 15: 25-27.	Level VII: Expert opinion or consensus	Studied the use of doll therapy and the guidance the authors had developed by using doll therapy in several different settings.	Developed guidelines on using dolls with dementia residents.
Minshull, K. (2009, Mar/Apr). The impact of doll therapy on well-being of people with dementia. Journal of Dementia Care, 17:35-38.	Level IV: Case-control or cohort study	"The study aimed to identify whether doll therapy improved well-being in residents with dementia. If the results were positive the plan was to seek funding… (P.36)." For future use of doll therapy.	One finding was that dolls that cry could cause distress in pts. Another incidental finding was that the staff liked to play with the dolls. Another finding was the doll therapy helps to improve speech, well-being and communication.
Moore, D. (2001, Nov/Dec). 'It's like a gold medal and it's mine' – dolls in dementia care. Journal of Dementia Care, 9:21-22.	Level VII: Expert opinion or consensus	The author, a psychology research assistant, observed use of baby doll therapy in the home to discover why the dolls had a beneficial effect on dementia residents.	Found that dolls can play a number of rolls other than a baby, such as parent, spouse, teacher, or other significant person. Staff and relatives also interact with the dolls.
Nightingale, d. (2007, Apr). The therapeutic use of doll therapy in dementia care. Retrieved September 21, 2011 from http://www.dementiadoctor.co.uk/dolltherapy.html.	Level VII: Expert opinion or consensus	"…Aim to describe the possible benefits of doll therapy…by considering the principles in relation to person focused and person centered care (P. 1)."	The doll is, "…not just an inanimate object to a particular person…you can't simply take it away and replace it with something else…to do so leads to distress and agitation…(P. 1)."

Study	Design	Intervention	Outcome
Ready, R., & Ott, B., (2003). Quality of Life measures for dementia. Health and Quality of Life Outcomes, 1:1-13.	Level VII: Expert opinion or consensus	Studied 9 Quality of Life measurement tools for appropriateness for dementia residents by type of resident population. Reviewed instruments developed for use with AD residents.	Three of the nine instruments reviewed were found appropriate to measure QOL AD residents for the current project. Two were appropriate for mild to severe AD and one was appropriate for moderate to severe AD.
Stevenson, A. (2010, Sep/Oct). Dolls: handle with care. Journal of Dementia Care. 18:16-17.	Level VII: Expert opinion or consensus	The purpose of the study was to describe, "… a situation where dolls caused distress to one resident and led us to discover traumatic events in her life (P. 16)."	An individualized approach to the resident based on observation is an effective approach to using dolls with dementia residents. It is important to consider the resident's personal history.
Verity, J. (2008, Jan/Feb). Dolls in dementia care: bridging the divide. Journal of Dementia Care. 14:25-27.	Level VII: Expert opinion or consensus	The aim of this study is to " build a bridge between the two opposing views… (P. 25)…" of doll therapy and "…show how dolls can be used for their symbolic significance, with tremendous positive outcomes (P. 25)."	Dolls can provide opportunities for nurturing, reduce agitation and anxiety and the benefits can help to reduce the need for chemical restraints.

APPENDIX D.1
Rapid Critical Appraisal of Cohort Studies
Barbara A. Braden

Article: James, I., Mackenzie, L., & Makaetova-Ladinska, E. (2006, April 5). Doll Use in Care Homes for People with Dementia. *International Journal of Geriatric psychiatry*, 21:1093-1098.

1. Are the results of the study valid?

1) Was there a representative and well defined sample of residents at a similar point in the course of the disease? ☒ Yes ☐ No ☐ Unknown

14 residents chose 13 dolls and 1 teddy bear

2) Was follow up sufficiently long and complete? ☒ Yes ☐ No ☐ Unknown

12 weeks

3) Were objective and unbiased outcome criteria used? ☐ Yes ☒ No ☐ Unknown

Residents' behavior graded by staff members

4) Did the analysis adjust for important prognostic risk factors and confounding variables? ☐ Yes ☒ No ☐ Unknown

Was a largely descriptive study

2. What are the results?

1) What is the magnitude of the relationship between predictors? (i.e., prognostic indicators) and targeted outcome?

Was not measured

2) How likely is the outcome event(s) in a specified period of time?

The outcomes for each resident were variable

3) How precise are the study estimates?

Not precise, a five-point Likert-type scale was graded by staff

3. Will the results help me in caring for my residents?

a) Were the study residents similar to my own? ☒ Yes ☐ No ☐ Unknown

Residents all at least 65 with diagnosis of dementia

b) Will the results lead directly to selecting or avoiding therapy? ☒ Yes ☐ No ☐ Unknown

All positive for the use of doll therapy

c) Are the results useful for reassuring or counseling residents? ☒ Yes ☐ No ☐ Unknown

Outcomes of improved behavior can reassure family members.

APPENDIX D.2

Rapid Critical Appraisal of Cohort Studies
Barbara A. Braden

Article: Mackenzie, L., James, I., Morse, R., Makaetova-Ladinska, E., & Reichett, F. (2006, July). *A pilot study on the use of dolls for people with dementia*. Age & Aging, 35:441-444

1. Are the results of the study valid?

5) Was there a representative and well defined sample of residents at a similar point in the course of the disease? ☒ Yes ☐ No ☐ Unknown

All residents, n=37, fourteen chose dolls (2males, 12females).

6) Was follow up sufficiently long and complete? ☒ Yes ☐ No ☐ Unknown

Follow-up was a minimum period of three weeks.

7) Were objective and unbiased outcome criteria used? ☐ Yes ☒ No ☐ Unknown

Outcome criteria were subject to the impression of staff members.

8) Did the analysis adjust for important prognostic risk factors and confounding variables? ☐ Yes ☒ No ☐ Unknown

Minimal analysis was presented in the form of a table of six-point summary of the impact of the use of dolls on activity and effective states of residents

2. What are the results?

4) What is the magnitude of the relationship between predictors? (i.e., prognostic indicators) and targeted outcome?

No predictors given. Targeted outcomes measured on Likert-type scale of 1-5.

5) How likely is the outcome event(s) in a specified period of time?

The time period was at least three weeks. This was sufficient time to notice change in behavior and happened in almost all residents using dolls.

6) How precise are the study estimates?

Study estimates are subjective and measured on a Likert-type scale.

3. Will the results help me in caring for my residents?

d) Were the study residents similar to my own? ☒ Yes ☐ No ☐ Unknown

All residents were at least 65 with diagnosis of dementia.

e) Will the results led directly to selecting or avoiding therapy? ☒ Yes ☐ No ☐ Unknown

The use of doll therapy was successful at improving behavior in almost all residents using dolls with no negative outcomes. This confirms use of doll therapy for this project.

f) Are the results useful for reassuring or counseling residents? ☒ Yes ☐ No ☐ Unknown

The results are especially useful in explaining the intervention to family members for informed consent.

APPENDIX D.3
Rapid Critical Appraisal of Cohort Studies
Barbara A. Braden

Article: Cohen-Mansfield, J., Marx, M., Dakbeel-Ali, M., Regier, N., & Thein, K. (2010, April). Can Persons with Dementia Be Engaged With Stimuli? *American Journal of Geriatric Psychiatry*, 18: 351-362.

1. Are the results of the study valid?

9) Was there a representative and well defined sample of residents at a similar point in the course of the disease? ☒ Yes ☐ No ☐ Unknown

193 residents of 7 nursing homes in Maryland

10) Was follow up sufficiently long and complete? ☒ Yes ☐ No ☐ Unknown

Follow-up was for three weeks.

11) Were objective and unbiased outcome criteria used? ☐ Yes ☒ No ☐ Unknown

Rated by staff members on a Likert scale from 1 – 3.

12) Did the analysis adjust for important prognostic risk factors and confounding variables? ☒ Yes ☐ No ☐ Unknown

They measured the effect of sex, cognitive function and education on engagement.

2. What are the results?

7) What is the magnitude of the relationship between predictors? (i.e., prognostic indicators) and targeted outcome?

23 -25 stimuli were used over a three week period. Some of the relationships, especially for life-like dolls rankings for engagement, duration, attention, and attitude were all high, but the stimulus was frequently refused.

8) How likely is the outcome event(s) in a specified period of time?

Ranking is 5th out of 25 for life-like dolls to hold attention.

9) How precise are the study estimates?

Are not precise, based on yes and no for frequency of observation.

3. Will the results help me in caring for my residents?

g) Were the study residents similar to my own? ☒ Yes ☒ No ☐ Unknown

Not all residents had dementia and not all were over 65 years old.

h) Will the results lead directly to selecting or avoiding therapy? ☒ Yes ☒ No ☐ Unknown

24 other stimuli were used besides baby dolls!

i) Are the results useful for reassuring or counseling residents? ☒ Yes ☐ No ☐ Unknown

The results shown for baby dolls are reassuring.

APPENDIX D.4

Rapid Critical Appraisal of Cohort Studies
Barbara A. Braden

Article: Minshull, K. (2009, Mar/Apr). The impact of doll therapy on well-being of people with dementia. *Journal of Dementia Care*, 17:35-38.

1. Are the results of the study valid?

13) Was there a representative and well defined sample of residents at a similar point in the course of the disease? ☒ Yes ☐ No ☐ Unknown

Study carried out on Wards 1&2 of the Royal Victoria Hospital, Edinburgh. Sample size was 9 residents.

14) Was follow up sufficiently long and complete? ☒ Yes ☐ No ☐ Unknown

Follow-up was for one month.

15) Were objective and unbiased outcome criteria used? ☐ Yes ☒ No ☐ Unknown

Rated by staff members using the Bradford Dementia Group Well-being Profiling Tool

16) Did the analysis adjust for important prognostic risk factors and confounding variables? ☐ Yes ☒ No ☐ Unknown

The results were given in a bar chart only by percent.

2. What are the results?

10) What is the magnitude of the relationship between predictors? (i.e., prognostic indicators) and targeted outcome?

14 signs of well-being were rated by the author and a social work student each week for four weeks. They were rated from 0 to 3 with 0 being no sign and 3 being significant sign of well-being.

11) How likely is the outcome event(s) in a specified period of time?

The research showed the doll therapy improved the well-being of residents. Likelihood was not shown.

12) How precise are the study estimates?

Are not precise, based on rater's observation.

3. Will the results help me in caring for my residents?

j) Were the study residents similar to my own? ☒ Yes ☐ No ☐ Unknown

All residents had dementia.

k) Will the results lead directly to selecting or avoiding therapy? ☒ Yes ☐ No ☐ Unknown

Therapy will be considered to be continued if the therapy is successful at changing untoward behavior.

l) Are the results useful for reassuring or counseling residents? ☒ Yes ☐ No ☐ Unknown

The results shown for baby dolls are reassuring.

APPENDIX E

Doctor of Nursing Practice

Capstone Project

Baby Doll Therapy in Dementia Residents

Practice Guidelines for Doll Therapy for Individuals with Dementia

Barbara A. Braden, MS, MSN, FNP, NP-C

Wright State University and University of Toledo Collaborative

DOCTOR OF NURSING PRACTICE PROGRAM

Fall 2013

Social, Behavioral & Educational Protocol

Implementation Protocol for Baby Doll Therapy in Dementia Residents

The Problem:

1. During the course of their diagnosis, dementia residents can become agitated and cause harm to themselves and others. (Moses, 2011).
2. Usual treatment for agitation in dementia residents is use of chemical restraints which can cause further digression of mentation. (Blowcott, 2009).
3. Use of baby doll therapy has been shown in the literature to reduce anxiety and improve overall behavior in dementia residents. (Higgins, 2010; Verity and Kuhn, 2008; Neuschotz, Green, & Matos, 2009).

The Intervention (Doll Therapy):

PICOT: In female residents over 65 with moderate to severe dementia (P), how does exposure to baby-doll therapy (I) compared to no baby-doll therapy exposure (C) influence behavior (O) over a one-week period (T)?

Objectives of intervention:

1. Prevent long-term complications in elderly residents with dementia
2. Increase the resident's self-confidence
3. Improve the resident's behavior during routine and special care
4. Increase the resident's social interaction with staff, family members, and other residents
5. Improve the resident's participation in activities of daily living
6. Improve the resident's sense of well-being
7. Decrease agitation and assist the resident in times of stress

Population:

1. Elderly female residents at least 65 years old or older.
2. Residents with documented diagnosis of moderate to severe dementia.
3. Residents with manual dexterity sufficient to hold or caress a baby doll.
4. Visual acuity sufficient to recognize the form of a baby doll.

5. Difference in language spoken is no barrier.

Outcomes of doll Therapy:

1. Increased activity and focus
2. Improved communication when carrying a doll
3. Improved attitude towards other residents and care takers
4. Decreased Agitation during routine care
5. Keeping resident's hands busy
6. Less likely to do themselves harm (Miller, 2010).

Recommendations for Implementation:

1. Educate staff of the dementia care center skilled nursing facility on doll therapy
   a. Provide staff in-service using Introduction to Doll therapy PowerPoint developed by Project Lead (see attached PowerPoint for content).
   b. Introduce doll and demonstrate introduction of the doll. (Mackenzie, James, Morse, Makaetova-Ladinska, & Reichett, 2006).
   c. Provide time and environment for discussion and opportunity for questions and answers.
2. Assessment of need for intervention:
   a. Use the following inclusion and exclusion criteria to select appropriate residents.
      I. Inclusion Criteria
         1. Residence: Long-term Care Facility (LTCF)
         2. Gender: Female
         3. Age: 65 years old or older
         4. Diagnosis of moderate-to-severe dementia (per the national Minimum Data Set (MDS) 3.0 Brief Interview for Mental Status (BIMS) score)
         5. Manual dexterity to hold or caress baby doll
         6. Visual acuity to see baby doll
         7. Ability to choose available baby doll
      ii. Exclusion Criteria

1. Residents with mild dementia
2. Residents who do not accept and relate to the doll after two attempts
3. Residents who immediately accept the doll but leave it a short time later.
4. Residents who, in rare instances, the doll invokes negative irritated reactions.

b. The dolls that were purchased for this project are all blue-eyed, female, Caucasian dolls. Residents will not be chosen on the basis of ethnicity. If the resident does not accept the doll and treat it as her own "real" baby, she will not be entered into the Project. This may be a confounder in the project and will be addressed in the final document as such.

c. Coordinate with dementia care center staff/attend meetings to identify residents with diagnosis of dementia (primary or secondary diagnoses) who meet criteria for therapy.

3. Contact resident's guardian to gain informed verbal consent to enter resident into the Project.

4. Educate caretakers on doll therapy.

a. Provide written material introducing doll therapy (see attached sample) including picture of doll used for therapy.

b. Provide introduction to the doll and description of how to handle the doll. (Mackenzie, James, Morse. Makaetova-Ladinska, & Reichett, 2006), (James, Mackenzie, & Makaetova-Ladinska, 2006).

c. Gain buy-in from the caretaker and assure follow-up with same caretaker.

d. Provide opportunity for questions and answers in face-to-face encounters, electronic communications, or phone conversations.

5. Intervention implementation

a. Assessment of acceptance of intervention by resident

iii. Introduce baby doll by handing to the resident two times. (Cohen-Mansfield, Marx, Dakbeel-Ali, Regier & Theina, 2010)

iv. If no response in reaching out for the doll or possession of the doll during the two attempts categorize behavior as non-responsive.

v. If doll is accepted by the resident and treated as own, enter the resident into the project.

b. Coordinate with caretaker throughout implementation

vi. Visit caretakers and residents at least weekly to inform and answer questions until caretaker feels comfortable with intervention.

vii. Observation of time and behaviors that doll is cared for informally by caregivers.

viii. Reinforce caretaker's reaction to doll through the resident's eyes (e.g., Treat doll as real). (Minshull, 2009).

ix. Encourage caretakers in their role.

6. Evaluation -Measurement of Outcome

a. Assist caregivers in documentation of brief description of pre-therapy resident behaviors (e.g., "Withdrawn and uncommunicative…rocked and shouted…sometimes disruptive…."). (Mackenzie, James, Morse. Makaetova-Ladinska, & Reichett, 2006, P. 442).

b. Assist caregivers with the documentation of the Baby Doll Therapy Evaluation tool at inception and one-week later. (See forms for documentation and Documentation Guide, attached). (Mackenzie, James, Morse. Makaetova-Ladinska, & Reichett, 2006).

c. It is important that the same caretaker participate in documenting both iterations of the Baby Doll Therapy Evaluation Tool in order to maintain consistency across the evaluation process.

d. Project Lead to document Engagement Observation Rating Tool at inception and one-week later (see copy of form attached).

e. Provide feedback to caregivers as appropriate.

f. Informally determine the caregiver's perspective of the implementation of doll therapy.

g. Discuss the continuation of the therapy based on the outcomes and caregiver perspective.

h. The doll will be left with the resident.

References

Cohen-Mansfield, J., Marx, M., Dakbeel-Ali, Regier, N., & Thein, K. (2010, April). Can persons with dementia be engaged with stimuli? American *Journal of Geriatric Psyc*hiatry, 18: 351-362.

Higgins, P. (2010, Oct 1). Using dolls to enhance the well being of people with dementia. *Nursing Times*: 1-4.

James, I., Mackenzie, L., & Makaetova-Ladinska, E. (2006, April 5). Doll use in care homes for people with dementia. *International Journal of Geriatric psychiatry*, 21:1093-1098.

Logsdon, R**.,** Gibbons, L, McCurry, S. & Teri, L. (2002). Assessing quality of life in older adults with cognitive impairment. *Psychosomatic Medicine*, 64, 510-519.

Mackenzie, L., James, I., Morse, R., Makaetova-Ladinska, E., & Reichett, F. (2006, July). A pilot study on the use of dolls for people with dementia. *Age & Aging*, 35:441-444.

Miller, B. (2010, May 14). Doll therapy & dementia. Retrieved from http://www.ehow.com/about_6515768_doll-therapy-dementia.html;

Minshull, K. (2009, Mar/Apr). The impact of doll therapy on well-being of people with dementia. *Journal of Dementia Care*, 17:35-38

Moses, S. (2011, Feb 20). Neurology book, cognitive disorders. Dementia. Family Practice Notebook, LLC. Retrieved from http://www.fpnotebook.com/Neuro/Cognitive/Dmnt.htm

Neuschotz, L., Green, L., & Matos, P. (2009). How dolls can help people with dementia. *American Nurse Today*, 4: 36-37.

Verity, J. & Kuhn, D. (2008, January 1). The are of dementia care. Care. New York, New York: Rittenhouse Book Distributors.

APPENDIX F

Information about Baby Doll Therapy

Dear Staff Member/Guardian:

I am a Doctor of Nursing Practice Student at the University of Toledo, Ohio. I am currently conducting an evidence-based therapy for dementia residents to help lessen their anxiety and acting-out behavior. Dementia in elderly residents and their resultant recalcitrant and sometimes dangerous behavior to self and others is problematic in the long-term care setting for facility staff, guardians, and family members. In many cases chemical restraints, such as sedatives, narcotics, and antidepressants are used to control these behaviors. This type of therapy can produce undesirable side effects and worsen the progression of dementia.

While searching current literature on the topic, I found an effective therapy that can be used with female dementia residents and has no identified negative side-effects or outcomes. The therapy is called baby doll therapy. The therapy offers life-like baby dolls to female residents in long-term-care facilities (LTCF) with diagnosis of dementia. After accepting a doll, the resident is able to relate to the doll as their own. From this relationship, the resident begins to feel usefull and that they have a purpose in life again.

The therapy is simple to begin, cost-effective, time-saving, and shows immediate results in behavior improvement, increased resident self-esteem, and increased interaction with others. Residents show significant gains in self-confidence and social abilities. In most cases they sleep better, relate to others better, and have an over-all positive behavior improvement. The trial of this therapy and measurement of outcomes will take place over a one-week period. The baby dolls will be provided and left with the resident when the project is finished. This is an exciting project and a chance to make a change in outcomes of residents with dementia.

Dementia and Doll Therapy

Evidence-Based Project

Barbara A. Braden

DOCTOR OF NURSING PRACTICE NUR 709 Project Seminar

University of Toledo

Fall 2011

Purpose:

- Find evidence-based therapies to effect behavioral modification in patients with dementia
- To identify characteristics of evidence-based therapy in patients with dementia
- To conduct a study of evidence-based behavioral therapy in patients with dementia
- To improve behavior and well-being in patients with dementia
- To reduce need for chemical restraints

EXEMPLAR

- Phyllis, 81 y.o. female
- No chronic physical illness
- Lives in memory impaired facility for the past 5 years
- Diagnosed with advanced Alzheimer's Dementia
- Angry and difficult during routine care
- Fights with other residents
- Becomes easily agitated
- Chemical restraints have little effect
- All three children live out-of-town

Synthesis of Evidence

"Imagine trying to button a shirt while wearing thick gloves and blurry goggles. Imagine trying to understand verbal instructions while sirens, static and voices ring in your ears. This is what dementia patients deal with on a daily basis (Goodwin, A., 2010, p. 1)."

Synthesis of Evidence

How Dolls Can Help Patients With Dementia

Geriatric psychiatry unit staff at The Mount Sinai Medical Center, New York, New York.

Neuschotz, Green, & Matos, (2009)

- Unit-based quality initiative to comfort agitated patients
- Benefits immediately evident
- Helped improve patients mood
- Increased cooperation with feeding and toileting
- Improved interaction with staff
- Beneficial to explore patient histories
- All disciplines now involved
- Doll population keeps growing

Synthesis of Evidence

- **"Dolls can create miracles,"**
- "They allow people who are no longer able to communicate to once again say that they're
  - hungry,
  - need to go to the bathroom,
  - are uncomfortable,
  - often using the doll as their tool:
    - 'My baby is cold.'
- Also a parent's need to nurture and care for another reappears, at a time when it seems they're the ones needing all the care (Warner, 2010, p. 1)."

[illegible]

Synthesis of Evidence

Outcomes of Doll Therapy

- Increased activity and focus
- Improved communication when carrying a doll
- Improved attitude towards other residents and care takers
- Decreased Agitation during routine care
- Keeps patients hands busy
- Less likely to do harm to themselves or others

Proposed Change

- PICOT Question using the Prognosis/Prediction template
- In females over 65 with moderate to severe dementia (P), how does exposure to baby-doll therapy (I) compared to pre-baby-doll therapy exposure (C) influence behavior (O) over a one-to- three-week period (T)?

The Dolls

Strategies of Implementation

- The Plan
  - Inform the Director, Co-ordinator, and others
  - Form planning team
  - Plan and give in-service on dementia and doll therapy
  - Team considers different ways of introducing dolls and best way to measure outcomes
  - Get team agreement
  - Apply for IRB approval

Stakeholders

Identify project team roles & leadership

- Active:
  - DNP Student,
  - Medical Director
  - Volunteer Coordinator
  - Nursing Director,
  - Social Worker
- Supportive
  - Nurses/NAs
  - Chaplain
  - Caretakers

Problem

"People with dementia who can find verbal communication difficult often demonstrate ill-being through nonverbal communication, which can result in behaviour that is viewed as challenging."

http://www.naidex.co.uk/NaidexBirl1/website/default.aspx?refer=126

Method of Evaluation

- "Quality of Life Alzheimer's Disease Scale,"
  - Administer before doll therapy
  - To be used by the Project Lead with caretaker
  - Helps to identify behavioral cues
  - Helps awareness of more than physical needs
  - Measures 13 quality of life items
  - Scored on a four point Likert-type scale, with 1 = poor, and 4 = excellent.
    - Scores can range from 13 to 52
    - The higher the score, the greater the quality of life

Ready and Ott (2008)

Method of Evaluation

"Quality of Life Alzheimer's Disease Scale,"

Scored on a four-point Likert-type scale
1 = poor, and 4 = excellent

• Physical health	• Friends
• Energy	• Self as a whole
• Mood	• Ability to do chores around the house
• Living situation	• Ability to do things for fun
• Memory	• Money
• Family	• Life as a whole
• Marriage	

Eyre (2006)

Method of Evaluation

- Brief description of patient's frequent behaviors before the use of the doll
- Survey pre-therapy, at 1 month & 3 months
- The impact of the use of dolls on the activity and affective states of residents
  - 1 = much less; 2 = little less; 3 = no change; 4 = little more; 5 = much more

- Activity/liveliness
- Interacting with staff
- Interacting with other residents
- Happier/content
- Agitation
- Amenable to personal care

Mackenzie, James, Morse, Mukaetova-Ladinska, and Reichelt. (2006).

Significance

- Available literature on doll therapy is positive in its outlook
- Patient shows significant gains in self-confidence and social abilities
- Patient able to relate to the doll as their own
- In many instances they sleep better,
- Relate to others better
- Have an over-all positive affect improvement.
- This is an exciting project and a chance to make a change in patient outcomes

Significance

[illegible]

"Doll therapy has allowed for a new level of communication between patients and caregivers, where caregivers can discover more about the patients history from the patients themselves, or family members can "find" their loved ones again, in some cases, even if only for a few minutes. It can even change cycles that are undesirable, lessening the need for sedatives like lorezepam to modify behavior or keep patients safe while restoring some of their independence."

http://www.ehow.com/about_6515768_doll-therapy-dementia.html

Significance

http://www.ashtondrake.com/mcategory/baby-dolls.html [illegible]

"At Geisinger Medical Center (GMC), Great Britian, nearly 40 percent of the patient population is considered to be geriatric - age 65 or older….

To better care for their geriatric patients, GMC nurses affiliated with Nurses Improving Care for Healthsystem Elders (NICHE), a national geriatric initiative to improve the care of older hospitalized adults, began to research the use of alternative treatment methods, namely baby doll therapy."

Baby Doll Therapy Assists Senile Geriatric Patients (2011)

http://www.medicalnewstoday.com/releases/223519.php

Significance

"According to GMC nurses Tami Underhill, R.N., BSN, and Sarah Evans, R.N., this mode of therapy involves the simple act of offering a doll to a patient in need of soothing. The approach may seem fluffy to some, but it works wonders with their patients, according to Underhill.

"It is an effective therapy for improving dementia patients' quality of life," Underhill said. "It is also one of the easier therapies, if not the easiest, to administer."

Baby Doll Therapy Aims to Soothe Dementia Patients (2011)

http://www.medicalnewstoday.com/releases/223519.php

Significance

"Baby dolls perform "miracles" for Alzheimer's patients every day. For some they bring back wonderful, nurturing memories and feelings of caring for a small baby, others simply find it comforting to care for another, when their days are mostly spent being cared for by someone else."

Baby Doll Therapy (2011)

http://www.alzstore.com/Alzheimers/baby-doll-therapy.htm

Significance

http://www.youtube.com/watch?feature=player_embedded&v=1X1zPVl4fZE.

"Two ladies at an Alzheimer's care facility were in the later stages of aphasia – despite the staff's best efforts, the words out of their mouths appeared to be nothing more than gibberish, making no sense whatsoever. Sentences were not sentences, phrases were unrelated, words were not words, at least in any language that the staff recalled. Yet these two women would sit on a bench outside with their baby dolls and talk to each other for hours, seemingly understanding every word, on topics of great importance to each other.."

Baby Doll Therapy (2011)

http://www.alzstore.com/Alzheimers/baby-doll-therapy.htm

Synthesis of Evidence

"One evening while making rounds in the geriatric psychiatry unit, a nurse manager heard a patient crying in a little girl's voice and pleading for her mother and her doll. The patient had been admitted from a nursing home because of physcial and verbal aggression and an inability to cooperate with care (she had pulled out her feeding tube). The nurse manager asked a mental health aide to make a doll using a pillow case.

When the patient received the doll she became calmer, smiled and hugged the doll. To the staff's amazement, the positive effects continued. The patient became more cooperative during care, tests, and procedures. Her sleep improved, as did her social interaction with staff and peers. Shortly afterward she was discharged (Neuschotz, Green, & Matos, 2009, P. 36)."

Synthesis of Evidence

"Caregivers rightly have an aversion to treating older adults like children, even when the effects of dementia render them child-like. But here's a wonderful exception that Alzheimer's patients enjoy: **Try giving a woman in the later stages of dementia a baby doll** (Spencer, 2009, p. 1)."

http://www.elder.com/article/politics/watchdog-slams-dementia-care-england

References

Miller, B. (2010, May 14). Doll Theapry and Dementia. *eHow Health*. Retrieved April 4, 2011 from http://www.ehow.com/about_6515768_doll-therapy-dementia.html.

Spencer, P. (2009, Sep 29). Baby Love: Therapy for Alzheimer's Sufferers. (2009, Sep 29). Caring.com. Retrieved April 5, 2011 from www.caring.com/blogs/caring-currents/alzheimers-baby-dolls.

Miller, B. (2010, May 14). Doll Therapy & Dementia. Retrieved April 4, 2011 from Doll Therapy & Dementia | eHow.com http://www.ehow.com/about_6515768_doll-therapy-dementia.html#ixzz11csm8ajh.

Goodwin, A. (2010, Jan 22). A day in the life of a dementia patient. Tudock Journal http://www.bing.com/images/search?q=DEMENTIA+CARE+PICTURES&view=detail&id=0341E5B2D31BF7E33B10F89B0E60FA99B7F36AF3&first=61&FORM=IDFRIR&qpvt=DEMENTIA+CARE+PICTURES.

Neuschott, L., Green, L., & Matos, P. (2009). How Dolls Can help People with Dementia. American Nurse Today, 4: 36-37.

Bruce E (2000): Looking after well-being: a tool for evaluation. Journal of Dementia Care, Nov/Dec: 25-27. University of Bradford (2002): Well-being Profiling pack

Ready, R., & Ott, B., (2003). Quality of Life measures for dementia. *Health and Quality of Life Outcomes*, 1:1-13

Mackenzie, L. James, I. Morse, R., Mukaetova-Ladinska, E., & Reichelt, F. (2006, May 11). A pilot study on the use of dolls for people with dementia, Aging, 441-444.

Baby Doll Therapy Aims to Soothe Geriatric Patients. (2011). Medical News Today. Retrieved February 13, 2011 from http://www.medicalnewstoday.com/releases/223519.php.

Baby Doll Therapy. (2011). Alzheimer's Store. Retrieved February 13, 2012 from http://www.alzstore.com/Alzheimers/baby-doll-therapy.htm.

APPENDIX G

ORIGINAL PROJECT IMPLEMENTATION GUIDELINES

A. PROJECT OVERVIEW:

1. Title: Baby Doll Therapy in Dementia Residents

2. Protocol summary:

The condition of dementia exhibits itself in anxiety, agitation, and sleeplessness, inability to care for oneself, wandering, defiant and sometimes violent behavior, and other unsafe actions. Chemical restraints are often used to control agitated behaviors, but are not always effective and produce untoward effects. Doll therapy has provided purposeful activity that can help dementia residents feel useful. In most instances they are less agitated, sleep better, relate to others better, and have an over-all positive affect improvement.

The PICOT question for this evidence based project is: :In female residents over 65 with moderate to severe dementia (P), how does exposure to baby-doll therapy (I) compared to no baby-doll therapy exposure (C) influence behavior (O) over a one-week period (T)? The project will be implemented using the framework by Rosswurm and Larrabee (1999) "A Model for Change to Evidence-Based Practice." It is anticipated that approximately 16 female residents will participate in the implementation of the project. These participants will be identified by Dementia care center staff, per the developed criteria.

The dolls will be offered to the dementia residents following appropriate consent. Those who accept the dolls and treat them as real will be monitored by their caretakers on their perceptions of the impact of the dolls in six areas of behavior; activity/liveliness, interaction with staff, Interaction with other residents, happier/content, Agitation, and amenable to personal care. They will be evaluated on a five-point Likert-type scale with 5 being much more change and 1 being much less change.

Results will be reported in descriptive terms and in table format. Case studies will be reported. If successful in modifying untoward behaviors, the use of dolls will be considered for continued use by the Hospice staff. Evaluation of feasibility will be conducted through family and staff involved with implementation.

3. Project Lead:

1) Barbara Braden, NP-C, FNP Student, University of Toledo

4. Collaborators:

1) Nursing Director, Dementia care center
2) Staff of the Dementia care center
3) Family members/Guardians of select residents at Dementia care center

5. Team members:

1) Project Lead
2) Director of Nursing
3) Family Members/Guardians
4) Additional personnel as indicated

6. Scope:

The scope of this Guideline includes elderly female dementia residents, administrative personnel, healthcare personnel, and caretakers, engaged in the care of the dementia residents.

7. Ethical/legal Issues:

Even though this Project is evidence-based and does not require an Internal Review Board (IRB) it is always good practice to have the Board review and approve the Project for future efforts. An application will be made to the IRB at the University of Toledo. The literature shows little if any adverse effects of instituting baby doll therapy. Therefore, ethical/legal issues are not discussed in this Protocol. There were no safety issues related to the use of doll therapy in the literature.

B. INTRODUCTION:

1. Current State of Knowledge

According to Medical Subject Headings (2011), dementia is defined as, "An acquired organic mental disorder with loss of intellectual abilities of sufficient severity to interfere with social or occupational functioning. The dysfunction is multifaceted and involves memory, behavior, personality, judgment, attention, spatial relations, language, abstract thought, and other executive functions. The intellectual decline is usually progressive, and initially spares the level of consciousness (p.1)." Groulx (1998) opines that this type of behavior may be the result of internal physical or mental problems such as pain or unmet needs, and residents will respond best to attentive and respectful care by care providers and family members.

Verity and Kuhn (2008) opine that one of the biggest needs for seniors who have led a productive life is to feel needed and useful. Higgins (2010) states that baby doll therapy can provide purposeful activity that can help dementia residents feel useful. Spenser (2009) states, "Surprisingly, an "Alzheimer's baby" helps someone with dementia feel like a functional adult (not a patronized child). And that brings feelings of satisfaction, pleasure, calm, and accomplishment. Cuddling a doll soothes and entertains, reducing aggression. Pretty good, as dementia activities go (P. 1)." Outcomes of baby doll therapy with dementia residents have shown increased activity and focus, improved communication when carrying a doll, improved attitude towards other residents and caretakers, decreased agitation during routine care, keeping the resident's hands occupied, and they are less likely to do harm to themselves.

2. Justification for the Study:

Historically, the treatment of dementia was the use of devices and techniques that restricted and restrained the movement of residents. The restraints were used to keep the resident safe from self-harm and accidental injury and to save money and staff -resources. Over time the use of restraints has increasingly been viewed both as undesirable and abusive. As a result chemical restraints to control agitated and other unsafe behavior are being used with dementia residents. Use of chemical restraints, usually in the form of anti-psychotic medications, to control behavior is not always successful and increases the possibility of adverse side effects, to include death, and furthers digression of cognitive faculties. Groulx (1998) states there are several types of agitated behaviors in individuals with dementia that are not well-managed with pharmaceutical-therapeutics. Baby doll therapy has been shown to successfully control untoward behavior in elderly residents

with dementia but is not widely accepted in the United States. There is also no literature describing use of baby doll therapy in hospice residents with dementia.

4. Questions:

PICOT: In female residents over 65 with moderate to severe dementia (P), how does exposure to baby-doll therapy (I) compared to no baby-doll therapy exposure (C) influence behavior (O) over a three-week period (T)?

5. Purpose:

The overall aims of this Guideline are to:

1) Prevent long-term complications in elderly residents with dementia
2) Increase the resident's self-confidence
3) Improve the resident's behavior during routine and special care
4) Increase the resident's social interaction with staff, family members, and other residents
5) Improve the resident's participation in activities of daily living
6) Improve the resident's sense of well-being
7) Decrease agitation and assist the resident in times of stress

C. PROCEDURES AND METHODS:

1. Project design/locations:

The design of the study is an evidence-based longitudinal cohort project of qualified residents under the care of The Dementia care center, Toledo, Ohio. A convenience sample of caregivers, and the dementia residents for whom they care, will be given the opportunity to volunteer to participate in the study. Potential residents will be identified by staff members of The Dementia care center as meeting the inclusion criteria.

2. Audience and stakeholder participation:

An in-service on baby doll therapy and its functions will be given to all staff members of The Dementia care center on an individual basis, Follow-up training both in groups and as individuals will be done as indicated. Each of the caretakers of eligible residents will receive initial training about the Project and how to use the measurement instrument.

3. Introduction of baby doll:

There are three ways in which baby doll therapy can be introduced to the elderly female dementia resident:

1) Offer a baby doll to the resident by handing it to them or holding it out to them

2) Leave several dolls on a table in an area accessible to the resident and allow her to pick one up.

3) Set up a nursery where the resident can go and get a baby doll whenever she chooses.

The preferred method for this Project is number 1, to offer a baby doll to the resident by handing it to them or holding it out to them. This will be done twice by the Project Lead. If the resident accepts the doll and treats it as their own, the caretaker will be asked to complete, Brief description, Form 1 and the Baby Doll Evaluation Form. The subsequent evaluation form will be completed by the caretaker at one week after introduction of the baby doll. It is preferable for the resident to keep and maintain their own baby so they can begin to relate to it as a child/doll of their own. It also precludes the need for cleaning and sanitizing the baby doll between residents. The baby doll should be referred to as if it were a real baby so the resident feels secure

that their "baby" will be treated well. The baby doll should be called by the name the resident has given it. The baby doll should not be taken away from or withheld from the resident as a form of punishment or to gain more cooperation as this may have the adverse effect of causing anxiety in the resident.

4. Focus:

The focus of all care provided to the residents named herein:

1) Should be on the person with dementia, not on the disease itself.

2) The personality and character of the resident should be considered.

3) It is the person's reality that should be considered, not that of the caretaker.

4) Care should be person-centered.

5) Having dementia increases the need for security.

D. STUDY POPULATION:

1. Case definitions:

The study population consists of residents of The Dementia care center, Toledo, Ohio and their caregivers

2. Participant inclusion Criteria:

This Guideline applies to all staff members, caretakers, and family members with both direct and indirect care responsibilities for, and includes:

1) Elderly female residents at least 65 years old or older.

2) Residents with documented diagnosis of moderate to severe dementia.

3) Residents with manual dexterity sufficient to hold or caress a baby doll.

4) Visual acuity sufficient to recognize the form of a baby doll.

5) Difference in language spoken is no barrier.

3. Participant Exclusion Criteria:

The following residents will be excluded from the Project:

1) Residents with mild dementia

2) Residents who do not accept and relate to the doll after two attempts

3) Residents who immediately accept the doll but leave it a short time later.

4) Residents who, in rare instances, the doll invokes negative irritated reactions.

4. Estimated number of participants:

Initially, the Project will start with sixteen dolls. If further dolls are indicated and funding is available for purchase, more eligible residents and their caretakers may be enrolled in the Project.

E. VARIABLES/INTERVENTIONS:

1. Variables of interest in order of appearance in the questions and on the survey forms:

1) Frequent resident behaviors before introduction of the baby doll.

2) Date of introduction of the baby doll to the resident

3) Resident's race

4) Resident's behavior on 6 items before introduction of the baby doll

5) Change in resident's behavior on 6 items at one week after introduction of the baby doll to the resident.

6) Comments made by caretakers

2. Study Instruments:

An instrument with two scoring sheets have been adapted, by permission from the developers, from the instrument developed by Mackenzie, James, Morse, Mukaetova-Ladinska, and Reichelt (2006) to measure behavior change in dementia residents with the use of baby doll therapy. The instrument is attached to this document. The instrument contain six areas of behavior that are to be rated by the resident's caretaker prior to baby doll therapy, then again at one week after introduction of the doll to the resident. The Project Lead will instruct the caretakers in the documentation of the instruments.

The instruments are easy to understand and to document. The six areas of behavior are as follows:

1) Activity/liveliness
2) Interacting with staff
3) Interacting with other residents
4) Happier/content
5) Agitation
6) Amenable to personal care

For the first week after introduction of the baby doll, the six items will be scored using a five-point Likert-type scale as:

1) 1 = much less;
2) 2 = little less;
3) 3 = no change;
4) 4 = little more;
5) 5 = much more.

A second instrument will be used by the Project Lead to assess the interaction of the resident with the doll, the time observed, and the resident engagement. This instrument will be done on both the first visit and the one week visit to compare engagement and interaction with the doll.

3. Expected outcomes:

Expected outcomes are a dramatic improvement in the resident's behavior. For example, if they have been silent before the therapy, they will begin to talk and relate to the doll and to others around them. If they have been agitated much of the time before therapy, they will become calmer and much more amenable to personal care.

F. DATA HANDLING AND ANALYSIS:

1. Data Collection:

Data collection will be done by the Project Lead using the two forms (attached) of the Baby Doll Therapy Evaluation Tool, after educating the caretakers on its use and documentation. The Engagement tool will also be documented by the Project Lead by interviewing the caretaker.

2. Data Entry:

Data entry for all forms used will be done by the Project Lead using an Excel spreadsheet as shown in the attachment. If a second instrument is used, a separate spreadsheet will be developed for it.

3. Reports:

Results will be reported by means of a written report, including developed statistics and tables.

G. DISSEMINATION, NOTIFICATION, AND REPORTING OF RESULTS:

1. Dissemination:

Dissemination of the results of this Project will be determined by the Project team and the faculty members on the Project committee.

2. Notification:

Notification of participants of the Dementia care center staff and family members will be done by means of the final written/published report.

3. Reporting of results:

Results will be reported to and included in a written submission to the University of Toledo.

H. CONCLUSION:

Available literature on the subject of baby doll therapy consistently demonstrates positive behavioral change in dementia residents. Multiple case reports show significant gains in self-confidence and social abilities when residents are allowed to create a caring role for themselves in relation to a doll or stuffed toy. The doll becomes real to them and they are able to relate to it as if it is actually a child of their own. In many instances they sleep better, relate to others better, and have an over-all positive affect improvement. Baby doll therapy has been shown to be beneficial to elderly female residents with moderate to severe dementia and is ideal for use in long-term care facilities

References

Eyre, L. (2006, Feb 2). Well-being in dementia care. Retrieved 4/11/2001 from http://www.naidex.co.uk/NaidexBir11/website/default.aspx?refer=126.

Groulx, B. (1998, March). Nonpharmacologic treatment of behavioral disorders in dementia. *The Canadian Alzheimer's Disease Review*: 6-8.

Higgins, P. (2010, Oct 1). Using dolls to enhance the well-being of people with dementia. *Nursing Times*: 1-4.

Mackenzie, l. James, I. Morse, R., Mukaetova-Ladinska, E., & Reichelt, F. (2006, May 11). A pilot study on the use of dolls for people with dementia, *Aging*, 441-444.

Medical Subject Headings. (2011). Dementia. National Library of Medicine. Retrieved March 27, 2011 from http://www.nlm.nih.gov/cgi/mesh/2011/MB_cgi.

Spencer, P. (2009, Sep 29). Baby love therapy for Alzheimer's sufferers. *Caring.com*. Retrieved from www.caring.com/blogs/caring-currents/alzheimers-baby-dolls.

Verity, J. & Kuhn, D. (2008, January 1). *The art of dementia care.* New York, New York: Rittenhouse Book Distributors.

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Appendix H

Date: _____ **Code #:** _____

Baby Doll Therapy Evaluation Tool
Brief Description - Form 1

Dementia Care Center

Dear Staff Member. Thank you for completing this form for the Baby Doll Therapy Project. The Project is designed to determine if the use of baby dolls has a positive effect on people with dementia. Please complete this brief description form before the baby doll is introduced to the resident you are caring for.

Resident's Race/Ethnicity: (circle one) Asian Pacific Islander African American Native American White Hispanic Unknown

Resident's Age in years: _____ **Brief description of resident's frequent behaviors before the use of the doll (such as rocking, shouting, anxious, withdrawn, etc.):** _____

_____

There are six items of behavior to score the person with. Please rate the items from 5 to 1, with 5 being Strongly Agree and 1 being Strongly Disagree with the following items: (Please Circle one)

	Strongly Agree	Agree	Not Applicable	Disagree	Strongly Disagree
1. The Resident's activity level or liveliness is good:	5	4	3	2	1
2. The Resident interacts with you:	5	4	3	2	1
3. The Resident interacts with other people or residents:	5	4	3	2	1
4. The Resident is happy or content:	5	4	3	2	1
5. The Resident becomes agitated:	5	4	3	2	1
6. It is easy to give personal care to the Resident:	5	4	3	2	1

Comments: _____

_____

(Please continue your comments on the back if more space is needed!)

Thank you so much for completing this Evaluation! It will help us to determine if the use of baby dolls helps dementia residents with their interactions!

Date: _____ **Code #:_____**

Baby Doll Therapy Evaluation Tool

Brief Description - Form 2

Dementia Care Center

Dear staff member. Thank you for participating in the Baby Doll Therapy Project. The Project is designed to determine if the use of baby dolls has a positive effect on women with dementia. This is the second form to complete at one week after the resident has received a baby doll to determine if changes have occurred in the resident's behavior.

There are six items of behavior to score the person with. Please compare the resident's behavior now with her behavior before she received the baby doll. Each of the six items below can be scored as 1 = Much Less, 2 = Little Less, 3 = No Change, 4 = Little More, and 5 = Much More. Please circle the number that best corresponds with the change in the resident's behavior.

	Much More 	Little More 	No Change 	Little Less 	Much Less 
1. The Resident's activity level or liveliness:	5	4	3	2	1
2. The Resident interacts with you:	5	4	3	2	1
3. The Resident interacts with other people or residents:	5	4	3	2	1
4. The Resident is happy or content:	5	4	3	2	1
5. The Resident becomes agitated:	5	4	3	2	1
6. It is easy to give personal care to the Resident:	5	4	3	2	1

Comments: _____

(Please continue your comments on the back if more space is needed!)

Thank you so much for completing this Evaluation! It will help us to determine if the use of baby dolls helps dementia residents with their interactions!

Appendix I

BABY DOLL THERAPY DATABASE

RESIDENT	Date	AGE	DOLL DATE	RACE	1a	1b	2a	2b	3a	3b	4a	4b	5a	5b	6a	6b
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
12																
13																
14																
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23																
24																
25																
26																
27																
28																
29																
30																
TOTALS																

APPENDIX J

<u>Brief description</u> of resident's frequent behaviors before the use of the doll:

Resident	Brief Description
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	

APPENDIX K

BABY DOLL THERAPY CODING CHART

Resident: 1 - 16

Today's Date: Date format

Resident's Age: Age in years

Doll Date: Date format

Resident's Race	
a. Asian	**1**
b. Pacific Islander:	**2**
c. African American:	**3**
d. Native American:	**4**
e. White:	**5**
f. Hispanic	**6**

<u>Brief description</u> of resident's frequent behaviors before the use of the doll: Write out Questions:

1. The Resident's activity level or liveliness	1 thru 5
2. The Resident interacts with the staff:	1 thru 5
3. The Resident interacts with other people or residents:	1 thru 5
4. The Resident is happy or content:	1 thru 5
5. The Resident becomes agitated:	1 thru 5
6. The staff helped reduce your stress level:	1 thru 5

Comments: Write out!

APPENDIX L

Informed Verbal Consent Form from Resident Guardian
Baby Doll Therapy Project
Fall 2013

Resident	Relationship to Resident	Date of Consent
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		

APPENDIX M

Documentation Guide for the Baby Doll Therapy Evaluation Form

Q#	Resident Activity	Strongly Agree	Agree	Not Applicable	Disagree	Strongly Disagree
1	The Resident's activity level or liveliness is good:	High level of activity	Moderate Level of Activity	Not Applicable to this resident	Low level of activity	Very low level of activity
2	The Resident interacts with you:	Very talkative/asks questions	Moderately talkative/asks few questions.	Not Applicable to this resident	Quiet most of the time/Asks no questions.	Does not talk or interact with me
3	The Resident interacts with other people or residents:	Friendly and talkative with staff/family/residents	Moderately talkative with staff/family/residents	Not Applicable to this resident	Quiet most of the time when with other people	Does not talk or interact with others
4	The Resident is happy or content:	Smiles a lot/laughs with me and others/relaxed	Smiles some/laughs occasionally/relaxed	Not Applicable to this resident	Does not smile or laugh often	Does not smile or laugh at all
5	The Resident becomes agitated:	Very agitated and angry most of the time	Sometimes becomes agitated and angry	Not Applicable to this resident	Seldom becomes agitated or angry	Never becomes agitated or angry
6	It is easy to give personal care to the Resident:	Highly combative and resistant to any care attempts	Somewhat combative and resistant to any care attempts	Not Applicable to this resident	Seldom becomes combative or resistant	Never becomes combative or resistant

APPENDIX N
Engagement Observation Rating Tool for Doll Therapy

Subject code_____ Date _____

Complete the tool for a 10 minute observation following offering of the doll therapy and again at one-week . See the description of the categories that are rated for each activity observed.

Activity (Describe)	Time	ATTENTION (1-3) m/h	ATTITUDE (1-3) m/h	ACTION (ABCD with %)	Comments – describe
Doll therapy					

Code for Rating

Component	Developed definition for project
Engagement Duration (Time)	Amount of time participant shows being physically and mentally responsive to the activity/stimulus presented Duration measured in total minutes engaged during the 10 minutes. Example: 8 – would indicate that over the 10 minutes there was engagement for 8 minutes
Attention 1=not attentive 2= somewhat attentive 3=attentive m/h (majority/highest)	Level of attention during the activity Measured on a 3 point scale. Level of attention observed during most of the activity and the highest attention level during the activity are recorded. Example 2/3 somewhat attentive most of the activity but show attentiveness
Attitude 1= negative 2=neutral 3=positive m/h (majority/highest)	Observed positive or negative action to activity **Positive** attitude examples: participant smiles, laughs or shows other outward manifestation of happiness. **Negative** attitude examples: participant aggressively pushes stimulus away, cursing, manifesting frustration at the activity and other outward manifestations of negativity. Measured on a 3 point scale. Attitude to the activity stimulus seen during most of the activity is recorded as well as the highest rating of attitude observed during the activity. Example: 2/3 Neutral most of time yet did reach a positive
Action toward stimulus (manipulation, talking, etc.) A – appropriate response with spontaneous participation B – appropriate response with no spontaneous participation C – inappropriate or out of context response D - refusal % of time for each action category	Observed actions to the activity Appropriate response with spontaneous participation. Immediate response. Appropriate response with no spontaneous participation. Takes some time to participate. Inappropriate or out of context response – disruptive, doing an action such as repeatedly folding a napkin during a discussion group Refusal During the 10 minutes of observation record the % of time spent in each category (should be 100%) Recording example: A 30% B 50% C 20% Appropriate response spontaneously 30% of time; Appropriate response 50% of time; inappropriate response 20% of time

APPENDIX O
Results of Evaluation Table

ID	AGE	Race	Brief description of frequent behaviors before use of the doll	Doll perceived to be a baby	Activity/ Liveliness	Activity/ Liveliness Change	Interact with Staff	Interact with Staff Change	Interact with others	Interact with others Change	Happy/ Content	Happy/ Content Change	Agitation	Agitation Change	Ease of Personal Care	Ease of Personal Care Change
1	70	caucasian	She wanders and gets aggressive with care. She likes to be left alone and do her own thing.	Yes	some	little more	some	little more	a little	little more	Some	little more	a lot	no change	a little	little more
3	92	caucasian	She has periods of aggressiveness and a lot of crying off and on!	Varies	a little	no change	some	no change	some	little less	a little	no change	some	little more	a little	no change
4	92	caucasian	Silent. Anxious. Sun Downer.	Yes	a little	little more	some	no change	a little	no change	Some	little more	some	little less	a lot	no change
5	78	caucasian	She loves to take things and loves to drink. She pouts a lot when she doesn't get her way. She can go either way. She is changeable!	No	some	no change	some	no change	a little	no change	a little	no change	a lot	no change	some	no change
7	80	caucasian	She's up at night, wanders and has combative behavior and sleeps in daytime if up at night. She get combative when giving care!	Varies	a little	no change	a lot	no change	some	no change	a little	no change	a lot	no change	none	no change
8	82	caucasian	Client occassionally becomes agitated and combative. When she becomes agitated she goes into her room and won't have anything to do with others.	Varies	some	no change	some	no change	some	no change	Some	no change	a little	no change	a little	no change
9	60	caucasian	Tony hs been yelling and cursing a lot.	Varies	a lot	no change	a lot	no change	a little	no change	a little	little more	a lot	little less	some	no change
10	88	caucasian	Resident is very active and oftentimes difficult to redirect.	Yes	a lot	no change	a lot	no change	a lot	no change	Some	little more	a lot	little less	a little	little more
11	90	caucasian	Resident is mostly pleasant but withdrawn from other residents most of the time.	No	a little	no change	some	no change	a little	no change	Some	no change	a lot	no change	some	no change
12	82	caucasian	Resident is a pleasant Polish speaking human who is sometimes hard to communicate with and redirect. Can become agitated.	Yes	some	no change	some	no change	some	no change	Some	little more	some	no change	some	little more
13	85	caucasian	She is quiet and sleeps a lot. She is bossy and very criticle. She can become hostile even with family members.	Varies	some	no change	some	no change	some	no change	Some	no change	some	no change	a little	no change
14	78	caucasian	(The Client) has been mellow and not anxious but has a habit of eating clothes.	Unsure	some	no change	a little	no change	some	no change	a lot	no change	none	no change	a little	no change
15	85	african american	(The Client) has been crying a lot lately and very talkative.	Varies	a lot	no change	a lot	no change	a lot	no change	Some	no change	a little	no change	a lot	no change
16	92	caucasian	(The Client) has been speaking of dieing a lot lately.	Yes	a lot	no change	some	no change	some	no change	a little	no change	some	no change	a little	no change
17	79	caucasian	She is in last stages of dementia. She's quiet seems to be happy. She mumbles her words!	Yes	a little	no change	a little	no change	a little	no change	Some	little more	a little	no change	a little	no change
18	84	caucasian	(The Client) is generally calm, but does get anxious; constantly asks if she can	Yes	some	no change	a lot	no change	a lot	no change	Some	little more	some	no change	some	no change

APPENDIX P
Summary of Behavior Change Data

CODE #	Activity	Change	Interact 1	Change	Interact 2	Change	Happiness	Change	Agitation	Change	Ease Care	Change
1	4	5	4	5	2	4	4	5	5	5	2	4
3	2	2	4	4	4	4	2	2	4	5	2	2
4	2	4	4	4	2	2	4	5	4	2	5	5
5	4	4	4	4	2	2	2	2	5	5	4	4
7	2	2	5	5	4	4	2	2	5	5	1	1
8	4	4	4	4	4	4	4	4	2	2	2	2
9	5	5	5	5	5	5	2	4	5	4	4	4
10	5	5	5	5	5	5	4	5	5	4	2	4
11	2	2	4	4	2	2	4	4	5	5	4	4
12	4	4	4	4	4	4	4	5	4	4	4	5
13	4	4	4	4	4	4	4	4	4	4	2	2
14	4	4	2	2	4	4	5	5	1	1	2	2
15	5	5	5	5	5	5	4	4	2	2	5	5
16	5	5	4	4	4	4	2	2	4	4	2	2
17	2	2	2	2	2	2	4	5	2	2	2	2
18	4	4	5	5	5	5	4	5	4	4	4	4
Means	3.625	3.8125	4.0625	4.125	3.625	3.75	3.4375	3.9375	3.8125	3.625	2.9375	3.25
Means Difference	0.1875		0.0625		0.125		0.5		0.1875		0.3125	
Probability		1.00		1.00		1.00		0.05*		0.95		0.89
Min	2	2	2	2	2	2	2	1	1	1	1	1
Max	5	5	5	5	5	5	5	5	5	5	5	5
Mode	4	4	4	4	4	4	4	5	4	4	2	2

Means Difference = the difference between the change between the before and after data.

Probability = Freeman-Halton extension of Fisher's exact test to compute the (two-tailed) probability of obtaining a distribution of values in a 2x3 and 2x4 contingency tables, given the number of observations in each cell.

***Statistically Significant Change**

APPENDIX Q
Summary of Comments from Rating Tool

CODE	COMMENTS 1 (introduction of doll)	COMMENTS 2 (one-week evaluation)
1	Holds and rocks doll. Talks about the doll as if it is her own and kisses doll. Sits her up and talks to her.	patient had become violent when trying to take away doll to give personal care or feed. They gave the doll back to the project leader and declined to try again because the client became so difficult to work with. On the next day, the client had another client's (who had subsequently rejected her doll) doll and she was entered back into the program On the one-week evaluation the client holds the baby and talks to her/whistles at it constantly. Talks about the doll as if it is her own baby.
2	7 & 8 November attempted to give doll to the client each day but the client could not wake up enough to receive the doll.	Client was not entered into the study!
3	Smiled and held the doll. Fell asleep during most of the session. While awake was attentive to the doll.	Client holding the doll properly and sleeping. Was easily aroused. When asked about her baby she stated, "there is no baby, it is a doll." She remained holding the doll appropriately and fell asleep again.
4	When she received the doll she kissed it and just held her properly for the rest of the time.	Client asleep, holding doll appropriately. Returned several times and client remained asleep, holding the doll appropriately.
5	When she received the doll she kissed it and just held her lightly for the rest of the time looking at it occassionally.	Doll not with client. When given the doll she put it at the end of her bed and proceeded to ignore it. When asked what she thought of the doll she said, "it's allright." She then laid down and went to sleep.
6	The client appeared to be unable to hold the doll although she was able to move her arms. She said that the doll was very pretty, twice.	Client was not entered into the study!
7	The client took the doll and said "a pretty doll, she is pretty. Held the doll and said, I can't keep her. I don't know what to do with her. Will you help me get her home. I don't think I can do this." She continued to hold the doll. (Client never had any children).	Doll not with client. When offered the doll the client folded her arms and refused the doll. The client asked what she owed me and she would not respond after that. She folded her arms and closed her eyes. She then walked away!
8	The client immediately took the doll and held it correctly during the entire time. Gave the "baby" a name and answered questions concerning her "new baby."	Client was resting in bed with the doll in the chair. When handed the doll, she immediately took it and held it appropriately. She then put the doll by her side and continued to talk about it when questioned. She said the "baby's" name was Janie.
9	When seeing another resident reject a doll, she said, "I will take it." She was to receive the next doll so, when offered, she took it immediately and held and kissed it.	Doll not with client. When given the doll she held and kissed it several times throughout the ten minute visit.
10	The client accepted the doll and held it for about 2 minutes. She then put the doll in a chair and walked away. She was offered the doll one more time but she did not accept it. The caretaker said she has a poor attention span.	and the next day rejected the doll. Since then client 10 has been carrying the doll around every day. At times she leaves the doll on other wards. Today she is sitting in a chair quitely holding the doll which is very unusual behavior for this hyperactive client.
11	On the second attempt the client accepted and looked at the doll and held it during the full observation time. She told the caretaker she wasn't going to pretend when asked what her baby's name was.	about her doll, the client stated she did not have a doll, that someone else did. The doll was not in the client's room nor on the ward. It had been taken to another ward by client 10.

APPENDIX Q (Continued)
Summary of Comments from Rating Tool

CODE	COMMENTS 1 (introduction of doll)	COMMENTS 2 (one-week evaluation)
12	The client accepted the doll and held it. She paid full attention to the doll during the session.	Doll not with client. Accepted the doll immediatley when offered and just held it close and watched it carefully.
13	The client took the doll and had many questions but appeared to want the doll. After about five minutes she set the doll aside.	The client was in a chair in the dayroom. When asked about her "baby" she said she didn't know where it was. The caretaker said she thought she hid the doll and the doll was found "hidden" in a drawer in the client's room. When offered the doll she took it and kissed it. She continued to talk about how she loved it and was paying full attention to the doll. Later the caretaker said she would not give the "baby" up so she could eat dinner. During a subsequent encounter with the patient the doll was in the chair in the client's room and the client was in bed. When offered the doll she received and held it appropriately. When I returned later the client was sleeping soundly.
14	The client was unable to move much. The husband assisted with giving the doll. She smiled and held the doll as much as she was able. She could not talk or express any emotions except she keep smiling and looking at the doll.	It was difficult to understand or communicate with the client because she is unable to move or talk. When I arrived the client had the baby in the bed with her and she was leaning toward the doll, awake and alert. She appeared to be aware that the doll was with her and she appeared to be trying to draw the doll closer to her face.
15	During the first two attempts, the client would not accept the doll. She said "No" several times. The subsequent day she was holding another clients doll and when offered her own doll accepted it. She held it and mumbled something about the doll that was unintelligible.	Doll not with client but found in client's room. The client was in apparent distress during this visit and had increased hand and head tremors. She stated she did not feel well. When I visited her later that day, the doll was in the client's lap in an inappropriate position.
16	The client immediately took the doll and held it. She put it up to her face for the first 10 minutes and then fell asleep.	Doll found in client's lap. Client holding and kissing the doll. She fell asleep momentarily but when awake, she interacted with the doll.
17	The client immediately accepted the doll, holding and kissing it during the entire session!	I visited the client several times throughout a two-day time period. She was sleeping each time and not arousable. The caretaker stated that she is in her end stages and sleeps most of the time. Each time I visited her throughout the week and today, she was consistently holding the doll.
18	The client immediately accepted the doll, holding and kissing it during the entire session!	The doll with with the client while she was watching a performance. She continued to kiss and watch the doll.