

# The Influence of Doll Therapy in Iranian Elderly: A Randomized Trial Study

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Submitted: 2019-06-24; Accepted: 2019-09-17; Doi: 10.22037/jcpr.v4i4.30112

## Abstract

**Introduction:** Many elderly populations feel lonely and it has a significant negative relationship to their health status. Doll therapy may seem childish and ridiculous for adults, but it can have an undeniable effect on the elderly's health. The positive impact of doll therapy has already been proven in depression and dementia. The aim of this study was to evaluate the influence of doll therapy in agitation, aggression, and interactions of elderly people. **Methods and Materials:** Sixty elderly people were selected at the Kahrizak charity foundation in Tehran. Ten different dolls (5 popular characters and 5 newborn dolls in neutral and specific genders) were presented to them. Their reaction to all dolls recorded (no reaction: 0, watch closely: 1, caring the doll: 2, communicating with the doll: 3) and each elderly chose one doll to keep it for 6 weeks. The aggression, agitation, and interactions with other elderly people and also with the nursing home staff were asked before and after a 6-week period of doll therapy from their caregivers by the Likert scale. **Results:** Twelve of 60 samples exited from the study because they were unwilling. Twenty elderly did not meet the inclusion criteria. After 6 weeks, 8 subjects donated their dolls to someone else. Eventually 26, people stayed in the study, and their data were analyzed. The highest doll selection rate was for neutral gender dolls and popular dolls were almost ignored by the elderly. Paired sample T-test showed significant differences for aggression and agitation ( $P<0.001$ ) and also interactions ( $P<0.05$ ). **Conclusion:** Although the sample size after all exclusion seems to be small, we can conclude that doll therapy is not a consistent method for all elderly, but it is beneficial and can improve their relationships and reduce their aggression and agitation. More researches with larger samples are suggested.

**Keywords:** Doll therapy, Elderly, Play therapy

Please cite this paper as: Mirzakhani Araghi N, Dabiri Golchin M, Golshan Tafti M, Dabiri Golchin M, Fallah S, Yazdani F. The Influence of Doll Therapy in Iranian Elderly: A Randomized Trial Study. J Clin Physio Res. 2019; 4(4): e24. Doi: 10.22037/jcpr.v4i4.30112

## Introduction

Aging in place is one of the most desired requests of elderly people. These people want to stay in their own homes to maintain their independence and activity level (1-3). Anyway, they have to transfer to other places in order to gain better care or decrease their costs (4). Many elderly people feel lonely in care centers and it has a significant negative relationship with their health status (5). Doll therapy may seem childish and ridiculous for adults, but it has an undeniable effect on the elder's health. The positive impact of doll therapy has been proven in depression and dementia (6). The use of dolls or pets as a therapeutic tool can improve the elder's attention to the environment and prevent her/his isolation (7). Doll therapy in elderly people is some way flash back to their past, memories, and dependencies (8). In many cultures, pets are applied to

educational, psychological and physical rehabilitation and its effectiveness has been confirmed (9). Pets act as a catalyst or emotional mediator and facilitate therapeutic objects and especially social relationships (10). Doll therapy in these people can remind them of caring for their own children, especially if the doll is like a real newborn child (11).

Actually, all people have playfulness inside themselves and express it in some circumstances like playing with children or in family gatherings (12, 13). Doll therapy can provide an ideal concept to declare this quality. Doll therapy also can improve the quality of the relationship between the elderly and the staff and make them more cooperative. In addition, it can reduce the elders' agitation and aggression as well as the unnecessary strictness of the environment (12). Also, it can be a good starting point for people who do not engage in any other therapeutic program (8).

**Table 1.** The amount of selected dolls

Doll	Rate of selection
Newborn neutral gender, eye closed	8
Newborn neutral gender, eye opened	7
Newborn boy	5
Newborn girl	6
Popular little girl character	1

**Table 2.** Reaction scores

Column	Doll	Reactions											
1	Newborn neutral gender, eye closed	1	2	2	2	2	2	3	3	1	1	3	3
2	Newborn boy								2	2	3	2	2
3	Newborn girl							2	2	1	1	1	2
4	Newborn neutral gender, eye opened			1	1	2	1	2	3	3	1	2	2
5	Newborn neutral gender, smaller size								1	1	1	2	1
6	Popular little girl character										1	1	
7	Popular middle-aged character												
8	Popular sheep character												
9	Popular little boy character												1
10	Popular donkey character									1	1	1	2

**Table 3.** Paired sample T-test

		Paired Samples Test				
		95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Lower	Upper			
Pair 1	Agitation - Agitation2	0.30125	0.99875	3.901	19	.001
Pair 2	Aggression - Aggression2	0.50114	1.29886	4.723	19	.000
Pair 3	Interaction - Interaction2	-1.66986	-.23014	-2.762	19	.012

Doll therapy has its cons and pros. Some critics believed that elderly people would experience some hallucination about making relationships with their children, and defined it as an abusive, deceptive and insult to them (14). Others suggested that an isolated elderly would not return to daily living by our direct request, since this method is beneficial, it can be assumed it as a white lie (15).

At the moment, there are no investigations in doll therapy for elders in Iran. Worldwide occupational therapists applied doll or pet as a therapeutic tool for elderly people (16). Using pets is not customary in the eastern culture; so, we decided to carry out doll therapy in the elders. The purpose of this research was to evaluate the quality of the elderly's relationships with the dolls and to test the effect of this method to improve their real relationships and reduce their aggression and agitation.

## Methods and Materials

This quasi-experimental study was approved by the ethics committee of Shahid Beheshti University of Medical Sciences (code: IR.SBMU.REC.1396.81). Sixty elderly people were chosen regardless of their diagnosis. The list of residents in the nursing home was provided by the foundation and we defined a K to choose our samples. Whole population was divided to 60 and K defined. All participants were chosen with this K. All of them were older than 75 and living in the Kahrizak charity foundation which is a governmental charity nursing home in Tehran. The exclusion criteria was not to stay in the center for the next 6 weeks, have any surgery, and other reasons like leaving for visiting their family and friends.

The researchers asked the caregivers to rate these people in three areas by Likert scale. These areas were agitation,

aggression, and interactions with other elderly, caregivers or staff. The Likert scale was a 1 to 10 scale which shows the least aggression, agitation, and interaction at 1 and the most possible amount of these variables at 10. The same scale was used at the end of 6 weeks with the residual samples.

The elderly entered the room one by one and encounters with 10 dolls, then, they chose their favorite doll. These dolls contained 5 popular television program dolls, 2 animals (donkey and sheep), a little boy, a little girl, and a middle-aged doll. Five other dolls included 3 newborns that were neutral in gender, one eye closed, one eye opened, and the third one was smaller than a real newborn child. The last 2 dolls were girl and boy.

The elders' action was recorded after facing with the dolls. There were 4 scales: if they did not have any reaction, any score would be recorded. If they watch closely, would get 1, caring the doll 2, and communicate to the doll, talking or showing it to others got 3. These scores were recorded by the dolls code and the elderly were asked to choose one doll to maintain it for the next 6 weeks. After all, people chose their dolls, then, ordered dolls were provided and given to them for a 6-week period.

At the end of the 6th week, researchers returned to the foundation and asked three questions from the participants: did they keep the doll? Do they like to keep the doll? Did they find the doll beneficial or not. People who did not keep their dolls were excluded from the study and retest of agitation, aggression and interaction was done by their caregivers. For comparing the influence of doll therapy on their status before and after the intervention, paired sample T-test was used since data distribution was normal.

## Results

Sixty elderly were interred in the survey, 12 people (female) exited from the project because they were willing. Twenty others were excluded because they did not meet the inclusion area. Two subjects of these 20 passed away before starting with the dolls, 10 were leaving the center for different reasons from having surgery to visiting their family, 6 of them had severe physical problems and 2 of them were in the hospital at the moment. Finally, 20 male and 8 female stayed in the study. They encountered dolls and scores were recorded. After 6 weeks, 8 people had donated their dolls to someone else, usually their grandchild (1 female and 7 male). Finally, just 20 samples remained who had kept their dolls. After this 6 week, 2 males expressed that they were going to give the doll to their grandchild and found these dolls so ridiculous that had just left them on their table from the beginning. Eighteen other

individuals were so happy to keep the doll and worried about losing their concomitant.

The selected dolls list is ready on table 1. Non-selected dolls were excluded from the table1. Reaction scores are shown in Table 2. The Paired sample T-test is presented in Table 3 which showed significant differences between the interaction, aggression ( $P<0.001$ ) and agitation ( $P<0.05$ ) before and after the intervention. They demonstrated more interacted than the first scores and fewer aggression and agitation was seen in their actions.

## Discussion

It seems that doll can be replaced with the child or the grandchild of the elderly (11). All participants were not willing to keep the dolls in a recent study. In Mackenzie's study, 14 people from 37 express willingness and some of them lost their dolls during the study, just like the current survey (17). Similarly, 8 people from 28 had donated their dolls in our study.

According to table 1, the most reactions were recorded for the newborn neutral gender eye opened and closed. The fewer reactions were recorded for the middle-aged doll and the sheep. In a similar study, the newborn dolls which seemed more real, had the most rates (11). One of the prominent points of this study was higher rate of selecting the neutral sex dolls. The boy or girl doll was selected with personal motives. For example, the man who selected the popular little girl doll explained: "I have no daughter and I liked it to have one." This man had written a long poem for this doll (pretending as his girl) after the 6th week.

One the distinction between this study and others is the difference of participants' gender. In other studies, women were more willing and engaging in doll therapy; while more than fifty percent of participants were men in the present project (8, 10, 16). It was the opposite of general expectations from men. But probably general thoughts should change, as one of the elderly man's personal room was found completely crowded with dolls. So, the doll can be inspiring for both men and women. Anyway, it seems that elderly people pretend the doll as their own children. The man who was more creative with poetry imaginations could choose a doll which was not like a real child, even with a default character while others preferred the neutral dolls. So, they can easily imagine them alive. It is suggested that popular television dolls were not proper symbols instead of elderly children, maybe because they had defaulted personalities.

Except the all the positive responses, some elderly acted aggressively and claimed that: "I am not a child!" and we found it offensive. One of the elderly insisted on the reason for this action after the researcher explained the history and theory of

this study, and he chose one doll. Therefore, it is suggested that an introduction to the study and its benefits may be useful and requires more investigations.

Although we tried to have an accurate study, we faced some problems and limitations in this project. The most important one was missing dolls in the study. Although residents of Kahrizak could not take the dolls out of the center, people could come to visit them and they may have been in an awkward position to give their dolls to their grandchildren. They may have difficulties to describe why they had these childish dolls. We also suggest further studies in a different context to find out whether the doll therapy could be an option in all settings or not.

Caregivers claimed that elderly people were happier than before, less agitated and aggressive and friendlier. Even in some cases, the participant's roommates complained that they also want dolls and said: "why did not you like me such as my roommate and did not you give me a doll?!" T-test results approved this claims ( $P < 0.001$  and  $P < 0.05$ ). Totally, we concluded that reaction to the dolls is completely bipolar: definitely negative or very positive.

## Conclusion

As we discussed sooner, play therapy, especially doll therapy, is not a common intervention. Many recent studies are focusing on play therapy in older adults. Other studies could not suggest this method surely as we could not. Doll therapy needs to be used more for finding its cultural acceptance, since it had a positive influence in some countries. The conclusion is that doll therapy is not a consistent method for all elderly, but it is beneficial and can improve their relationships and reduce their aggression and agitation.

## Acknowledgment

The authors gratefully acknowledge the financial support for this work provided by the physiotherapy research center, school of rehabilitation, Shahid Beheshti University of Medical Sciences and also Kahrizak charity foundation for their kind support.

## Conflict of interest:

None

## Funding support:

We are grateful to physiotherapy research center for their financial supports.

## Authors' contributions:

Both authors made substantial contributions to the conception, design, analysis, and interpretation of data.

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