

# Faranak Parent-Child Mother Goose Program: Impact on Mother-Child Relationship for Mothers of Preschool Hearing Impaired Children



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## ABSTRACT

**Objectives:** The parent-child relationship is one of the strongest predictors of a child's adjustment during adulthood. Many hearing-impaired children have normal hearing families, and this issue adversely affects the parent-child relationship; however, studies on interventions have focused on high-risk clinical specimens.

**Methods:** The effect of the Faranak parent-child program (Persian version of Parent-Child Mother Goose Program) on the quality of mother-child relationship has been evaluated in this study, which involved families having preschool, hearing-impaired children. A group of 14 mothers with hearing-impaired children participated in this 12-week program. The control group received no training. Both groups were asked to complete the Gerrard parent-child questionnaire before and after the intervention program to assess their relationship with their children before and after the program.

**Results:** The mothers who were part of the experiment group reported many positive changes in their relationship with the child during the program.

**Discussion:** The Frank Parent-Child Mother Goose Program could help families with hearing-impaired children in this 12-week community-based program, wherein parents learned skills that affect the relationship between mother and child.

## 1. Introduction

**H**earing loss is a relatively common disorder that causes severe impact on all aspects of the general health of hearing-impaired

children. It also leads to the build-up of stress and psychological pressure in their families [1, 2]. The severity of disability experienced by children with hearing loss depends on the degree and duration of hearing loss, age of onset of hearing loss, and other associated disabilities

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[3, 4]. More than 95% of hearing impaired children have normal hearing parents [5]. In such circumstances, the expectations of hearing parents from their hearing-impaired children are often similar to the expectations that they would have from normal hearing children. There is, however, no coordination between expectations of normal hearing parents, especially mothers, and the reactions of hearing-impaired children. This issue disrupts the relationship between normal hearing mother, the primary or permanent caregiver, and hearing-impaired children [6].

According to the learning theory in mother-child relationship, both mother and child seek positive reinforcement from each other [7]. Bowlby believed that mutual relations between a mother and child increase emotional and social adjustment in the child [8, 9]. Life challenges can lead to changes in the responsiveness of the parents toward the child's sense of safety [10]. Therefore, the most important factor that negatively affects the physical and mental development of children is a false relationship between mother and child [11]. Also, the mother-child relationship is important for children in not being vulnerable [12].

Child's hearing loss creates many problems in family relationships, and gradually parents look at their child as a person with a functional disability not a child with different competencies. This can lead to a breakdown in the relationship of the parent with the child. In this way, the relationship between the parents and the child itself and verbal communication had begun to increase the relationship between caregiver and child, Knowing little child hearing loss and even gradually be quite disrupted [13]. Considering the major burden of rehabilitation of hearing-impaired children is on the mother, a proper emotional relationship between the mother and child with hearing impairment is important for the child's mental health and social skills.

In recent years, programs have been created to improve the relationship between normal hearing mothers and hearing-impaired children to facilitate expected normal development. The Faranak Parent-Child Mother Goose Program is one such program that has been adapted from an international program (Parent-Child Mother Goose Program). Few studies have been carried out in relation to the program, and most of those bear testimony to its effectiveness. For example, Yanne and Weis reported the positive impact of this program on effective communication between parent and child [14]. Elaine's study showed that this program in the acquisition of secure attachment for children and mother-child relationship is effective [15]. Formosa and Hnyz and Carool also showed that the Mother Goose parent-child program

could have a positive impact on parents in the following areas: enhance relationships with children, awareness of children referred for behavior, increase social protection, strengthening the knowledge and confidence to parents, learning and use of poems, songs and stories, learn new strategies for managing difficult situations parents, using poetry, songs and stories for your comfort and calm the children and use them as fun in everyday life [16, 17].

The Faranak PCMG Program is the Iranian version of the Parent-Child Mother Goose Program that is in use in many countries including Canada, the United States and Australia. This program is based on the consolidation of the relationship between mothers and children and is mainly used as a component of early intervention for children with hearing loss. Although its application involves the use of oral methods for hearing impaired children, it can also be used for children in preschool and early school stages. Considering factors such as the problems that are imposed on families, especially, mothers of children with hearing loss, and given the importance of mother and hearing-impaired child relationships, this study aimed to evaluate the effectiveness of the Faranak PCMG Program on the relationship between mothers and hearing-impaired children in the first few years of elementary school.

## 2. Methods

The research method was quasi-experimental with pretest-posttest and control group. The independent variable was the Faranak PCMG Program, and the dependent variable was the relationship between mothers and children with hearing loss.

### The statistical population and sampling

The study sample consisted of all mothers with hearing-impaired children aged 3-6 years old who were referred to a special school for the deaf in Tehran (Nezam-Mafi School) in the year 1392. The sampling method used was accessible probable sampling. The minimum sample of 28 was equally divided into experiment (n=14) and control groups (n=14). To determine the minimum sample size formula and Gill, Terret research information respectively and colleagues (2012) have been used, and the probability of Type I error and statistical power is determined 0.80 and alpha 0.05, at least 14 patients in each group.

### Parent child relationship questionnaire

This questionnaire was designed by Gerard (1994) and included 78 items, 7 main subscales and 1 validity sub-

scale. A Likert scale with four options (strongly agree, agree, disagree, and strongly disagree) was used. Each item had a score of 1 to 4. Parental support, satisfaction with parenting, involvement, communication, limit setting, autonomy and role orientation were the main scales, and social desirability was the validity scale. The reliability score of the instrument was determined using Cronbach's Alpha and was reported to be 0.82 and 0.81 using test-retest [18].

In order to record demographic characteristics of participants, a form was designed. It contained items about the child's profile, including name, age, birth order, birth weight, and age. The parents' profile included items such as name, age, educational level, occupation, number of children, and type of delivery and being premature.

### Summary of the meetings of Faranak PCMG Program Intervention

In this study, the Faranak PCMG Program was analyzed [19]. The program aims to strengthen the bond between mother and the hearing-impaired child. According to the Handbook of the Mother Goose parent-child program (2013), it is a group program in which parents participate with their children, and most activities are based on poetry, songs such as lullabies, and storytelling. It is a slow and gradual process, but there is a time earmarked for considering the issues raised by parents. According to the principles established in the handbook, staff and family have passed this training program participants do not pay any fee.

Frank's Parent-Child Mother Goose Program was presented to the participants across 12 sessions. In the first session, basic information was collected from mothers and their hearing-impaired children. The program was introduced to them by way of briefly explaining to them its characteristics, principles, and goals. Prior to the session, the children indulged in playing. They were given toys to play, and before the start of the session, the toys were placed in a special basket. Sessions always began with poems. Poems which were tangible for mothers were in priority then that we started with a simple poem and poems that were read in conjunction with the move, some poems were Read also standing. That both mom and children also participated in it; in some of the poems mothers were encouraged to cuddle their children. It should be mentioned that participants groups might want to read their poems in the local language. After the song, a lullaby was read by the mothers and mentor for their hearing-impaired children. The lullaby was sung in a soothing voice.

At the end of the session, mothers were told familiar short stories in compliance with the principles of storytelling. Goodbye poems were also read. The overall program included poems and songs, lullabies and stories, respectively. In the final session mothers planned to continue their relationships with each other, and talked more together about the benefits of common experience. Gradual process, and parent session or poems and lullabies were introduced gradually, to pressure them not to fear.

### 3. Results

The maternal education level of the experimental group was classified as follows: 42.9 percent attained diploma, 42.8 achieved below diploma, and 14.2 percent achieved higher diploma. In the control group, the educational level of mothers was categorized as follows: 21.4 percent attained diploma, 57.4 percent achieved below diploma, and 21.4 percent achieved higher diploma. A major portion (92.9%) of the experimental group was composed of housewives, and 1.7 percent were employed. In the control group, a significant percentage (85.7%) of the mothers was employed, and 14.3 percent of them were workers.

Due to age-matched children with hearing loss in both groups, the gender distribution was equal. The birth order of the children in the experimental group was as follows: 35.7 percent were the first child, 50 percent second child, and 14.3 percent were the fourth child. However, in the control group, the birth order of the children was as follows: 42.9 percent were the first child, 37.5 percent second child, 14.3 percent third child, and 7.1 percent of children were the fourth child. The average age of children in the experimental group was 5.12 months and 5.35 months in the control group. The average number of children of mothers of children with hearing loss in both groups was equal.

Table 1 shows that the mean of parent-child relationship questionnaire subscales of the experimental group at post-test compared to the pre-test in the child-parent relationship subscale had not been significantly increased. This means that the experimental group has improved just in child-parent relations sub-scale after experiencing the training program. The total scoring of scales reveals an overall improvement in the mother-child relationship. No significant statistical difference had been observed.

Due to the nature of the research (both groups and variables were measured on two occasions: pretest and post-test), the most appropriate statistical test for hypothesis was

**Table 1.** Summary of subscale results in the parent-child relationship questionnaire.

| Subscales                                | Group      | Level     | Mean   | Standard Deviation |
|--|------------|-----------|--------|--------------------|
| Parental support                         | Experiment | Pre-test  | 20.14  | 1.99               |
|  |            | Post-test | 20.42  | 3.15               |
|  | Control    | Pre-test  | 20.92  | 2.52               |
|  |            | Post-test | 21.00  | 2.18               |
| Satisfaction with parenting              | Experiment | Pre-test  | 23.57  | 2.02               |
|  |            | Post-test | 23.71  | 2.49               |
|  | Control    | Pre-test  | 23.35  | 3.07               |
|  |            | Post-test | 23.14  | 2.95               |
| Involvement                              | Experiment | Pre-test  | 32.71  | 3.98               |
|  |            | Post-test | 31.64  | 2.92               |
|  | Control    | Pre-test  | 33.64  | 3.73               |
|  |            | Post-test | 33.78  | 2.44               |
| Communication                            | Experiment | Pre-test  | 22.28  | 6.88               |
|  |            | Post-test | 29.85  | 2.90               |
|  | Control    | Pre-test  | 21.28  | 4.73               |
|  |            | Post-test | 21.14  | 3.88               |
| Limit setting                            | Experiment | Pre-test  | 24.92  | 4.04               |
|  |            | Post-test | 28.42  | 6.21               |
|  | Control    | Pre-test  | 25.57  | 3.52               |
|  |            | Post-test | 25.50  | 4.12               |
| Autonomy                                 | Experiment | Pre-test  | 21.78  | 2.42               |
|  |            | Post-test | 21.25  | 6.20               |
|  | Control    | Pre-test  | 22.00  | 2.32               |
|  |            | Post-test | 21.85  | 2.24               |
| Role orientation                         | Experiment | Pre-test  | 19.85  | 3.13               |
|  |            | Post-test | 20.35  | 3.97               |
|  | Control    | Pre-test  | 20.07  | 2.89               |
|  |            | Post-test | 19.71  | 2.19               |
| Social desirability                      | Experiment | Pre-test  | 179.64 | 11.30              |
|  | Control    | Post-test | 187.71 | 18.71              |
| Total score of parent-child relationship | Experiment | Pre-test  | 180.28 | 17.11              |
|  | Control    | Post-test | 179.27 | 11.34              |

**Table 2.** Review the condition of equality of variances between groups in dependent variables using statistical Levene test.

| Variable                    | Statistics F | df 1 | df 2 | Probability Amount |
|-----------------------------|--------------|------|------|--------------------|
| Parental support            | 36.72        | 1    | 26   | <0.001             |
| Satisfaction with parenting | 9.76         | 1    | 26   | 0.004              |
| Involvement                 | 0.021        | 1    | 26   | 0.885              |
| Communication               | 0.027        | 1    | 26   | 0.872              |
| Limit setting               | 14.76        | 1    | 26   | 0.001              |
| Autonomy                    | 17.46        | 1    | 26   | 0.001              |
| Role orientation            | 4.67         | 1    | 26   | 0.040              |
| Social desirability         | 5.05         | 1    | 26   | 0.033              |

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the analysis of covariance (ANCOVA). The Levene test was necessary to satisfy the condition of equality of variances between the groups. The results are presented in [Table 2](#).

According to [Table 2](#), the condition of equality of variances is met only with regard to the variables of Involvement and Communication. So for equality of variances, parametric tests cannot be used for those variables whose condition has not been met.

Given that one of the essential conditions for the use of analysis of covariance among dependent variables Parental support, Satisfaction with parenting, Limit setting, Autonomy, Role orientation and Social Desirability is not met, the appropriate method, under the circumstances, would be to calculate the difference between the pretest and posttest score across the two groups and

comparison groups using independent t-test. The aforementioned three conditions are met for the use of this test is needed. In the following two conditions of normal distribution of data pretest-posttest differences and Equality of variances of the groups in pretest-posttest difference were evaluated.

According to the probability values reported in [Table 3](#), the dependent variables' distribution is normal. Thus, the assumption of normal distribution of continuous variables for using parametric tests is established.

According to [Table 4](#), the condition of equal variances is met. So for equality of variances variables that condition has not been met parametric tests cannot be used. According to [Tables 2 to 4](#), a parametric statistical test can be used only for the dependent variables of commu-

**Table 3.** Review the normality of pretest-posttest difference scores research dependent variables using the Kolmogorov-Smirnov statistical test.

| Variable                    | Experimental Group |       | Control Group |                    |
|-----------------------------|--------------------|-------|---------------|--------------------|
|                             | Statistics F       | df 1  | df 2          | Probability Amount |
| Parental support            | 0.754              | 0.620 | 1.17          | 0.126              |
| Satisfaction with parenting | 0.656              | 0.783 | 1.12          | 0.157              |
| Limit setting               | 0.400              | 0.997 | 1.12          | 0.156              |
| Autonomy                    | 0.389              | 0.998 | 0.862         | 0.447              |
| Role orientation            | 0.663              | 0.771 | 0.554         | 0.919              |
| Social desirability         | 0.541              | 0.931 | 1.04          | 0.229              |

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**Table 4.** Review the condition of equality between group variance in the dependent variables using statistical test Levene.

| Variable                    | Statistics F | Probability Amount |
|-----------------------------|--------------|--------------------|
| Parental support            | 43.51        | >0.001             |
| Satisfaction with parenting | 17.07        | >0.001             |
| Limit setting               | 20.51        | >0.001             |
| Autonomy                    | 19.02        | >0.001             |
| Role orientation            | 20.95        | >0.001             |
| Social desirability         | 5.76         | 0.024              |

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nication and involvement. Due to the nature of the study, covariance analysis should be used for the analysis of dependent variables. The test is given in addition needs three preconditions high linearity and uniformity and two preconditions to the slope of the regression.

#### 4. Discussion

Family plays an important role in the life of the child and the child's responsibility with respect to particular values, beliefs and accepted behaviors of culture and society. Parent-child relationship that its effect interpersonal and communication skills and behavior research have shown the healthy development of the child-parent relationship for the positive and consistent warm welcoming and there should be close support [20]. In fact, family is the first core of social readiness of children for the challenges of social, educational, professional, ethical, and economic conflicts [21].

Although all family members (such as sisters and brothers, grandparents, uncles and aunts, uncle) impact and involve in children's growth and, the role of parent-child relationship has a great and long-term impact on child development is embodied as a product for the future. Several studies have reported that when a parent-child relationship is not balanced, such that it is either too close or distant, too flexible or rigid, too serious or irresponsible, the child may be faced with a lot of problems in interpersonal or social relations, situations involving confrontations, and adjustment. According to studies mentioned in this research, the importance of child-parent relationship is obvious in families in which there are children with special needs. This relationship is affected sort of. In this study, the focus was on the child-parent relationship, especially the mother-child relationship, since more than 95 percent of hearing-impaired children are born to normal hearing parents [5].

The expectations that normal hearing parents have from hearing impaired children are often similar to that from normal hearing children, but there is no coordination between expectations of normal hearing parents, especially mothers and hearing impaired children's reaction. This issue disrupts the relationship between normal hearing mother and primary or permanent caregiver and hearing-impaired children [6]. According to the Joint Committee on Infant Hearing, primary diagnosis and early intervention are crucial to maximize language competence and educational growth of hearing-impaired children. In a two-person relationship the interaction between mother-child is less broaden, there is less time dedicated to common activities, and it seems there is less joy in it.

It is important to emphasize these studies not only show a delay in the establishment of a relationship between normal hearing mother and hearing-impaired child but also demonstrate that parent-hearing impaired child relationship patterns are far from the expected norm. Normal hearing parents of hearing-impaired children in comparison with normal hearing parents of normal hearing children are more rigid and negative. After the child is 2-years-old, the relationship between normal hearing mothers and normal hearing children deepens, but this process is reduced between normal hearing mothers and hearing-impaired children. Also, the quality of the relation will be annoying, disappointing and punishing [6].

The necessity of conducting early intervention is important, and recent findings have confirmed the same [22]. In many cases, helping families, especially mothers, with hearing-impaired children in establishing appropriate and effective relations with the hearing-impaired child is the first priority. The intervention programs are successful when the family is functioning in an appropriate manner, caregivers of the child are motivated, and they can establish a healthy relationship with the child. Considering

this need, this study training program was designed and conducted to improve the child-parent relationship.

The results of the present study indicated that the intervention program was effective in improving hearing-impaired child-parent relationships. The findings of this study are consistent with the findings of [23-25]. Their findings indicate that family and child training can reduce negative child-parent interaction, parenting stress, mothers undergoing depression, and marriage conflicts. The efficacy of the Faranak PCMG Program was proved with the help of the total parent-child score, which recorded a significant increase from pre to posttest. Yanne and Weis found that mothers who had participated in the mother Goose parent-child program could establish a positive relationship with their child by reading poems as a means to establish their relationship with the child and manage the emotions between mother and child.

Scharfe showed in a study that the mothers who participated in the Mother Goose parent-child program and were part of the experimental group showed high levels of good parenting and also tended to have a more satisfying relationship with their children [15]. Considering that one of the reasons for molestation behaviors is a negative parent-child relationship, improving this interaction could cause a reduction in problematic behaviors at home, school, and while playing with their peers.

Many programs, which are designed to improve parents' mental health, also boost parent-child relationship and reduce the probability of behavioral disorders [26-30]. These findings approve the main findings of the study, wherein a significant decrease was observed in the mean of the experimental group post test. In the subscales of Parental support, Satisfaction with parenting, Involvement, Role orientation and Social Desirability, there was no statistically significant difference in the post test. These results could be attributed to the low level of economic, cultural and educational mothers, new mothers testing program and the lack of adequate motivation, communication, such as orientation least some of the content of education scale, and low number of intervention sessions (12 sessions). The program attempted to provide participants with comprehensive communication solutions through poetry, stories, and songs such as lullabies.

With poems and stories that were presented in the meeting were able to apply them in real situations. One of the problems of hearing impaired children was to speak the word not using rhythm and the program was trying to teach poetry to mothers and to use them in real situations

to help mothers communicate enjoyable with their hearing impaired children many mothers said that because they had no information about the influence of poetry and lullabies to strengthen and improve their relationship with the hearing impaired child as a result, they do not attempt to read the poems and telling bedtime lullabies to children but when they were able to communicate effectively with poems and stories with your child maintain.

In addition to presenting songs and lullabies and stories of mothers as the opportunities that Australia was trying even considered that mothers to be provided advice on rehabilitation for hearing impaired children. The limitations of this study included small sample and limited control of confounding variables. Other studies have argued, Putting factors associated with the child elements in which the problems of children and communicate with them is emphasized in family-based interventions in reducing the burden of many families [31, 32].

The effectiveness of the program is enhanced as it is accompanied by the training of teachers, who cooperated in it the program's implementation. Intervention programs include parent education, child education, and consultation with teachers and children. These programs focus mainly on managing children's behavior and the success of your child at home and school is effective. Despite the importance of educating children, parents and teachers, there was no possibility of educating children and teachers due to time constraints. The researchers proposed to develop intervention programs at the level of families, children, and teachers elsewhere. And in programs father shall be present during the intervention.

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### Conflict of Interest

The authors declared no conflict of interests.

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