Research **P**aper



Effect of home stimulation and early intervention in preventing the developmental delays of rural children

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Received: 30.05.2012; Revised: 29.08.2012; Accepted: 17.10.2012

■ ABSTRACT : An experimental study was undertaken to assess the developmental status and impact of the intervention programme in preventing the developmental delays among rural children. 35 rural children (3 months to 36 months) from the adopted village Ambam (experimental group) and 35 children from Ranampally village (control group) of Krishi Vigyan Kendra, Rudrur, Nizamabad dist. of Andhra Pradesh were selected as part of the technical programme implementation and found that 75 per cent of the children (3 months-36 months) have developmental delays during the pre-test. Later, the mothers of the experimental group infants were given intervention and home stimulation for a period of 6 months on importance of home stimulation and various activities to be carried out by the care taker with the help of a standardized intervention module and check list. Later, after 6 months, the post-test results indicated the improvement in the child's performance and there were no developmental delays observed in the experimental group children.

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KEY WORDS : Home stimulation, Early intervention, Rural children

■ HOW TO CITE THIS PAPER : Bilquis (2012). Effect of home stimulation and early intervention in preventing the developmental delays of rural children. *Asian J. Home Sci.*, **7** (2): 351-353.

evelopment is a product of maturation and learning. Learning takes place when the learning situation is exciting, challenging and stimulating. The early years are a time of rapid physical and mental growth and set the stage for later years.

The infants motor and cognitive development can be enhanced through a stimulating environment. The right or ideal learning stimulation is created with the toys and play materials. The toys and the stimulating material are needed for infants right from birth onwards (Verma and Khadi, 2002 and Ratnakumari, 2010). The toys and play equipments are essential in acquisition of gross motor and fine motor skills. It enhances their creativity, imagination and also stimulates the language and speech development.

Development is a natural process but requires certain conducive environmental conditions for reaching its optimum level (Mayuri and Nagamani, 2001). When such conditions are not available, developmental delays and even retardation are possible. The vast majority of rural children in India live under conditions that are not conducive for normal development. When the children do not receive adequate care and stimulation, there is a possibility of the children suffering developmental delays. The parents need to have knowledge in identifying signs that will indicate the developmental delays at the earliest.

■ RESEARCH METHODS

A pre-post test experimental study was used for assessing the developmental levels of the children.

Tools:

A standardized intervention package developed by All India Coordinated Research Project- Child Development was used for giving intervention to the mothers of the experimental group children. Home stimulation kit developed by the Department of Human Development and Family studies was used to provide the home stimulation to the experimental group of children.

Sample size :

Sample comprised of 70 children of 3 months to 36 months age. Out of which 35 children formed experimental group (Ambam village) and 35 children control group (Ranampally village).

Age group	No. of experimental group children	No. of control group children
3 to 6 months	10	10
6 to 12 months	10	10
12 to 24 months	10	10
24 to 36 months	5	5
Total	35	35

Intervention :

Data regarding the children were taken from the local Anganwadi centre teacher. Individual home visits were done to interact with the mothers and children. Later, pretest assessment was conducted to both the experimental and control group children using the standardized developmental assessment schedule.

Based on the scores obtained by the experimental children, they were categorized into three groups. Intervention was given to the mothers of these experimental group children about the importance of home stimulation and its effect on the developmental outcomes of children. Mothers were given intervention on cognitive, motor, social and language developments using a standardized intervention package.

Mothers of experimental children were given series of intervention about the various activities to be performed using the low cost stimulatory play material. Mothers of experimental children participated in the intervention programme actively and extended their cooperation in regular conduct of the said activities. The intervention was given for a period of 6 months.

■ RESEARCH FINDINGS AND DISCUSSION

The scores obtained by the experimental and control children during the pre and post tests are given in Table 1.

The pre-test scores of the experimental group children

indicate that, 44 per cent of the children have developmental delays. children showed delays in balancing of neck, grasping of the objects, reaching and holding the toys, recognizing the mother, social smile, maintaining eye contact, responding when name called, standing with support, uttering two words and fine and gross motor skills. 31 per cent of the children fell in developmentally average and 25 per cent scored developmentally superior category.

The pre-test scores of the control group children indicate that, 42 per cent of the children have developmental delays and 35 per cent fell in developmentally average category and only 23 per cent scored developmentally superior (Table 1 and Fig. 1).

The post-test scores of the experimental group children indicate that, 72 per cent of the children had overcome developmental delays and reached developmentally superior level after a series of intervention and home stimulation. 28 per cent children fell under developmentally average category.

The post-test scores of the control group children indicate that, 40 per cent of the children have developmental delays and 34 per cent fell in developmentally average category and 26 per cent scored developmentally superior (Table 2 and Fig. 2).



Table 1 : Pre-test scores of experimental and control group children							
Sr. No.	Score	Category	Pre-test				
		Category	Experimental group N (%)	Control group N (%)			
1.	75% and above	Developmentally superior	9 (25%)	8 (23%)			
2.	50-75%	Developmentally average	11 (31%)	12 (35%)			
3.	Below 50%	Developmentally delayed	15 (44%)	15 (42%)			

Table 2 : Post-test scores of experimental and control group children						
Sr. No.	Score	Category	Post-test			
		Category	Experimental group N (%)	Control group N (%)		
1.	75% and above	Developmentally superior	25 (72%)	9 (26%)		
2.	50-75%	Developmentally average	10 (28%)	12 (34%)		
3.	Below 50%	Developmentally delayed	Nil	15 (40%)		

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The scores obtained by the experimental and control group children indicate that, experimental group children after receiving intervention and home stimulation, showed improvement in their scores after the intervention, whereas the control group children continued to show the developmental delays. This clearly reveals that intervention to the mothers regarding the importance of home stimulation and identification of developmental delays and low cost stimulatory play materials helped the children to overcome the developmental delays and reach the normal developmental level.

Conclusion:

Developmental delays when identified early and taken care of, give the child a valuable head start in coping with self-help skills, basic education and training for living independent life and to come as close to the normal development as possible. The study revealed that, timely intervention and home stimulation given to the mothers of developmentally delayed children helps in overcoming the delays and reaching the normal development.

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