

# Play in Orphanages

Vikas Taneja<sup>1</sup>, R.S. Beri and J.M. Puliyeel

<sup>1</sup>Department of Pediatrics, Sir Ganga Ram Hospital, New Delhi, Department of Pediatrics, St. Stephen's Hospital, Delhi, India.

**Abstract. Objectives:** This paper attempts to validate the programme of structured play lasting 90 minutes a day, for use in orphanages, to check if it can be replicated in other orphanages, with similar results. **Methods :** A 2-week workshop on the structured play scheme was conducted at the Missionaries of Charity Orphanage in Delhi, the venue of the original project. 15 MOC sisters from 6 centers attended the workshop. The authors selected the MOC orphanage at Chandigarh to track the benefits of the programme. The development quotient of all the residents between the ages of 6 months – 3 years was assessed by a pediatric-clinical-psychologist using the Development Assessment Scale for Indian Infants (DAS II) scale. A reassessment of all these children was done again 3 months after initiating the programme of structured play here. **Results:** The mean motor and mental scores at the orphanage in Chandigarh before the start of the intervention were 57.9 and 58.2 respectively. Post intervention assessments showed a rise of 23 points in both the scores. **Conclusion:** The development of children in orphanages rises dramatically after initiating a programme of play. The pre-intervention development scores is similar to that in a pilot study and the benefits after play was also similar. The play programme can be easily replicated in other orphanages with similar results. [Indian J Pediatr 2004; 71 (4) : 297-299] E-mail: puliyel@vsnl.com.

**Key words :** Play; Development; Orphanages

The authors have previously demonstrated that a short, daily session of structured play can significantly improve the development of children in an orphanage. This project called the "Not by Bread Alone Project" has been published in the UK journal *Child: Care, Health and Development*.<sup>1</sup> Having demonstrated remarkable improvement in the development of children, it was felt that this programme of structured play could be used in other orphanages as well. The present study was undertaken with the objective to see whether the results of this pilot study could be replicated in other orphanages.

## MATERIALS AND METHODS

The Missionaries of Charity center in Chandigarh was taken up as the index. This MOC center was selected, as it was relatively close to Delhi and convenient for the authors to monitor the programme. A clinical psychologist did the assessments both before and 3 months after the intervention. She used the DASII scale<sup>2</sup> (the Indian adaptation of the Bailey's Scale of Infant Development) for making the assessments. The orphanage at Chandigarh has normal as well as physically handicapped children. Play was initiated such that all the children between the ages of 6 months and 3 years were included, regardless of their handicap. As the testing instrument is not validated in handicapped

children, the pre and post intervention assessments were done in children without any physical handicap (n = 19). The programme of play which was implemented is reproduced with permission of Child: Care, Health & Development (Table 1). The play therapist from the pilot study started the play programme.<sup>1</sup> Student's t test was used to calculate the p value for the difference between the pre and post intervention mean motor and mental scores.

## RESULTS

Table 2 shows the pre and post intervention assessments of children at Missionaries of Charity orphanage in Chandigarh. 19 children were assessed for their motor and mental scores both before and 3 months after the intervention. The mean motor and mental quotients before the start of the intervention were 57.9 (SD – 16.6) and 58.2 (SD – 16.4) respectively. Post intervention assessments showed a rise of 23 points in both quotients and this rise was statistically significant (p<0001).

## DISCUSSION

The initial developmental assessments made by the clinical psychologist at Chandigarh, were similar to the pre intervention scores of the pilot study published earlier. This shows that the preintervention development quotient (DQ) in Chandigarh is as bad as preintervention DQ in Delhi suggesting that the low DQ of children in the

**Reprint requests :** Dr. J.M. Puliyeel, Department of Pediatrics, St. Stephen's Hospital, Tis Hazari, Delhi-110054.  
Fax No : 91-11-23932412

TABLE 1. Short Structured 90 Minute Play Sessions, One Each For 6-12 Months and 1-2<sup>1/2</sup> Years (Reproduced with Permission from Blackwell)

Activities	Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Cognitive Stimulation	45 minutes	Items of daily use -manipulation -reaching out for objects	Use of sound producing toys like rattles, bells, drums etc.	Manipulation of objects of different shapes and sizes	Paper play -crushing of paper -use of things made out of paper	Exposure to outside environment -plants -flowers -birds -animals	Use of sound producing toys like rattles, bells, drums etc.
Motor stimulation	45 minutes	<ul style="list-style-type: none"> <li>● Massaging</li> <li>● Helping the babies to roll over</li> <li>● Crawling</li> <li>● Making babies sit with support</li> </ul>	<ul style="list-style-type: none"> <li>● Music to be played daily</li> <li>● Singing songs, rhymes, lullaby's</li> <li>● Talking to babies during all activities</li> </ul>		<ul style="list-style-type: none"> <li>● Helping babies stand and walk with support</li> <li>● Reaching out for objects</li> <li>● Manipulation of objects</li> </ul>		
Language stimulation	Carried out throughout the 90 minutes session				<ul style="list-style-type: none"> <li>● Cuddling of babies</li> <li>● Feeding the babies with good eye to eye contact</li> <li>● Talking to babies while feeding</li> </ul>		
Cognitive Stimulation	25 minutes	Sand and water play - use of sand pit and water pool	Group games like football, cricket, making of train etc.	Paper play - folding of paper - crushing - making of paper puppets and balls.	Use of clay - making of different shapes - manipulation	Exposure to outside environment -plants, trees -flowers -birds -animals	Use of colors - hand printing - coloring of paper and different objects
Motor stimulation	25 minutes	<ul style="list-style-type: none"> <li>● Helping the children stand and walk without support</li> <li>● Running</li> <li>● Jumping</li> </ul>			<ul style="list-style-type: none"> <li>● Climbing stairs</li> <li>● Activities on swings, slides, see-saws</li> <li>● Use of pull-along toys</li> </ul>		
Break	15 minutes	<ul style="list-style-type: none"> <li>● Encourage feeding with own hands</li> <li>● Drinking from glasses instead of bottles</li> </ul>			<ul style="list-style-type: none"> <li>● Group activities like dancing</li> </ul>		
Use of Play Area	40 minutes	Children to be divided in different sub-sections by rotation during the session	<ul style="list-style-type: none"> <li>● Manipulative Area</li> <li>● Kitchen Area</li> <li>● Names and use of different objects</li> <li>● Dressing Area</li> <li>● Names and use of different objects</li> <li>● Music Area</li> </ul>	<ul style="list-style-type: none"> <li>● Manipulation of blocks of all shapes and sizes</li> <li>● Names and use of different objects</li> <li>● Dressing Area</li> <li>● Names and use of different objects</li> <li>● Music Area</li> </ul>	<ul style="list-style-type: none"> <li>● Use of peg boards, form boards, shape trays etc.</li> <li>● Dressing in front of the mirror</li> </ul>		
Language stimulation	Throughout the 90 minutes session	<ul style="list-style-type: none"> <li>● Playing of drums, bells, ghungroos, xylophone, whistles etc.</li> <li>● Children to be constantly talked to</li> <li>● Brief and clear instructions for all activities</li> <li>● Identification of different pictures and objects</li> </ul>			<ul style="list-style-type: none"> <li>● Repetitions as many times as possible</li> <li>● Music to be played daily</li> <li>● Singing songs, rhymes, lullaby's</li> </ul>		

6-12 Months

Outdoor Session

1-2<sup>1/2</sup> Years

Indoor Session

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TABLE 2. Comparisons of Mean Motor and Mental Quotients in Children with Both Pre and Post Intervention Results

Variable	(n)	Mean Motor quotient (Standard deviation)	Mean Mental quotient (Standard deviation)
Pre-intervention	19	57.9 (16.6)	58.2 (16.4)
Post-intervention	19	81.2 (12.6)	81.3 (11.4)
Difference		23.3	23.1
p-value		< 0.0001	< 0.0001

Delhi orphanage is not an isolated phenomenon. Thus in the absence of play, the mean developmental score of children in orphanages is around 60. This is also the finding of others.<sup>3,4</sup>

The sharp rise in the mean motor and mental scores over the first three months was similar to the rise seen in the pilot study. This shows that the results of the pilot study were the direct result of the play programme and not due to other extraneous factors. Other researchers have also found that early stimulation of infants and children can boost their development.<sup>5,6,7</sup> The experience at Chandigarh shows that the project can be easily duplicated in other centers.

In this study the clinical psychologist who did the assessments was not involved with the play programme, so as to avoid errors due to observer bias. The remarkable similarity with the scores seen in the pilot study (which development scoring was done by a pediatrician who was not blinded to the intervention), is a reflection of the versatility of the assessment instrument being used. It also suggests that this is an objective assessment of children in the orphanage

### CONCLUSION

The schedule of the "Not by Bread Alone Project" can accelerate the motor and mental development of children

in orphanages. In the absence of a programme to stimulate children they tend to have a developmental score around 60. The structured play schedule, can improve these scores to near 90 over 3 months. The "Not by Bread Alone" project can be easily duplicated in other orphanages with the same benefits.

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