



Effect of intervention programme on psychological abilities of poor children

■ S. Kaushal*, C.K. Singh and R. Malaviya¹

Department of Human Development and Family Studies, C.C.S. Haryana Agricultural University, HISAR (HARYANA) INDIA

¹Department of Education, Lady Irwin College, NEW DELHI (INDIA)

(Email: skaushal53@gmail.com)

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*Author for correspondence

ABSTRACT

This investigation was undertaken to examine psychological abilities of poor children of rural Haryana and to assess effect of intervention programme on psychological abilities of low performer children. To achieve the objectives of the study, 400 children in the age group of 6-8 years belonged to lower income group were selected randomly from Hisar and Ambala districts of Haryana state. McCarthy scales of children's abilities scale developed by McCarthy (1972) was used to measure psychological abilities of the children. Based on pre-testing, intervention programme was developed and implemented on thirty per cent low performer underprivileged children. It was found that deprived children performed poor in verbal, perception, quantitative, memory and motor aspect of cognitive skills. Results revealed that children of Ambala district performed slightly better than children of Hisar district. Further, results shown that there were significant differences in verbal, perception, quantitative, memory, motor and general cognition of experimental group children after execution of intervention programme.

INTRODUCTION

The first eight years of life are important for psychosocial development as children engage much more regularly with the world outside of their families, with their teachers, peers and other adults. Evidence is growing that childhood years have long-lasting effects and are critical to human development. Children who are healthy, stimulated and well-nurtured during this period tend to do better in school and have a better chance of developing skills required to contribute to social and economic development (ADB, 2006). But many children younger than eight years in developing countries are exposed to multiple risks, including poverty, malnutrition, poor

health and non-stimulating home environments, which detrimentally affect their cognitive, motor and social emotional development.

Psychological abilities involve all mental functions and behaviours of human beings. Psychologists explore concepts such as perception, cognition, attention, emotion, phenomenology, motivation, brain functioning, personality, behaviour and interpersonal relationships. All these mental functions and behaviours are influenced by individual's surroundings. For present study, the following abilities were involved, *viz.*, verbal ability, perception performance, quantitative, memory, motor and general cognition. Many studies have documented that stimulatory intervention programme could be recovered

psychosocial development of disadvantaged children. Intervention is defined as a super-ordinate concept for the different intentional steps taken to change persons, events or environment in desired direction (Granlund and Bjeorck, 2005). Jaya and Ratna (1992) focused on the effect of stimulation programme on mental development of children and found that although the performance of both experimental and control groups were same at pre-testing but due to exposure of stimulation programme experimental children's rate of improvement in mental age was higher than control group.

This is an ex-post facto research aimed to investigate the psychological abilities of poor children *i.e.* verbal ability, perception performance, quantitative, memory, motor and general cognition. Experimental approach has also been adopted for this study to control over the research environment and intervention was given to observe its effect on dependent variables.

MATERIAL AND METHODS

This study was carried out purposively in Haryana state. Out of five cultural zones of Haryana state, two zones Nardak and Bagar were selected randomly. Ambala district from Nardak and Hisar district from Bagar zone were selected randomly for data collection. Eight villages were selected randomly from two zones of Haryana state (four villages from each district), *i.e.*, Shahpur, Ludas, Haricot and Kamri villages of Hisar district and Sultanpur, Karsan, Pathredi and Akbarpur of Ambala district for the research. Children in the age range of 6-8 years were selected. From each village, 50 children (25 male and 25 female) were selected randomly. Finally 400 children were taken from rural area of Haryana. McCarthy scales of children's abilities scale (McCarthy, 1972) was used which reflect real and meaningful performance in domains of cognitive and motor ability of children. Raw scores were used for statistical analysis

(frequency, mean, standard deviation and ANOVA) of data. The children of eight villages were arranged in descending order against their performance on different aspects of development. Sixty low performers, fifteen each from four villages, *i.e.*, Harikot and Kamri (Bagar) and Sultanpur and Asgarpur villages (Nardak) were act as experimental group and sixty low performers from other four villages of same zones were act as control group. Based on obtained data, an intervention programme was developed to enhance psychological abilities of low performers. The intervention programme included different activities for the improvement of psychological abilities of slow performers of a particular age group.

OBSERVATIONS AND ANALYSIS

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

Comparison of children's psychological abilities against area :

Table 1 elucidates comparison of different psychological abilities of Hisar and Ambala districts children. It is appeared that children of Hisar and Ambala districts differed significantly in verbal ability ($z=1.99$) at 0.05 level of significance. Mean score disclosed that children of Ambala district ($M=29.23$) had better verbal ability as compared to children of Hisar district ($M=27.81$). There were non-significant differences in perception, quantitative, memory, motor and general cognition of the children from Hisar and Ambala districts.

Further, the mean scores determined that the children of Ambala district gained slightly more mean scores in all psychological abilities, *i.e.*, verbal ($M=29.23$), perception ($M=29.89$), quantitative ($M=31.76$), memory ($M=27.51$), motor ($M=33.17$) and

Table 1: Comparison of psychological abilities against area			(n= 400)
Psychological abilities	Hisar Mean±SD	Ambala Mean±SD	Z-test
Verbal	27.81±6.58	29.23±7.67	1.99*
Perception	29.54±7.51	29.89±9.61	0.41
Quantitative	32.0±8.06	31.76±8.41	0.28
Memory	26.57±4.99	27.51±6.43	1.62
Motor	32.31±9.03	33.17±11.41	0.84
General cognition	61.70±11.95	63.57±13.07	1.49

* Means differ significantly within the row at 5% level of significance

general cognition (M=63.57) as compared to children of Hisar district (M=27.81 for verbal ability, M=29.54 for perceptual ability, M=32 for quantitative, M=26.57 for memory, M=32.31 for motor and M=61.70 for general cognition, respectively).

Concluding the result it can be interpreted that locality wise, children of Ambala district performed slightly better than children of Hisar district.

Impact of intervention programme on psychological abilities of experimental groups children :

Table 2 portrays pre and post-testing comparison of psychological abilities of experimental and control group children. Significant differences were observed in psychological abilities (verbal $t=10.39$, perception $t=9.89$, quantitative $t=10.55$, memory $t=7.96$, motor $t=11.17$ and general cognition $t=10.78$) of experimental group children after exposure to intervention programme at 5% level of significance. Mean scores of experimental group for their psychological abilities at pre-testing stage were for verbal M=22.93, perception M=23.58, quantitative M=25.30, memory M=22.27, motor M=24.07, general cognition M=50.70 and after implementation of intervention programme, it increased M=27.70, 29.40, 34.92, 26.72, 35.98 and 60.98, respectively.

Surprisingly, significant differences were also explored in verbal ($t=2.16$), perception ($t=2.99$), quantitative ($t=2.24$), motor ($t=2.78$) and general

cognition ($t=3.40$) of control group children at 5% level of significance. Mean scores of psychological abilities during pre-testing stage were for verbal M=22.03, perception M=22.33, quantitative M=24.47, memory M=22.33, motor M=24.38, general cognition M=50.13 and at post testing stage, little mean differences were recorded for verbal (M=22.87), perception (M=22.98), quantitative (M=25.15), memory (M=22.50), motor (M=25.30) and general cognition (M=51.80).

From above results, it is concluded that significant improvement could be seen in verbal, perception, quantitative, memory, motor and general cognition of underprivileged children through intervention programme. Due to maturation, replication of same scale for post-testing and other extraneous factors, significant improvement had also seen in control group children for verbal, perception, quantitative, motor and general cognition.

Per cent gain in psychosocial development of experimental group children :

Table 3 highlights net and per cent gain in psychosocial development of underprivileged children. In psychological abilities, children net gain for verbal ability was 3.93 (17.14%), perception ability 5.17 (21.92%), quantitative 8.94 (35.33%), memory 4.28 (19.22%), motor 10.93 (45.41%) and general cognition 8.16 (16.09%), respectively.

Psychologists explore concepts such as perception,

Table 2: Impact of intervention programme on psychological abilities of experimental group				(n= 120)
Psychological abilities	Pre-testing	Post-testing	Mean difference	Paired 't' value
	Mean±SD	Mean±SD		
Experimental group (n= 60)				
Verbal	22.93±2.65	27.70±3.75	4.77	10.39*
Perception	23.58±3.78	29.40±5.45	5.82	9.89*
Quantitative	25.30±5.02	34.92±5.08	9.62	10.55*
Memory	22.27±2.67	26.72±4.45	4.45	7.96*
Motor	24.07±4.97	35.98±7.85	11.91	11.17*
General cognition	50.70±4.00	60.98±7.49	10.28	10.78*
Control group (n= 60)				
Verbal	22.03±2.23	22.87±2.24	0.84	2.16*
Perception	22.33±2.73	22.98±2.41	0.65	2.99*
Quantitative	24.47±4.42	25.15±3.79	0.68	2.24*
Memory	22.33±2.95	22.50±2.19	0.17	1.08
Motor	24.38±4.92	25.30±4.03	0.98	2.78*
General cognition	50.13±3.19	51.80±2.14	1.67	3.40*

* indicates significance of value at P=0.05

cognition, attention, emotion, phenomenology, motivation, brain functioning, personality, behaviour and interpersonal relationships. All these mental functions and behaviours are influenced by individual's surroundings. Results showed that children of Ambala district were performed slightly better in verbal, perception, quantitative, memory, motor and general cognition as compared to children of Hisar districts. Multicultural locality of Ambala district and better exposure to the children at schools by teachers made these children better than children of Hisar district. Singh *et al.* (2010) indicated that children of urban areas surpassed children from slums and rural areas and boys from three locations exceeded than girls in mental abilities. Results obtained from present research revealed that significant mean differences observed in verbal, perception, quantitative, memory, motor and general cognition between pre and post-testing stage of experimental group children after execution of intervention programme. Regarding control group, although significant differences were found in verbal, perception, quantitative, motor and general cognition but minor mean differences had noticed as compared to experimental group. This gain might be due to maturation, replication of same scale for pre and post-testing or due to some extraneous factors that could not be controlled. The results corroborates with the study of Malik *et al.* (2005). They concluded that experimental group children gain was significantly higher than the control group on cognitive development scores after the intervention period. Kavita (2008) also reported similar findings that significant differences existed in intellectual abilities of the children after implementation of intervention programme. Lifter and Torney (1995) explored impact of early language intervention programme on development of children's language, cognition, emotion and social interaction. After

intervention, they found that experimental group performed better than the control group. Apache (2005) also reported that significant improvements observed in both locomotor and object control skills of children through activity based intervention as compared to direct instruction. Bharadwaj (2000) found significant improvement in the mean scores of low performers after implementation of intervention on their motor abilities. These results are also in agreement with the results of Folio and Fewell (2002). They explored a positive change in rate of development of motor skills after intervention. Saini and Sangwan (2010) also reported that experimental group children performed better in all cognitive activities, *viz.*, verbal, perceptual performance, quantitative, memory and general cognition during post-testing stage after exposure to intervention package. Navkiran and Shangwan (2011) supported that after intervention, significant differences were found in pre and post-testing mean score of experimental group children in perception, attention, short term memory and long term memory of slow learner.

Conclusion:

At last, from the findings of the present study discussed in the light of literature, it can be concluded that despite of many progressive policies and programmes executed by government, the translation of these policies into reality at grass root level has not been carried out. Majority of disadvantaged families had given non-stimulation environment to their children. Not surprisingly, being raised in poverty has been linked with unfavorable verbal, perception, quantitative, memory, motor, cognitive and behaviour outcomes. To make deprived children competent, intervention programme had been planned and applied on sixty low performers. After exposure to intervention programme, the deprived

Table 3: Per cent gain in psychosocial development of experimental group				(n= 120)	
Psychosocial abilities	Mean difference of experimental group (n= 60)	Mean difference of control group (n= 60)	Net gain	Per cent gain	
Psychological abilities					
Verbal	4.77	0.84	3.93	17.14	
Perception	5.82	0.65	5.17	21.92	
Quantitative	9.62	0.68	8.94	35.33	
Memory	4.45	0.17	4.28	19.22	
Motor	11.91	0.98	10.93	45.41	
General cognition	10.28	1.67	8.61	16.09	

children benefited in verbal, perception, quantitative, memory, motor and general cognition areas. Thus, it could be said that activities planned for intervention programme was efficient and effective to enhance psychosocial development of deprived children. The present study adds the knowledge that through proper stimulatory programme, development of deprived children could be reimbursed. Therefore, this intervention package can be used by parents and teachers to enhance psychosocial development of children.

REFERENCES

- ADB (2006). Technical assistance to Kyrgyz republic for preparing the second community- based early childhood development project. Asian Development Bank.
- Apache, R.R. (2005). Activity-based intervention in motor skill development. *Perceptual Motor Skills*, **100**(3): 1011-1020.
- Bharadwaj, G. (2000). The impact of comprehensive intervention programme on motor and mental development of rural male infants in district Kangra of Himachal Pradesh. M.Sc. Thesis, HPKV, Palampur, Himachal Pradesh, India.
- Folio, R.M. and Fewell, R.R. (2002). *Peabody Developmental Motor Scales* (PDMS-2). Austin, TX, Pro-Ed.
- Granlund, M. and Bjerck, A.E. (2005). Participation and general competence do type and degree of disability really matter? In: *Change, Resistance and Reflection: Current Nordic Disability Research* (Eds. Traustadottior, R., Gustavsson, A., Tossebro, J. and Sandvin, J.T.). Lund, Sweden, pp. 227-294.
- Jaya, K.S. and Ratna, K.S. (1992). The effect of home stimulation programme on mental developmental of toddlers (12-18 months) of slums of Hyderabad city. *Indian Psychological Review*, **38**(4&5): 30-34.
- Kavita (2008). Promoting intellectual and social abilities of low performers: interplay of heredity and environment. Ph.D. Thesis, C.C.S. Haryana Agricultural University, Hisar (Haryana) India.
- Lifter, M. and Torney, K. (1995). Strategies that make sense. *J. Early Intervention*, **19**(2): 106-107.
- Malik, S., Balda, S. and Punia, S. (2005). Promoting social competence of 6-8 years old socially incompetence girls. *J. Soc. Sci.*, **10**(3): 233-236.
- McCarthy, D. (1972). *McCarthy Scales of Children's Abilities*. New York : The Psychological Corporation.
- Navkiran and Shangwan, S. (2011). Effect of intervention training on information processing skills of slow learner. *Psycho-Lingua*, **41**(1): 56-59.
- Saini, P. and Sangwan, S. (2010). Impact of cognitive package on pre-school slow learners. *Psycho-Lingua*, **40**(1&2): 130-132.
- Singh, C.K., Dhanda, B. and Shanwal, P. (2010). Gender difference in motor and mental development in children: an impact of stimulating activities. *Anthropologist*, **12**(2):153-154.

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