ORIGINAL ARTICLE

The effect of pre-school education on social maturity of elementary students

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Abstract

Objective: To determine the effect of pre-school experience on social maturity of first grade elementary children in Iran.

Methods: The descriptive cross-sectional study was conducted in Kermanshah, Iran, during 2006-7. Using random sampling, 62 elementary school children were selected for the study. The students were assessed on the Social Maturity Scale comprising 117 questions that measured social maturity using 8 sub-scales. The face validity of the questionnaire was tested using a panel of experts from the Department of Psychology, Kermanshah Medical University. After reviewing the instrument, appropriate adjustments were made to the questionnaire. Reliability test involved pilot study among 20 children outside the study population. Cronbach's alpha coefficient was used to test for the 8 sub-scales. SPSS 14 was used for statistical analysis.

Results: Of the 62 children, 31 (50%) had been to pre-school. Compared to the other set of 31 (50%), those with pre-schooling developed more social maturity, scoring 70-72 on the social maturity scale while the others scored 69-71 ($p<0.042$). Result of this study has implications for families and elementary school officials.

Conclusion: The difference between those with pre-schooling and those without it was significant, but not so highly significant as to recommend making it mandatory.

Keywords: Social maturity, Pre-school, Elementary children, Cross-sectional. (JPMA 63: 980; 2013)

Introduction

Early childhood education has been theorised as a tool for social change to combat the evils of ignorance and poverty for the creation of a better future for children. Early childcare and pre-school policies have become an important focus of the government's strategy for improving the well-being of children either through the enabling effect that childcare has on allowing parents to work, or through other more direct effects of early education on children. In Iran, the history of early childhood education goes back 80 years when the first kindergarten (KG) was established for the children of the wealthy. At present, the field of education in Iran is becoming increasingly attuned to the importance of pre-school programmes. Educators in the Western culture believe that such programmes facilitate children's academic and social adjustments, while contributing to their acquisition of skills and knowledge associated with academic success.[1-3] Nevertheless, most of the studies initiated by Iranian scholars exclusively focus on children's academic learning with less attention to social maturity.

An analysis of earlier studies suggests that results vary as a function of the developmental domain being evaluated and as a function of the number of years between children's attending the programme and the time of evaluation (short, medium, or long-term evaluation). Thus, the results of studies targeting overall development are contradictory in the conclusions. Some studies have found positive short-term effects, while others have not. Moreover, some studies report effects only at mid-term evaluations.[4]

In terms of cognitive development, studies indicate that there are significant increases in children's intelligence quotients, but that these diminish and even disappear with time.[4] The studies exploring the effects of pre-school programme on academic learning and psychosocial development are more conclusive; showing positive effects. In terms of academic learning, however, the results vary as a function of variables such as socioeconomic status and belonging to a racial or visible minority. The studies exploring the effects of pre-school programme on motor development indicate no significant effects. The evidence from these studies has consistently pointed to short-term cognitive improvement as well as long-term gains in terms of academic achievement, reduction in special education placement, employment, earnings and crime.[5] In addition, parents were positively affected as well, with benefits being reported in terms of maternal employment and increased parental involvement in their child's school.[6] Finally, few studies have explored the effects of

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pre-school programme on children's social maturity.

While the developers of pre-school programme are primarily concerned with children's cognitive development, parents, teachers, and educators are interested in children's socio-emotional development.[7] According to relevant literature in the West, attending a pre-school programme positively influences children's socio-emotional development. For example, in an experimental design, children who had attended the pre-school programme displayed better psychosocial adjustments than the control group.[8,9] In another non-experimental study, children who were cared for outside of the home were more socially competent and better able to understand the feelings of others than the control group.[10,11] Moreover, children from higher-income families who attended a pre-school programme showed more social competence than children who did not attend such a programme.[12]

Independence, sociability, low levels of aggressiveness have also been reported as a result of pre-school programmes. Other studies have also concluded that attending a pre-school programme promotes children's psychosocial development.[13] However, studies have[14,15] found that pre-school programmes do not have a significant effect on children's psychosocial development. To address these contradictory results, the current study sought to investigate social maturity among children with pre-school background and those without it. Therefore, this study hypothesised that pre-schooling can enhance social maturity among pre-schoolers. Moreover, it also hypothesised that there would be no significant difference on social maturity across gender.

Subjects and Methods

As part of dissertation in medical school, and an agreement with the Organisation of Education and Training, the study used causal comparative design. Two groups of first-grade children were compared in terms of social maturity. In order to minimise biases in the study, we used data from a sample across three districts in Kermanshah province during 2006-7. To further minimise research bias, all teachers and parents were equally trained to fill the questionnaire. The research instrument included Social Maturity Scale developed by Vineland and later standardised by Edgar Doll.[16] The instrument comprised 117 questions that measured social maturity using 8 sub-scales. As recommended by the scale, children's social age was determined by real age multiplied by social intelligence quotient (IQ). Face validity of the questionnaire was tested by a panel of experts from the Department of Psychology, Kermanshah Medical University. After reviewing the instrument, appropriate adjustments were made to the questionnaire. Reliability test was conducted through a pilot study among 20 children outside the study population. Cronbach's alpha coefficient was used to test for the 8 sub-scales. The overall reliability coefficient was 0.78, indicating a reliable instrument. Data was collected by contacting students, parents and their teachers, discussing the objectives of the study. After debriefing school teachers and the parents, all 62 questionnaires were handed over to them and they were asked to get them completed with the help of a researcher. After two weeks, a follow-up telephone call resulted in 100% response rate. Data was analysed using SPSS version 14.

Results

In the sample, 31 (50%) had attended pre-school and the remaining 31 (50%) had no such experience. Among those who attended pre-school, 20 (64.51%) were girls and 11 (35.5%) were boys. In the other group, 21 (67.74%) were girls and the remaining 10 (32.25%) were boys. The majority of those who attended pre-school were the third child (n=24; 77.41%) in the family, while and 7 (22.58%) were the fourth child. Among those who did not attend pre-school, 26 (83.87%) were the third child in the family, and the remaining 5 (16.12%) were the fourth child. With regard to parents' education, both fathers and mothers had elementary education across the pre-schoolers and non-pre-schoolers. Concerning parents' type of job, both groups had fathers owning their own businesses. However, their mothers were homemakers. Children with pre-school experience scored 70-72 on the social maturity scale, while children without pre-school experience scored 69-71. Furthermore, children's age, the average of which was 5.83±1.51 years was converted to a social age with pre-school experience was 8-8.50, while in the other

Table-1: Mean comparison of social maturity between children with and without preschool experience.

Factor	Independent variable		Mean	Range	Mann-Whitney U test	P-value
	With preschool[1] (n=31)	Without preschool[2] (n=31)				
Social maturity	70-72	69-71	70±0.707	1	505.000	0.042*
Social age equivalent	8-8.50	7.80-8.30	12.13±5.55	7.85		

[1,2]Chronological age= 7.30. *p <0.05.

Table-2: Mean comparison between social maturity and demographic variables.

Social maturity	Gender		Fathers' education	Mothers' education	Fathers' occupation	Mothers' occupation	Rank of birth	Mean rank	range	Mann-Whitney	P-value U test
	Male	Female									
With pre- school	71.2±1.4	70.7±1.8	70.4±1.5	71.02±1.67	71.02±1.72	70.9±1.6	70.65±1.65	70.84±0.27	0.8	618.5	0.502
Without pre-school	69.2±2.3	70.2±1.7	69.84±1.87	70.2±1.8	69.86±1.7	69.95±04	69.1±1.65	69.76±0.44	1.1	621.31	0.201

group it was 7.80-8.30 (Table-1). The difference was significant ($p<0.042$).

Demographic variables indicated that there was no significant difference between them and the social maturity score (Table-2).

Discussion

Pre-schooling in general enhances social maturity among first-grade children. Because of the opportunities which pre-schools offer to children, it has long been assumed that pre-school experience enhances children's social development. Literature review shows conflicting results. The large and productive body of research has demonstrated that the social information processing explains meaningful differences in the behaviours of pre-school children.[17-20] A limited number of studies have found conflicting results. For example, some researchers have found that although short and medium term benefits of early education or pre-school programmes seem to be compelling, findings on long term benefits are mixed.[21] The apparent conflict is to some extent related to experimental design problems; the diversity of the social development measures that have been used in the various studies; and perhaps other measurement errors. Moreover, it is very difficult to make generalisations about the result of the current study. This is due to the fact that small number of first-grade students participated in this study. Although a large number of people were approached for the study, only a limited number of parents agreed to participate. However, many studies have found socio-demographic factors to be predictive of behavioural maladjustment in school. Lower income and low maternal education were found to predict lower levels of social competence in pre-school.[14,15] Perhaps further research is needed to replicate this study in some other context to make any generalisations.

Overall, the study has implications for elementary school policymakers in Kermanshah province. First, pre-school experiences can be used as a tool to screen children with several behavioural learning disorders. For example, children with attention deficit issues, those having separation anxiety, school phobia, children with borderline IQ, and learning disabilities can be recognised and treated. Second, an on-site child psychologist would play an effective role in preventing such disorders. Parents can also be informed by school psychologist about the possible appearance of any symptoms in time to provide emotional or psycho-behavioural therapy for their children.

Conclusion

The difference between pre-schoolers and non-pre-schoolers in terms of social maturity score is not so highly significant as to suggest mandatory pre-school for all. Larger studies in different geographical locations are required to generalise the results of the current study over the wider population.

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