

Mother's Education and Students' Multiple Intelligences

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Abstract *The main objective of the study was to find out the relationship between mother's education and students' multiple intelligences. Pearson Coefficient Correlation was used to find out the relationship between mother's education and students' multiple intelligences. A significant correlation was found between mother's education and students' verbal/linguistic, logical/mathematical and musical intelligence. An insignificant correlation was found between mother's education and students' visual/spatial, bodily/kinesthetic, interpersonal, intrapersonal and naturalistic intelligence. It was recommended that children should be provided various opportunities so they may enhance their different types of intelligence.*

Keywords: *Verbal/linguistic; logical/mathematical and musical; visual/spatial, bodily/kinesthetic, interpersonal, intrapersonal, naturalistic intelligence.*

1. Introduction

Educationists are agree on the statement that mother's lap is the first school of learning. A child has got a very worm contact with her mother. Due to this strong and lasting contact a mother's behavior, her socialization, her language, and her education exercises a very deep influence on a child personality. As a result a child cognitive abilities and intelligences are directly affected. In a population based study of eastern Finnish men, using data on their parents socioeconomic position, their own educational level and performance on cognitive function tests, it was found that mothers education and father's occupation made a significant, independent contribution to their sons cognitive function. After adjusting for their own educational attainment, only mother's education level remained significant implying that the activities and roles engaged in by mothers during the childhood of these men played an important role in the cognitive development of their offspring that endured well into the fifth and sixth decade (Kaplan, Turrell, Lynch, Everson, Helkela, and Salonen et al, 2001). In an Indian study Sidhu, Malhi and Jerath (2008) demonstrated that children of mothers with 8 or more years of schooling had significantly higher IQ ($M = 107.57$) than children of mothers with less than 8 years of schooling ($M = 96.58$), hence suggesting that maternal level of education as a surrogate for maternal IQ and influences the cognitive development of the child. The authors argued that probably better educated mothers create an enriched home environment, seek out structured learning opportunities for their children and enhance their child's cognitive and academic success. Davis-Kean (2005) demonstrated that the relation of parents' educational achievement to children's academic achievement is indirectly related through parents educational expectations and specific parenting behaviours. Parents with higher level of education are likely to value education more and have higher expectations of their children's achievement than other parents. They shape the children's home learning environments and thereby foster their academic interests, beliefs and skills. Although enough evidence is available documenting the importance of education of parents and income on the growing child's cognitive development, there is hardly any study from India which has examined this impact. Moreover, most studies have assessed the role of mother's education and either not controlled for father's education or ignored it completely. It is important to recognize that since income and education are so closely related as is the education level of

mothers' and fathers', separating their effect is difficult and is possible only in studies with large sample sizes. Keeping this in view, the present study attempts to examine the moderating effect of parental education status on the intelligence of school going children from low income groups.

Gardner (1983) extended the idea of intelligence and took into account areas such as spatial relations, interpersonal knowledge and music besides mathematical and linguistic ability. Intelligence is "the ability to tackle problems successfully or to approach the products that are acceptable and esteemed in one or more cultures" (Gardner and Hatch, 1989). Undertaking genetic and social research, he formed a list of eight intelligences. This novel idea regarding intelligence is very much different from the conventional concept, which normally considers just two intelligences, linguistics and mathematical.

Though the multiple intelligences are separate by physical structure from one another, Gardner asserts that the intelligences seldom function autonomously. These intelligences are used concomitantly and generally assist each other when a person improve skills, resolve or tackle problems. For instance, a dance performer can do well if:

- He has a pretty high level of musical intelligence to know rise and fall of the sound, the rhythm and various beats of the music.
- He possesses interpersonal intelligence in order to understand to enthuse or stimulate his spectators by his actions also.
- He possesses bodily-kinesthetic intelligence in order to give him energy and to use different parts of his body skillfully and abruptly.

Gardner (1993:3-11) put forward a new and creative idea of the human intelligence. This new idea for evaluating human intelligence is antithetical to the long established concept of human intelligence evaluated by IQ tests.

Multiple Intelligence Theory argues that every individual is able enough to learn about the universe in which he lives. This theory gives a new interpretation of intelligence. Before the appearance of this theory no scientific definition of intelligence was given. Although people discussed intelligence so often and grouped people in the category of dull or bright on the basis of their degree of intelligence. (Gardner, 1993).

Gardner interpretation is altogether different. According to him, intelligence is a problem solving ability or to create such products which are of importance in one culture or many cultural settings (Cahill, 1999). Furthermore, Gardner (1999:34) modified his explanation of intelligence after some time deliberately and said that a society or culture plays a significant effect on intelligence; he defines that intelligence is a bio-psychological processing of information. Gardner (1999) stresses on the cultural impact on human intellect. An individual takes inspiration from his/her surroundings. Therefore, some of the intelligences are promoted and others are not in the same person. The notion of the ideal human being varies from society to society. Greeks notion of a great man was that of a person having extra physical strength, mental soundness, and virtue; the Roman valued courage regarding personality (Gardner, 1999).

The unfavorable effects of environmental deprivation and positive favourable affects of environmental enrichment upon the children's cognitive development have been noted in many studies. In a study, Gottfried (1984) concluded that if the children are subjected to certain forms of environmental discouragement earlier in life, their intellectual development gets adversely affected.

Gardner identified eight different intelligences. The eight intelligences are as listed below:

Verbal/linguistic intelligence: The ability to use word most effectively either orally or in writing.

Logical/ mathematical Intelligence: The capacity to use numbers effectively and reason well.

Spatial intelligence: The capacity to understand the visual-spatial world accurately and perform transformations on those perceptions.

Musical Intelligence: The ability to “perceive, discriminate, transform, and express musical forms.”

Bodily-Kinesthetic Intelligence: Expertise in using one’s whole body to express ideas and feelings and facility in using one’s hand to produce or transform things.

Interpersonal Intelligence: The capacity to “perceive and make distinctions in the moods, intentions, motivations, and feelings of other people.”

Intrapersonal Intelligence: “Self-knowledge and the ability to act adaptively on the basis of that knowledge.”

Naturalist Intelligence: “Expertise in the recognition and classification of the numerous specials—the flora and fauna—of an individuals environment. (Armstrong 1999).

2. Statement of the Problem

The problem understudy was to find out the relationship between mother’s education and students’ multiple intelligences (verbal/linguistic, logical/mathematical, visual/spatial, musical, bodily/kinesthetic, interpersonal, intrapersonal and natural).

3. Objectives of the Study

1. Relationship between mother’s education and students’ multiple intelligences.
2. To give recommendations and suggestions in the light of the findings of the study.

4. Research Question

1. Is there any relationship between mother’s education and students’ multiple intelligences.

5. Research Methodology

The following research methodology was adopted.

5.1 Population

Students enrolled in 1st year, in all Government, Degree, Colleges, session 2010, in district Bannu constituted population of the study.

5.2. Sample

Eight Government Degree Colleges four from urban and four from rural were randomly selected through basket random techniques. Keeping in view the strength of the students in sample schools using convenient sample method 382 students from urban and 332 students from rural altogether 714 were selected as total sample of the study.

5.3. Instrumentation

Multiple intelligence inventory based on Howard Gardner multiple intelligences theory, developed by Armstrong (1994) was used to measure students multiple intelligences. This inventory contains 40 items five statement for measuring each intelligence.

This inventory was translated in Urdu with the help of English and Urdu expert in order to make it easier and understandable to the students in local environment.

For the validity and reliability and to remove language ambiguity the multiple intelligence inventory was personally distributed among 50 subjects as a pilot run. The subjects were part of

the population but were not included in the selected sample of the study. Data was analyzed through SPSS–16. The reliability of forty items at Cronbach’s alpha obtained was .784 which is quite reasonable.

6. Data Analysis

The collected data was entered in SPSS-16 and was analyzed using appropriate statistical tests. The central tendency and variability of the multiple intelligences of the sampled students was measured using Mean and SD respectively. Pearson Coefficient of Correlation was used to find the relationship between mother’s education and students’ multiple intelligences.

Table 1. *Correlation between mother’s education and students’ multiple intelligences*

S.NO	Variables	r	P
1	Verbal/linguistic	.18	.00
2	Logical/mathematical	.12	.00
3	Visual/spatial	.06	.07
4	Musical	.11	.00
5	Bodily/kinesthetic	.01	.68
6	Interpersonal	.09	.01
7	Intrapersonal	.07	.04
8	Naturalistic	.01	.74

7. Findings of the Study

Table 1 shows that the correlation coefficient between mother’s education and student’s verbal/linguistic intelligence is .18 with a P value .00 which means that there is a significant correlation between mother’s education and students’ verbal/linguistic intelligence.

The correlation coefficient between mother’s education and student’s logical/mathematical intelligence is .12 with a P value .00 which means that there is a significant correlation between mother’s education and students’ verbal/linguistic intelligence.

The correlation coefficient between mother’s education and student’s visual/spatial intelligence is .06 with a P value .07 which means that there is a insignificant correlation between mother’s education and students’ visual/spatial intelligence.

The correlation coefficient between mother’s education and student’s musical intelligence is .11 with a P value .00 which means that there is a significant correlation between mother’s education and students’ musical intelligence.

The correlation coefficient between mother's education and student's bodily/kinesthetic intelligence is .01 with a P value .68 which means that there is an insignificant correlation between mother's education and students' bodily/kinesthetic intelligence.

The correlation coefficient between mother's education and student's interpersonal intelligence is .09 with a P value .01 which means that there is an insignificant correlation between mother's education and students' interpersonal intelligence.

The correlation coefficient between mother's education and student's intrapersonal intelligence is .04 with a P value .07 which means that there is an insignificant correlation between mother's education and students' intrapersonal intelligence.

The correlation coefficient between mother's education and student's naturalistic intelligence is .01 with a P value .74 which means that there is an insignificant correlation between mother's education and students' naturalistic intelligence. (See annexure A)

8. Conclusions

1. There is a significant correlation between mother's education and students' verbal/linguistic, logical/mathematical and musical intelligence.
2. There is an insignificant correlation between mother's education and students' visual/spatial, bodily/kinesthetic, interpersonal, intrapersonal and naturalistic intelligence.

9. Recommendations

1. Special attention should be given to mothers' education as it affects intelligences of their kids.
2. Children should be provided various opportunities so they may enhance their different types of intelligence.

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