

## STUDENTS' EPISTEMOLOGICAL BELIEFS IN RELATION TO THEIR PARENTS' PROFESSION AND TYPE OF SCHOOLING IN LOWER INCOME FAMILIES OF PAKISTAN

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Literature has reported links of parents' profession and type of schooling to students' achievements, and performance in schools. On the same pattern, literature has empirical evidence about regulative roles of the student's epistemological beliefs in students' adopted motivation, learning strategies, and in an achieved quality of learning outcomes. Assuming the reliance of the students developed epistemological beliefs on social setup and learning activities in schools, the present study applied multivariate analysis of variance approach to verify the assumed roles of the students' type of schooling and their parents' professions in the development of their epistemological beliefs. Although, the descriptive analysis indicated the differences in different dimensions of the students' epistemological beliefs in relation to their parents' profession, and type of schooling, however, global MANOVA confirmed the independence of the students' epistemological beliefs from the students' type of schooling, and parents' professions in population of Pakistani students in lower income families. This led to the inference that Pakistani secondary school students have similar epistemological beliefs independent of their parents' profession and type of schooling.

### INTRODUCTION

The vital role of parents socio-economic status in overall child education has consistent empirical support (Kainuwa & Yusuf, 2013), however, although, there are various socio-economic variables and indicators leading to parents socioeconomic status, but, parents' education (Eccles & Davis-Kean, 2005; Laosa, 1982) and parents' profession (Castillo et al., 2011) have more crucial roles in child education. The degree of parents' higher education, and professional levels, influence students' achievement, learning dispositions (Kalff *et al.*, 2001; Musarat, Nadeem, Naz, Perveen, & Sameen, 2013; Omolade O., Ajayi, & O.Salomi, 2011), and students' expectations of learning outcomes (Arshad, Attari, & Elahi, 2012).

One dimension of the relationship of parents' profession and students' study is students' time allocation to their study at home, and it was found that students whose parents are unemployed, self-employed, and employer have a higher

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probability of child labor (Parikh & Sadoulet, 2005), which could subsequently lead to limited time for their studies at home. The students' chances of getting post secondary higher education was less in cases where parents have lost their jobs (Wightman, 2012).

Above all, the parents' choice of school for their children, and their educational track was found to be dependent on parents' profession (Dustmann, 2004). Furthermore, besides, the relationships between other important variables of students' quality education; the negative and problematic behavior in schools has been also linked to lower-level parental occupations as compared to high level parental occupations (Kalff *et al.*, 2001).

Thus, the key role of parents' profession in students' educational life is very critical and significant. The choice of school for children is very critical for the child education because there are studies that have provided an evidence that there is a less favorable environment for students' cognitive development (Castillo *et al.*, 2011), and students take less interest in studies in public schools in comparison to private schools (Ali, Ali, & Naz, 2012; Andrabi, Das, & Khwaja, 2002). However, the quality of private schools is a key factor for the creation of such reported differences in students' academic performance and grooming in government and private schools. However, the irony in the case of Pakistan is that it is possible that elite private schools have raised the quality education by using better teaching methods that lead to better learning outcomes like other developing countries (Day *et al.*, 2014), whereas, non-elite private schools of Pakistan drastically and desperately lack good buildings, qualified teachers, laboratories as compared to government schools (Iqbal, 2012). Therefore, the positive results about the contribution of private schools to raise quality education cannot be generalized in the context and perspective of non-elite private schools of Pakistan.

Along the predictor roles of above factors in students' quality of learning outcomes, and overall learning behavior; one more contributor is students' epistemological beliefs, which seems to regulate students' learning behaviors and achievements. The different dimensions of students' epistemological beliefs such as beliefs about the process of knowledge development, change and justification of knowledge escort a particular understanding of the real world around (Hofer, 2000). There is support of empirical evidence about definite roles of students' epistemological beliefs in students' engagement, effort and time spent on learning tasks (Corte, Eynde, & Verschaffel, 2002), beyond the fact, whether; these epistemological beliefs are naive or sophisticated. Generally naive beliefs like knowledge is simple, absolute, knowledge is imparted by teachers, knowledge is learned at once, knowledge is fixed, and epistemological beliefs in limited human learning capacity, have been found to be associated with lower grades in science learning, and maladaptive motivation (Lodewyk, 2007).

### **PROBLEM OF THE STUDY**

The above discussion converged to conclude that as there are relationships between parents' education, and the type of schools that students attend to various indicators of quality education, likewise, there might be relationships among students' epistemological beliefs, parents' profession, and a type of schooling. Therefore, the present study investigated the dependency of students' science related epistemological beliefs to their parents' profession and the type of schooling among science students in Pakistan.

### **POPULATION AND SAMPLE OF THE STUDY**

The population of the study was male secondary school science students from different government and private schools. These students had successfully completed their eighth grade studies, and were in the first month of their 9<sup>th</sup> grade classes at the time of data collection. The private schools were non-elite schools, whereas government schools were general secondary schools. The sample was conveniently selected at ease during visits to different government and private schools. The respondents of the survey were 108 students. The sample consisted of 48 students from private schools as compared to 51 students from government schools, whereas 09 students did not mention their school. The range of average age of respondents was 13-14 years. All students were from lower socioeconomic backgrounds. The parental professions were Government service (36%), self-employed (35%) and Agriculture (27%). The Government service parental profession category included teachers of primary and secondary schools, and office assistants in government offices. The Self-employed parental profession category was composed of shopkeepers, and technicians working independently. The agricultural professional category covered earning activities like farming and cultivation activities, and seasonal labor in crop fields in time of crop harvesting.

### **DATA COLLECTION AND ANALYSIS**

The data were collected about three dimensions of students' epistemological beliefs, the certainty of knowledge, omniscient authority and knowledge, justification with the help of the Elder's adapted Urdu Epistemological Beliefs Questionnaire EBQ. The demographic information about the parents' profession and students' type of schooling was also collected along this questionnaire.

The collected data were analyzed to test the following hypotheses:

- H<sub>0</sub>1: There is no difference in population means of dimensions of epistemological beliefs of students for their parents' profession.
- H<sub>0</sub>2: There is no difference in population means of dimensions of epistemological beliefs of students for their type of schools.

H<sub>0</sub>3: There is no difference in population means of dimensions of epistemological beliefs of students for combinations of their parents' professions and their types of schools.

The students' schools were of two categories: government schools and private schools. However, parents' professions were merged into three major categories: Government service, Self-employed and Agriculture. Here in this study, three dimensions of epistemological beliefs: belief in certainty of knowledge, belief in omniscient authority and Beliefs in Justification of knowledge by testing and reasoning was assumed as dependent variable against independent variables of the type of schooling and parents' profession.

## RESULTS

There were apparently mean differences among students' epistemological beliefs and groups of government and private schools and parental professions in descriptive data analysis (See Table 1).

The naive epistemological beliefs in dimensions of belief in knowledge certainty and belief in omniscient authority; were indicated by students' higher scores of these two dimensions. On the other hand, students' lower scores on beliefs of knowledge justification also led to portray naive epistemological beliefs. In order to test the pre-assumed hypotheses, a multivariate analysis of variance seems a suitable option to infer population characteristics latent in sample data after satisfaction of assumptions of normal distribution (observed scores along the line

TABLE 1: MEAN SCORES OF EPISTEMOLOGICAL BELIEFS IN DIFFERENT GROUPS

	<i>Grouping Variables</i>	<i>N</i>	<i>Mean</i>	<i>Std. Error</i>	<i>Std.</i>
				<i>Mean</i>	<i>Deviation</i>
<b>Belief of Knowledge Certainty</b>	Government School	51	13.9461	0.36281	2.591
	Private School	48	13.9583	0.36643	2.53871
	School Not Mentioned	9	15.5833	0.80039	2.40117
<b>Belief Omniscient Authority</b>	Government Service	39	13.8269	0.41329	2.58103
	Self-Employed	38	13.8158	0.37994	2.3421
	Agriculture	29	15	0.49954	2.69009
<b>Belief of Knowledge Justification</b>	Government School	50	13.444	0.38176	2.69945
	Private School	46	14.3522	0.59007	4.00204
	School Not Mentioned	9	14.8222	0.87967	2.63902
	Government Service	38	14.2	0.55049	3.39348
	Self-Employed	38	13.8737	0.55989	3.45141
<b>Belief of Knowledge Justification</b>	Agriculture	27	13.5111	0.60899	3.16439
	Government School	48	11.0208	0.28245	1.95687
	Private School	48	11.9427	0.28386	1.96664
	School Not Mentioned	8	12.0938	0.3565	1.00834
	Government Service	38	11.0197	0.32161	1.98251
<b>Belief of Knowledge Justification</b>	Self-Employed	38	12.0395	0.31109	1.91767
	Agriculture	26	11.4519	0.36847	1.87886

of expected scores in p-p plots, and insignificant Shapiro-Wilk Test), homogeneity of variance (insignificant Box's Test), equality of error variances (insignificant Levene' test), independence of samples, and no outliers.

The MANOVA analysis in the Table 2 showed that as a whole, mean differences of different dimensions of students' epistemological beliefs in relation to their type of schooling, parents' profession and collective role of students' parental profession and type of schooling were not actual representation of population characteristics, and  $p > 0.05$  led to infer that differences in means were statistically insignificant. Consequently, in this present study, the study failed to reject three pre-assumed null hypotheses, and it was inferred that there were insignificant differences in different dimensions of students' epistemological beliefs in relation to the students' type of schooling and parents' profession.

TABLE 2: MULTIVARIATE ANALYSIS OF VARIANCE

		<i>Grouping Variables</i>	<i>F</i>	<i>Sig.</i>
<b>Multivariate Tests</b>	Combined Dimensions of Beliefs	School	1.483	0.186
		Parents Profession	0.42	0.865
		Parents' profession and School Combined	1.194	0.287
<b>Tests of Between-Subjects Effects</b>	Belief of Knowledge Certainty	School	1.205	0.304
		Parents Profession	0.729	0.485
		Parents' profession and School Combined	1.647	0.169
	Belief Omniscient Authority	School	0.702	0.498
		Parents Profession	0.007	0.993
		Parents' profession and School Combined	1.02	0.402
	Belief of Knowledge Justification	School	2.502	0.088
		Parents Profession	0.435	0.649
		Parents' profession and School Combined	1.442	0.227

## DISCUSSION

The independence of differences in different dimensions of epistemological beliefs from the students' type of schooling, and parents' profession provided evidence that these factors have less crucial roles in the development of sophisticated epistemological beliefs among Pakistani secondary school male students. Furthermore, it also pointed out that there were similar teaching and learning practices in schools, regardless of fact, whether, these were private or government schools. Additionally, teaching-learning situations in government and private schools promoted naive epistemological beliefs in both government and private school students. Moreover, the students were also from lower income families in both private and government schools, and it is already found that such families

contribute less in their child's school education (Kalff *et al.*, 2001; Musarat *et al.*, 2013). Additionally, the phenomenal contribution of private schools in the quality of education; through the use of better teaching methods, and strategies in other countries (Day *et al.*, 2014), cannot be generalized in case of Pakistani non-elite private schools (Andrabi *et al.*, 2002). The different Pakistani scenario in case of private schools was because of the reason that a majority of school teachers in non-elite private schools were found to be less qualified, and less experienced than government school teachers (Andrabi *et al.*, 2002). Conversely, the paradox of government schools was that these were overcrowded schools and large classes left a little or no room for the government experienced and qualified teachers to impart any differences than private schools. Role of laboratories is vital in the development of science concepts, but these are lacking in private schools and government schools as well. Moreover, in government schools a large number of students cannot effectively use these laboratories too (Iqbal, 2012), whereas, a majority of private schools have funding problems, and are privately owned (Andrabi *et al.*, 2002).

### CONCLUSION

It was found that students in Pakistan have naive epistemological beliefs across the groups of government and private schools and groups of parental professions. It showed similarities in parental attitude in relation to their children's education across all professional groups and similar teaching practices across the government private school groups.

### IMPLICATIONS

The present study affirmed the need for interventions, and programs to involve Pakistani families in their children's school education. There is a need for activities that can raise awareness among parents about their vital role in their children's schooling. On an equal footing, there is a need to use the modern student centered teaching methods and learning strategies like discussion and student dialogues in routine teaching strategies to promote sophisticated epistemological beliefs among students of both government and private schools.

### References

- Ali, A., Ali, Z., & Naz, R. (2012). Study Habits and Education Planning: A Case Study of Comparison of Private and Public Sector Schools. *The Dialogue*, 7(3), 309-318. doi: [http://www.qurtuba.edu.pk/thedialogue/The%20Dialogue/7\\_3/Dialogue\\_July\\_September2012\\_309-318.pdf](http://www.qurtuba.edu.pk/thedialogue/The%20Dialogue/7_3/Dialogue_July_September2012_309-318.pdf)
- Andrabi, T., Das, J., & Khwaja, A. I. (2002). The Rise of Private Schooling in Pakistan: Catering to the Urban Elite or Educating the Rural Poor? In t. L. Project (SeriesEd.). Retrieved from <http://www.leapsproject.org/site/publications/>. doi: [http://www.leapsproject.org/assets/publications/PrivateSchools\\_CateringToUrbanElite.pdf](http://www.leapsproject.org/assets/publications/PrivateSchools_CateringToUrbanElite.pdf)

- Arshad, M., Attari, Z. H., & Elahi, E. (2012). Impact of Parents' Profession on their Children's Learning English in Pakistan. *International Journal of Learning & Development*, 2(1).
- Castillo, R., Ruiz, J. R., Chillón, P., Jiménez-Pavón, D., Esperanza-Díaz, L., Moreno, L. A., & Ortega, F. (2011). Associations between parental educational/occupational levels and cognitive performance in Spanish adolescents: The AVENA study. *Psicothema*, 23(3), 349-355.
- Corte, E. D., Eynde, P. O. t., & Verschaffel, L. (2002). Knowing What to Believe: The Relevance of Students' Mathematical Beliefs for Mathematics Education. In B. K. Hofer & P. R. Pintrich (Eds.), *Personal Epistemology: The Psychology of Beliefs About Knowledge and Knowing* (pp. 297-320). New Jersey: Lawrence Erlbaum Associates, Inc.
- Day, A., L. Mcloughlin, C., Aslam, M., Engel, J., Wales, J., Rawal, S., Rose, P. (2014). The role and impact of private schools in developing countries: a rigorous review of the evidence Final report. Education Rigorous Literature Review. Birmingham United Kingdom: Department for International Development.
- Dustmann, C. (2004). *Oxford Economic Papers* 2004(56), 209-230. doi: DOI: 10.1093/oeppf048.
- Eccles, J. S., & Davis-Kean, P., E. (2005). Influence of parents education on their children's educational attainments: the role of parent and child perceptions. *London Review of Education*, 3(3), 191-204.
- Hofer, B. K. (2000). Dimensionality and Disciplinary Differences in Personal Epistemology. *Contemporary Educational Psychology*, 25(4), 378-405.
- Iqbal, M. (2012). Public versus Private Secondary Schools: A Qualitative Comparison. *Journal of Research and Reflections in Education*, 6(1), 40-49.
- Kainuwa, A., & Yusuf, N. B. M. (2013). Influence of Socio-Economic and Educational Background of Parents on their Children's Education in Nigeria. *International Journal of Scientific and Research Publications*, 3(10), 1-7.
- Kalff, A. C., Kroes, M., Vles, J. S. H., Bosma, H., Feron, F. J. M., Hendriksen, J. G. M., Jolles, J. (2001). Factors affecting the relation between parental education as well as occupation and problem behaviour in Dutch 5- to 6-year-old children. *Social Psychiatry and Psychiatric Epidemiology*, 36(7), 324-331. doi: 10.1007/s001270170036
- Laosa, L. M. (1982). School, Occupation, Culture, and Family: The Impact of Parental Schooling on the Parent-Child Relationship. *Journal of Educational Psychology*, 74(6), 791-827.
- Lodewyk, K. R. (2007). Relations among Epistemological Beliefs, Academic Achievement, and Task Performance in Secondary School Students. *Educational Psychology*, 27(3), 307-327. doi: 10.1080/01443410601104080
- Musarat, A., Nadeem, S., Naz, F., Perveen, F., & Sameen, A. (2013). Impact of Parental Education and Socio-economic Status on Academic Achievement of University Students *International Journal of Academic Research and Reflection*, 1(3), 25-33.
- Omolade O., A., Ajayi, K. O., & O.Salomi, M. (2011). Relative Effects of Parents' Occupation, Qualification and Academic Motivation of Wards on Students' Achievement in Senior Secondary School Mathematics in Ogun State. *British Journal of Arts and Social Sciences*, 3(2), 242-252.

- Parikh, A., & Sadoulet, E. (2005). The Effect of Parents' Occupation on Child Labor and School Attendance in Brazil *CUDARE Working Papers*: Department of Agricultural & Resource Economics, UCB.
- Wightman, P. (2012). Parental Job Loss, Parental Ability and Children's Educational Attainment *Population Studies Center Research Report 12-761*. The University of Michigan: MacArthur Foundation Research Network on Transitions to Adulthood, The National Poverty Center, Gerald R. Ford School of Public Policy.