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Mediation Analysis of Factors Affecting the Performance of Public Schools at Early Childhood Level in Punjab, Pakistan

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Abstract

The main purpose of this study was to examine the factors that affect the performance of public schools for early childhood education (ECE) in Punjab, Pakistan. ECE focuses on provision of effective nutrition, health care, secure and compassionate environment and participatory opportunities for the children of 3-5 years age. A survey was conducted for data collection using a structured questionnaire which was adapted from Early Childhood Environment Rating Scale (ECERS). Total 90 responses were collected from teachers and parents of 36 ECE public sector schools in 6 districts of Punjab. The research design has been followed to explore the structural equation modeling (SEM) of variables. The results of the study reflected that qualification of teachers (QT) and availability of facilities (AF) are important factors that positively affect parent's satisfaction (PS). Moreover, the AF mediates the relationship between QT and PS. The study will help academia and policy makers to effectively address the issues of performance of ECE schools. The impact of indicators like QT and experience of teacher were evaluated for the first time in public sector ECE schools and recommended to replicate it in all other public / private educational institutions.

Keywords: early childhood education, structural educational modeling, availability of facilities, parent's satisfaction, performance, mediation.

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Introduction

The contribution of early child development is fruitful in the form of successful school entry & improvement in school activities that eventually lead to success in later parts of life (Murtaza, 2011). Research has found that most important period for holistic growth of a child is the time period of his early childhood. Barnett (2008) found that the students who received ECE treatment at the age of three have higher IQ level and the gain in cognitive skill was higher with respect to age.

The process of learning starts with the birth and majority of brain developing is done during the early years of aging, i.e. from the birth to the 8 years of aging. Inadequate or in-appropriate education opportunities during these critical years can hamper complete and absolute growth of intellectual abilities of a child. Early Childhood Education (ECE) is comprised of effective nutrition, health care, compassionate environment and participatory opportunities for learning new things and ideas. The cognitive skills, reading and educational development is proved to be improved more at the age of three years at centers than conventional home based arrangements and has impact in later stages of life (Bernal& Keane, 2011). The most obvious and commonly way in which a child develops is physical. There are three types of physical activities rhythmic stereotype, exercise during pre-school and rough and tumble play (Pellegrini &Smith, 1998). There are many growth and developmental domains of a child that are related to and have close association with each other. Some of these may include the physical growth, observatory and sensitivity growth, verbal contact development, cognitive growth, emotional growth and social development.

The concept of ECE is very incomplete in Pakistan public sector schools which include only informal classrooms (Katchi class) before entering into class 1 (Shakil, 2002). ECE is not fully matured in public sector of education in Pakistan (Malik et al., 2010) which is also acknowledged by Ministry of Education (2009).It is revealed in a research study that 4.532 million students are enrolled in public sector schools which have no separate classrooms and well trained teachers (Khan et al., 2017).Multi grade classes join the same roof in public sector schools due to unavailability of class rooms in many cases. The public sector lacks the ECE class rooms which are specially designed for young children, and teachers are not trained for such specific needs (Khattak, 2016), resulting in improper teaching (Shakil, 2002). No age criterion is

fixed for entry to particular class and usually students of age from three to five to attend it (Coleman, 2010).

Students' level of learning is assessed on the basis of memorization, fluency in speaking, reading and writing skills which serves as base to give grades and scores in order to plot their progress (Orloff et al., 2007). The book knowledge and the memorization of given concepts is preferred by teachers rather than conceptual understanding. Government of Pakistan announced reforms policy in 2001 for meeting up the commitments of SDGs and UN convention on children rights. The introduction of formal syllabus and enhancing the enrolment of the students in katchi class was the major target of this policy.

In 2002 Teachers Resource Centre developed curriculum on ECE which was later revised in 2007 but could not be institutionalized in schools due to lack of class rooms and unavailability of teachers and funds. Rich et al. (2007) reported that Pakistan failed to fulfill its commitment to institutionalize early childhood education into public schools due to shortage of funds and budget constraints for early childhood.

Early Childhood Education in Public Sector

The Government of Punjab has approved "The Early Childhood Education (ECE) Policy" in 2017. This policy was designed to strengthen and institutionalize early learning province-wide and to provide clear standards for equitable and quality ECE. It aims to contribute in attaining SDG 4 to ensure comprehensive, logical quality education and promoting life-long learning opportunities for all.

Quaid-i-Azam Academy for Education Development (QAED), in collaboration with School Education Department, Punjab and with support of UNICEF, World Bank and Plan International started the Early Childhood Education (ECE) program. Under a joint initiative the Government of Punjab has started to develop 11000 ECE classrooms. The investment was made in different areas including (i) creation of child friendly ECE classrooms in public schools (ii) provision of ECE standardized Kit of 46 items to each ECE room, (iii) provision of part time caregivers to facilitate ECE teachers in taking care of children and to keep the ECE classrooms in order. (iv)capacity building of Head Teachers, Teachers, Caregivers and School Council Members. QAED and School Education Department government of Punjab aim to attain 100% enrollment in the ECE classroom with higher level retention of

school going children in subsequent classes in public schools across the province.

Rationale of the Study

ECE rooms were first time established in public sector schools in Punjab province, so it was important to examine the impact of EC on public school, children, teachers and parents perceptions which were not found in previous studies. The main aim of this study is to fill this gap by analyzing those factors that affect performance of ECE schools, teachers and overall learning environment. In addition, the study also aims at examining and understanding the phenomenon of satisfaction level of parents of the children in ECE schools in order to overcome the challenges confronted with ECE schools.

Research Questions

The study had following research questions:

1. What are the key factors that affect the performance ofpublic schools with emphasis on satisfaction of parents of children (3 to 5 years age) in ECE schools?
2. Whether qualification and experience of ECE teachers affect the performance of ECE Public Sector Schools?
3. What are the proposed remedial measures to improve the performance level of public in ECE schools and parent's satisfaction?

Literature Review

According to Young (2002) multidisciplinary research over the years has explored the benefits of ECE due to which it has given a prime position in international policy. These benefits include economic and social wellbeing of the children through life long foundation level of learning to reduce poverty and improve intergeneration social mobility.

Fantuzzo*et al.*, (2005) studied a sample of 3969 students who have participated in large districts ECE school i.e. kindergarten and assessed the children through language, attitude and habits and attendance and mathematical skills. He assessed that benefits were associated with centre based education system with ECE facilities. Francisco et al. (2006) identified the positive impact of government interventions regarding ECE on school enrolment, and retention of students. Aboud (2006) found that preschool has influence on the result of primary classes

in Bangladesh and similar results are found in other developing countries (Montie*et al*., 2006).

Heckman (2007)explained that the care of child at a stage of childhood when brain growth is at its peak has huge benefits than on remaining stages of childhood education. Fukkink (2007) identified encouraging impact of specialized capacity building skills provided to caregivers, professing child caring training to children and continuous monitoring on learning of children in day care centers. Hayashikawa (2008) explored that the children who have attended quality ECE have improved mental, intellectual and educational health distinctively than those who have not attended such a facility. ECE assisted the administration in to realize their commitment to give assess to every child have assure its right to quality education. The benefits of ECE are greater if preschool starts earlier from the age of 3-5 years (Gormley*et al*., 2008). With provision of ECE facility in Paraguay comparison of sibling who attended preschool and who did not cleared the benefits of early education at the age of 3 years which reflected in the form of higher educational achievement reducing rate of dropout upto secondary school level (Berlinski*et al*., 2008).

In similar way Argentine has experienced higher rate of preschool enrolment and improved grades achievement with expansion of preschool program. Different researchers associated the benefits of ECE with up to the age of 33 years which results in the form of higher qualification and earning (Magnuson et al., 2004). Preschool education is free in France for all the children from the age of 3 years. As the program started 60-70% increase in enrolment of children up-to the age of 3 years was observed, while 30 to 40% up to age of 4 years. The state has evidences that the children who have attended preschools have greater exposure and higher wages in the labor market. ECE reduced socio-economic inequalities as the children from less privileged families benefits more as compared to the children having strong family backgrounds(Dumas and Lefranc, 2010).Similarly, Norway assessed ECE with enhanced inter-generational mobility(Bauer, & Riphahn, 2009).

Berlinski*et al*., (2009) found that group of children who have attended ECE classes obtained tremendously greater marks on intellectuals and education parameters as young child had higher qualification, and were more possibilities to attend higher education institutions and less pregnancy in teenage compared with others who have not attended similar treatment. ECE had significant impact on

reading and math skills which persisted throughout long tenure of adulthood. ECE had significantly impacted the use of drugs by younger students but less impact of ECE was found in habit of lawbreaking, self-violence and economic independence at that stage of life. The positive impact regarding educational skills and enhanced years of higher education support policies favoring ECE programs for deprived children. The similar impact was found on physical health of children.

Esping-Andersen *et al.*, (2012) conducted a study in Denmark to evaluate the performance of ECE and found the 3 years old Children, especially the children of lowest income were found at the bottom of the scores obtained from test while results derived from the sample from US were different. The results from both countries reflected that quality of ECE differs in the both countries which were good in Denmark as compared to US. Felfe & Lavile, (2012) conducted a research in western Germany on child protection system in centers with marginal levels of facilities and used marginal treatment effects to access 0-3 years old children. They found that the children belonging to privileged background will have strong socio economic environment i.e. parental net income and education obtained less advantages as compared to less privileged children have weak family background. Particularly the children from well to do families have less self-reliance as compared to others. The other clarification may be that higher SES families make early investment in their children's skills and therefore, any benefits their children might derive from child care might not be captured by the available skill measures.

Martinez *et al.,* (2012) found that ECE is the least cost and highly effective approach to serve poor children. The study proved that the children who have attended preschool have better cognitive, developmental and socio emotional attributes. In an impact evaluation study by Kaul et al., (2013) found that provision of playing material and training of teachers on early education has positive impact on learning of children, school enrolment and overall school environment. Prompt interventions for the newly established health and education board to focus resources to change life chances in infants through provision of early education to integrate, child care, health services and parental support is required. Great differences are found in health and development of individuals belonging to different origins. Despite the interventions of the government decades ago it has failed to reduce the differences. Even the influence of origin persisted in children and also more aggravates the situation. At this stage ECD is the

most effective time for the development of cognitive, intellectual and physical capabilities of disadvantaged children. The quality preschool system linked with affordability and accessibility can generate log term benefits for the children. The house learning environment influence the child in better was but it is difficult to affect it (Melhuish, 2014).

Above mentioned studies have focused only on teachers, children and facilities but ignored parents, which is central point of this research study (Dependent Variable) as their perception and satisfaction have been studied in the research. Secondly, in Pakistan, ECE classes in public sector was not reviewed viz a viz Facilities and Parents satisfaction. Thirdly, in Punjab there are about 39,000 primary schools where Kachi classes were present and no ECE classes were functioning previously. Whereas preschool/KG classes were working in private sector schools, which parents prefer for their children. This literature gap has been tried to cover in this research.

Methodology

The study was quantitative in nature and the objective of this study was to find out the impact of certain factors that account for satisfaction of parents having their child in ECE schools. The study had following variables:

Dependent Variable

The parent's satisfaction (PS) was dependent variable of the study.

Independent variables

Variables which include Qualification of ECE teacher (QT) and Experience of ECE teacher (ET).

Mediating Variables

At ECE School (AF) and Child Care (CC) were two mediating variables of this study.

Conceptual framework

The conceptual framework of research study and proposed relationship among variables is reflected in Figure 1.which elaborates that two variables (Availability of facilities (AF) and child care (CC)) were mediators in the model. The theoretical framework of the study was that the qualification and experience of ECE teacher affects the

satisfaction level of parents. The model we selected contained three latent variables and every variable was measured through questions, just like the 1st latent variable was Availability of facilities (AF) and it had five questions for measurement. 2nd latent variable was Child Care (CC) and it had three questions for measurement and the 3rd latent variable was parent's Satisfaction (PS) it had four questions for measurement.

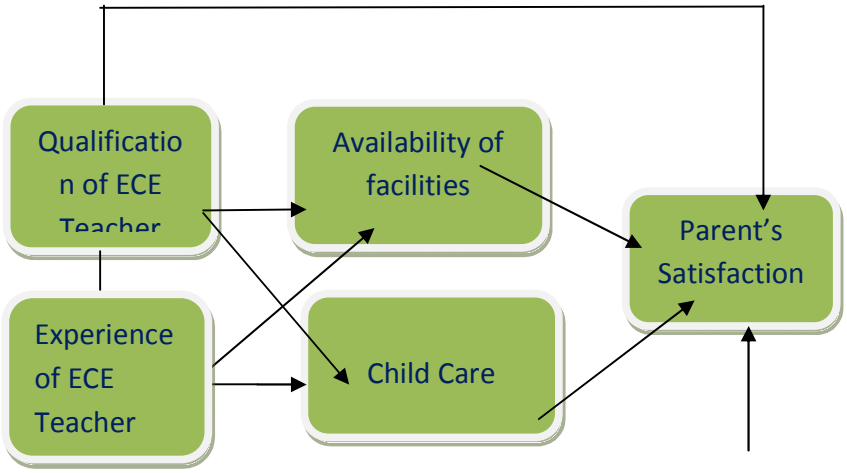

Figure 1 Conceptual Framework of study

Hypotheses of the Study

Based on the model of study, a total of seven hypotheses were proposed to be tested which are given below:

H1: There is a positive association between Qualification of teacher and Child Care.

H2: There is a positive association between Qualification of teacher and Availability of facilities.

H3: There is a positive association between Experience of teacher and Child Care.

H4: There is a positive association between Experience of teacher and Availability of facilities.

H5: There is a positive association between Child Care and parent's Satisfaction.

H6: There is a positive association between Availability of facilities and Parent's Satisfaction.

H7: There is a positive association between Qualification of teacher and Parent's Satisfaction.

Delimitations of Study

The present research study mainly focused on qualification of teachers, experience of teachers, availability of facilities and child care to assess the performance of public schools. However, there are many other factors involved that affect the performance of public schools at ECE level which include number of teachers, provision of infrastructure, socio-economic factors and class room availability which have not been the focus of this study and can be a topic of research in future.

Study Population and Sampling

In the light of the objectives of the study, sample of 36 ECE public sector schools from 6 districts (Rawalpindi, Gujrat, Lahore, Toba Tek Singh, Rahim Yar Khan and Rajanpur) two from each northern, central and southern regions of Punjab representing the regional diversities were selected purposively. A total of 110 questionnaires were distributed out of which 15 were not returned and 5 were incomplete so rejected and finally 90 complete Performa's returned from respondents (teachers and parents) were collected. The 6 districts out of 36 have been chosen on three basis: one is regional diversity (2 each from southern, central and Northern Punjab province) and second is that these are only few of the districts where ECE class rooms have been established and working at time of research study. Thirdly, lack of resources and financial constraints. The Questionnaire adapted from ECERS was used to collect information from teachers/caregivers(54 in 36 classes in 6 districts) and parents (36 in 6 districts) of students.

Instrument and Data Collection Procedure

The data from respondents was collected using questionnaire. The instrument used is Early childhood Environment Rating Scale (ECERS) which measures child-teacher interactions along with facilities available in ECE rooms for preschool children(Harms et al., 2014). ECRS tool is used to measure with precision both teacher-child relations and conducive environment that affect the developmental needs of young children age between 3 to 5 years. The questionnaire was pilot tested for its reliability and validity from experts and then modified in view of their opinion. The responses were collected on a five-point Likert-type scale

(1=strongly disagree to 5=strongly agree). Smart PLS was used to carry out analysis.

Ethical Considerations

A formal approval from the Director General of QAED and School Education Department was sought before conducting this survey. The permission and consent of each and every respondent was also obtained before collection of data and that there will be no harm to the privacy of any individual/respondent who participated in this survey.

Results and Discussion

The results of descriptive analysis of education and experience of teachers are presented in table 1.

Table 1
Education of Teacher

Qualification	Frequency	Percentage
Matric	14	16%
F.A. / Intermediate	7	8%
Graduation	21	23%
Masters	43	49%
Above Masters	5	4%

Table 2
Experience of Teacher

Experience	Frequency	Percentage
Less than 1 Year	15	16%
1-2 Years	52	58%
3-4 Years	18	20%
5-6 Years	4	5%
Above 6 Years	1	1%

Confirmatory Factor Analysis (CFA*)*

The PLS path model (drawn in Smart PLS software) after PLS Algorithm calculation with independent variables (Qualification of teacher, Experience of teacher), dependent variable (Parent's Satisfaction), relationship among variables and all indicators of variables are shown in Figure 1 (Ringle et al., 2015). The reflective nature of variables is indicated by arrow directions.

The path coefficient of Availability of facilities (AF) strongly affects parent's satisfaction (PS) and its value is 0.678. Other path

coefficient of experience of teacher affects child care (CC) and its value is 0.159. This value is lower which shows weak relationship.

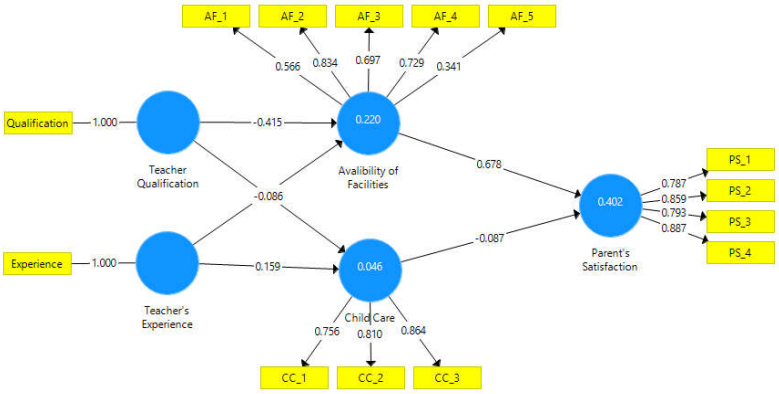

Figure 2 PLS Path Model

Reliability and Validity

The values of Cronbach's alpha were computed to check the reliability and validity of the model. The table 3 reflects the values of Cronbach's alpha, composite reliability and Average Variance Extracted (AVE).

Table 3
Results of reliability and validity

Latent Variable	Cronbach's Alpha	rho_A	Composite Reliability	AVE
CC	0.761	0.853	0.852	0.658
AF	0.661	0.691	0.779	0.430
PS	0.852	0.859	0.900	0.694

The values of Cronbach's alpha for child care (CC), Availability of facilities (AF) and parent's satisfaction (PS) are 0.761, 0.661 and 0.852. All the values are greater than 0.70 except for the value of AF which is 0.661 and very close to 0.70. The values of Cronbach's alpha should be greater than 0.70 in order to be considered acceptable. A value less than 0.4 shows that the item should be removed / extracted, and item with a loading of 0.4-0.7 may be removed in case if they increase the

Composite Reliability (CR) and AVE value more than threshold value (Chin 2010; Hair, Ringle, and Sarstedt 2011).

The value of CR was also measured to check the reliability of the constructs. The results of CR show that the values for CC, AF and PS are 0.852, 0.779 and 0.900 respectively. All the values of CR are greater than 0.7. The results of CR indicate that the model possesses acceptable level of reliability (Chin 2010; Hair et al., 2011). The AVE values of the latent variables are also computed and reflected in table 3. The AVE value for CC, AF and PS are 0.658, 0.430 and 0.694 respectively. All these values are greater than 0.5 except for AF which shows that there exists acceptable level of convergent validity (Chin 2010; Hair et al., 2011).

Discriminant Reliability

To assess the extent to which each and every latent variable was distinct from other constructs, Fornell-Larcker criterion was used to verify and confirm discriminant validity (Chin 2010; Hair et al. 2014). The results of this criterion are shown in table 4.

Table 4
Fornell-Larcker Criterion of Discriminant Validity

	CC	ET	AF	PS	QT
CC	0.811				
ET	0.201	1.000			
AF	0.545	0.301	0.656		
PS	0.282	0.170	0.630	0.833	
QT	-0.164	-0.494	-0.462	-0.349	1.000

The diagonal values should be less than non-diagonal values in order to have discriminant validity. The results in table 4 show that all the values at diagonal; are greater than non-diagonal values; it means that no issue is regarding discriminant validity found in the model.

Factor Loadings

The values of the factor loading for all the constructs of latent variables are shown in table 5.

Table 5
Factor Loading

Latent Variable	Constructs	Factor Loading
AF	AF1	0.566
	AF2	0.834
	AF3	0.697
	AF4	0.729
	AF5	0.341
CC	CC1	0.756
	CC2	0.810
	CC3	0.864
PS	PS1	0.787
	PS2	0.859
	PS3	0.793
	PS4	0.887

The values of factor loadings show the reliability of individual indicators of constructs. The value for factor loading should be more than 0.7 for acceptance. The results in table 5 show that the values for AF1, AF3 and AF5 are 0.566, 0.697 and 0.341 respectively. These values can be dropped for the sake of getting improvement in final results.

Collinearity Assessment

The values of inner VIF and outer VIF were also computed to check the issue of multi-collinearity in the model. The results of outer VIF value and inner VIF values are shown in table 6 and 7 respectively.

Table 6
Outer VIF Values

Latent Variable	Constructs	VIF
AF	AF1	1.321
	AF2	1.904
	AF3	1.617
	AF4	1.320
	AF5	1.110
CC	CC1	1.731
	CC2	2.051
	CC3	1.380
PS	PS1	1.734
	PS2	2.408
	PS3	1.771
	PS4	2.742

Table 7
Inner VIF Values

	CC	ET	AF	PS	QT
CC				1.423	
ET	1.323		1.323		
AF				1.423	
PS					
QT	1.323		1.323		

The results in table 6 & 7 show that both the outer and inner VIF values are less than 5. Therefore, it is concluded that the problem / issue of multicollinearity is not present among the variables. In case if the values of Inner and Outer VIF are greater than 5, then this is sign of presence of multicollinearity and hence those constructs need to be removed / excluded. This is not the case here.

R Square

The outcomes of R square and Adjusted R square for the latent variables are presented in table 8.

Table 8
R Square

	R Square	R Square Adjusted
CC	0.046	0.045
AF	0.220	0.219
PS	0.402	0.401

The values for R square for child care (CC), Availability of facilities (AF) and Parent's Satisfaction (PS) are 0.046, 0.220 and 0.402 respectively. Similarly, the values for Adjusted R square for CC is 0.045 and for PS is 0.401. It means that 40% of variation in PS is explained by CC.

F Square

The value of F square depicts the contribution of each constructs in between the relationships found. The value of F square also reflects the significance of one construct on another construct along with the degree of its effectiveness. The results of F square are shown in table 9.

Table 9
F Square

	CC	ET	AF	PS	QT
CC				0.009	
ET	0.020		0.009		
AF				0.540	
PS					
QT	0.006		0.167		

The value of F square should be less than 0.02 in order to hold significant relationship. The relation of CC and PS has F square of 0.009. Similarly, the relation of ET and AF has F value of 0.009.

Significance of Structural Paths in Bootstrapping (SEM for Hypothesis Testing Through Path Coefficients)

Bootstrapping is a method which is used to check and test the significance of a model. The value of t-statistics reflects significance of path coefficients (Ringle et al., 2015). The table 10 shows the results of path coefficients.

Table 10
Path Coefficients

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (ST.DEV)	T Statistics	P Values
CC -> PS	-0.087	-0.070	0.124	0.705	0.481
ET -> CC	0.159	0.148	0.159	0.996	0.319
ET -> AF	0.096	0.087	0.145	0.660	0.510
AF -> PS	0.678	0.685	0.112	6.062	0.000
QT -> CC	-0.086	-0.098	0.132	0.649	0.517
QT -> AF	-0.415	-0.426	0.106	3.929	0.000

The results of path coefficients in above table show that relationship between AF and PS is positive having Beta value 0.678. The t-value for this relationship is 6.062 which is greater than 2. The p value is 0.000 which is less than 0.001 and statistically significant. Similarly, the path coefficient between QT and AF is also significant having t value of 3.929 and p value 0.000. The results of other path coefficients show that the relation among them insignificant.

Total Effects and Testing of Hypotheses

The bootstrapping results are shown in table 11 below. The total original effects and total mean effects for all the constructs were computed. The table 11 also shows the values of standard deviation, t-statistics and p-values. The results of table 11 show that the relationship between Availability of facilities (AF) and parent's satisfaction (PS) is positive and significant having t value of 6.062 and p value 0.000. Similarly the relationship between Qualification of teacher (QT) and Availability of facilities (AF) and Qualification of teacher (QT) and Parent's Satisfaction (PS) is also significant owing to their t values and p values (Akram and Zepeda, 2013).We can say that availability of facilities at ECE schools increase the satisfaction level of parents of children in ECE schools. Similarly, the qualification of a teacher also has positive impact on the satisfaction of parents of children in ECE schools.

Table 11
Total Effects

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values	Decision
CC -> PS	-0.087	-0.070	0.124	0.705	0.481	Not Supported
ET -> CC	0.159	0.148	0.159	0.996	0.319	Not Supported
ET -> AF	0.096	0.087	0.145	0.660	0.510	Not Supported
AF -> PS	0.678	0.685	0.112	6.062	0.000	Supported
QT -> CC	-0.086	-0.098	0.132	0.649	0.517	Not Supported

Mediation Analysis

The mediation analysis was done by computing total indirect effects and specific indirect effects. The results of which are shown in table 12 and 13.

Table 12
Total Indirect Effects

	Original Sample (O)	T Statistics	P Values
CC -> PS			
ET -> CC			
ET -> AF			
ET -> PS	0.051	0.521	0.602
AF -> PS			
QT -> CC			
QT -> AF			
QT -> PS	-0.273	3.062	0.002

Table 13
Specific Indirect Effects

Hypothesis	Original Sample (O)	T Statistics	P Values	Decision
ET -> CC -> PS	-0.014	0.469	0.639	Not Supported
QT -> CC -> PS	0.007	0.326	0.745	Not Supported
ET -> AF -> PS	0.065	0.661	0.509	Not Supported
QT -> AF -> PS	-0.281	2.931	0.004	Supported

The results in the above table show that AF is mediating significantly between QT and PS with significant p value of 0.004 and t-statistics value 2.931, which is greater than acceptable value (greater than 2). It means that Availability of facilities (AF) at ECE schools is a strong mediator between qualification of teacher (QT) at ECE schools and satisfaction of parents (PS) of children at ECE schools.

Discussion and Conclusion

The findings of the study reveal that qualification of teacher and availability of facilities at ECE schools are important factor that affects and satisfaction level of parents of children of ECE classes. The higher the qualification of ECE teacher means that parents of children are more satisfied with education level of their child. Similarly educated and qualified the teachers improve the performance of ECE public schools (Hyun and Sajjad, 2018). The Availability of facilities at ECE class rooms (AF) is another important variable that has positive impact on parent's satisfaction and school performance. The study also revealed that the combination of qualified teacher and available facilities (mediator) not only improves performance of ECE schools but also satisfy the parents of children to a large extent. The results of the study are also supported by Mehmood & Gondal (2017) who found that school and classroom facilities have significant, positive impact on learning

environment and student's academic performance and tend to improve teaching learning process. (Hudson et al, 2005) found that the performance and learning process at schools depend upon certain factors like qualification & competency of teachers, classroom environment and physical facilities present at schools.

The study is significant is a way that it tried to examine the impacts of certain indicators of education, qualification and experience of teachers on the performance of school and satisfaction level of parents of children. The study will help policy makers to deal with the issues of performance of ECE schools and service delivery of public educational institutions.

Recommendations

Following policy points are suggested on the basis of findings of the study for reforming the ECE Schools systems of Punjab:

- Highly qualified teachers to be appointed in ECE classes (53% Teachers are having qualification of masters and above as per table 1).
- All public schools existing kachi classes be converted into ECE classes for not only increasing enrolment but also retention of children.
- Teachers of ECE classes along-with caregivers must be given proper training before entrusting them to teach ECE classes.
- Monthly parent-teacher meetings be properly held to have close interaction of parents with teachers thus increasing parent's satisfaction level.
- EC section in each public sector primary school should be established and for this purpose consistent plan and allocation of funds is required in remaining schools of Punjab.

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