



## Research article

## School role in improving parenting skills and academic performance of secondary schools students in Pakistan

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## ABSTRACT

**Background:** This research investigated the association between school role in improving parenting skills and the academic performance of secondary school students. And to examine the role of student gender, literacy status of the parents and parental importance to children education in the association between school role in improving parenting skills and students' academic performance.**Methods:** A multistage stratified random sampling technique was adopted to portray information from 448 students on a Likert scale. Chi-square, Kendall's Tau-c tests were used to determine the direction and strength of association among variables.**Results:** The results depicted that the association of children's academic performance was found significant ( $P = 0.000$ ) and positive ( $\text{Tau-c} = 0.215$ ) with school capacitating parents how to monitor and discuss schoolwork at home with children, assisting parents in setting academic goals for children ( $P = 0.000$ ,  $\text{Tau-c} = 0.225$ ). Moreover, the respondent's gender, parent literacy status and parental importance to children's education explained variation in the association between school role in improving parenting skills and children's academic performance.**Conclusions:** The school role in improving parenting skills significantly and positively contributed to children's academic performance. Moreover, boys, children of literate parents and children whose parents give more importance to their education with school active role in improving parenting skills were more liable to score higher grades.

## 1. Introduction

Education is the most important pillar that contributes to the improved quality of life of an individual (Esping-Andersen, 2005). Education maximizes the opportunities for sustainable development and plays a pivotal role in the development of the individual, society and nation in all spheres of life (Singh et al., 2005). Academic performance of students is one of the vital elements through which the whole education system revolves (Rono, 2013). Every nation, society, parents, and students dream to have better academic performance to equip the individual with all the skills to face and meet the challenges of the modern world (Muller, 1993). According to Dimbisso (2009) academic performance refers to the completion in a particular subject area; the academic

performance is measured by the students achieved grades, marks and scores percentage.

Peoples, institutions and groups are the agents that shape child behavior, emotions, attitudes, and learning process (Saldana, 2013). Child development practitioners and researchers mainly focused on the contextual factors like home, school and the neighborhood environment that shapes child development as these are the immediate sources of child development and socialization (Bascia, 2014; Joshi and Acharya, 2013; Kiuru et al., 2014). Growing body of knowledge has identified multiple factors that shape children academic performance such as parenting style (Ahmed et al., 2019), students attitude towards learning, educational facilities at schools and teachers skills and abilities (Maina, 2010), family socioeconomic status (Hanes, 2008; Pruitt et al., 2019), Classroom learning environment, peer group, students motivation and

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encouragement, home environment and parental involvement in children education (Kudari, 2016; Chen, 2018), neighborhood characteristics (Rothstein, 2013; Nicholas-Omoregbe et al., 2017), student gender (Mccoy, 2005; Gustavsen, 2018), and partnership between school, family and community (Epstein, 2001, 2009).

From the perspective of ecological framework, reciprocal positive interactions between parents and children, between parents and teachers or between families and schools contributed to social and psychological development of children that leads to securing better academic grades by children in school (Bronfenbrenner, 1987).

Parental involvement in children education improves children motivation to complete their academic tasks on time and improve their learning habits (Galihier, 2006; WEF, 2017). Epstein is considered a pioneer in researching in the area of parental involvement in children education and academic performance (Epstein and Mavis, 2006). Epstein presents six types of parental involvement and explained that involving parents in children's education are the main elements of school-home partnership for the reason to promote enabling, learning and protective environment to help children in their proper socialization and provide support in their developmental process including their education. Epstein six types of parental involvements explain six types of school roles, that are 1-school role in parenting, helping families in producing learning environment at home to support children education, 2- school role in communicating, in the forms of school-to-home and home-to-school communications regarding children school progress and school programs, 3- school role in volunteering, involving parents in school planning and activities, 4- school role in learning at home, providing ideas, information and learning opportunities to parents and families to help the student in learning, 5- school role in decision making, involving parents in school decisions and 6- school role in collaborating with the community to effectively and efficiently utilized community services to strengthen school programs, family practices, and student academic outcomes (Epstein, 1995). Child's better educational outcomes require collaborative and integrated efforts on part of the school, home and community. It was found that collaboration among these agents is very important for better child socialization, promoting learning environment, enhancing learning capabilities and better academic performance in children (Tárraga et al., 2017).

Moreover, parent-school partnerships strengthen communication between school and home and also is a vital source of improved social values and good citizenry (Mahuro and Hungi, 2016). It was found that collaboration between teachers and parents strengthen teacher-parents' relationships, improved community perceptions about the school, improved children's self-esteem and significantly contributed to better academic attainments of students (Garbacz et al., 2017; Sebastian et al., 2017; ISM, 2018). School can involve parents in children's education by adopting various strategies such as sharing student school progress with parents, involving parents in school planning, home visits, the arrangement of capacity building programs for parents like seminars, workshops, training. Sending newsletters, booklets and pamphlets for parents on child development (Liftoff, 2015; Masa and Mila 2017). According to the American Federation of Teachers (2007), the school-parent partnership is beneficial for parents, teachers and students. Through effective school-parent partnerships, parents are benefited in the shape of learning ideas and directions from school personals that how to support children in learning at home. Teachers learn more about the student home environment and the needs of children. For students, effective school-parent partnership is important as it is connected to an improvement in children's school engagement, motivation and positively contributed to children's academic performance.

### 1.1. Theoretical background

From decades educators, trainers, and researchers are interested in exploring the various school and out of school factors that shape students; academic performance. One systematic attempt to group these factors

into a model was put forward by Bronfenbrenner, in 1979. This study is designed in the light of the micro level of Bronfenbrenner socio-ecological model, this model explains child development under the influence of patterns of interaction and relationship. According to this model child developed within the systems of relationships (Family, school, neighborhood, peer groups, culture) that form the child's environment. This theory divided these systems of relationships into a framework of four levels that are micro level systems, meso level system, exo level system and macro level system. Micro system is the closest environment in which a student lives and interacts; it includes home, neighborhood and school. The meso level includes the interaction of two micro systems like the interaction between parents and teachers or between parents and neighbors (Bronfenbrenner, 1979). Exo system and macro system covers the prevailing culture and national policies that had no direct effect on the children and the children are not directly involved (Chinyoka, 2013; Donald et al., 2010). All the elements of the micro and meso level systems directly contribute towards the totality of the student's experiences and influenced the child's educational dispositions, behaviors and aspirations (Arnold et al., 2012; Hodgson and Spours, 2013).

Parenting skills are one of the most important factors that contribute to the academic performance of students'. In the current study, the school's role in improving parenting skills means the school's role in improving parental attitudes, ability, knowledge and/or behaviour necessary for the improvement in children academic performance (Tremblay et al., 2015). The association of school role in improving parenting skills with children's academic performance is widely studied in the developed countries, however, in less developed and developing countries less attention was made to this important aspect of child development specifically in the study area District Malakand Khyber Pakhtunkhwa Pakistan. The current study was conducted to add to the existing literature on the school's role in improving parenting skills and children's academic performance. Furthermore, the most important aspect of this research study was to examine the role of student personal and parental characteristic on the association between school role in improving parenting skills and children academic performance: Moreover, one other aspect overlooked by most researches on the issue is that proxy information is collected from parents, elders and teachers and are portrayed to get an understanding of children's feeling towards school role in improving parenting skills. In besides, this paper is unique in the way that it is based on responses collected directly from the children in Pakistan and represents their views, attitudes and feeling about the aforementioned variables.

This research study is an attempt to answer the following research questions.

Whether academic performance of children is having an association with school role in improving parenting skills? Whether there is a variation in the academic performance of children based on the school role in improving parenting skills with respect to child gender? Whether there is a variation in the academic performance of children on the basis of school role in improving parenting skills with respect to parent literacy status? and Whether there is variation in the academic performance of children on the basis of school role in improving parenting skills with respect to parental importance to education?

## 2. Materials and methods

### 2.1. Study design, sampling and sample size

The research study design was a "Cross-Sectional" or one-shot or status studies based on its time horizon (Babie, 1989). The study was carried out in District Malakand during the years 2018–19. The District Malakand was purposively selected as it is one of the top Districts in education as per the last report of Alif Ailaan and SDPI with respect to education Score (Dawn, 2017).

For selecting a representative sample, a multistage stratified random sampling technique was adopted. At first stage both the two administrative units (Tehsils) namely *Batkhela* and *Dargai* of District *Malakand* were selected. At the second stage 28 Union Councils (UCs) of both the selected tehsils were segregated into rural and urban Union Councils. Out of these 28 Union Councils 5 were urban and 23 rural with a ratio of 1:5, so on these ground total of 12 Union Councils including two urban and ten rural Union Councils were randomly selected. From these 12 selected Union Councils, 36 schools, 3 schools from each Union Council, were randomly selected including one government boy's school, one government girl's school and one private school from each Union Council. In this way 6 and 30 schools were selected from urban and rural Union Councils respectively.

At the third and the final stage sample frame was developed, total number of students in the 9<sup>th</sup> and 10<sup>th</sup> class in the selected 36 schools constituted the sampling frame. As per office record of the selected schools, total number of students in 9<sup>th</sup> and 10<sup>th</sup> class in the selected 36 schools was 7952 students out of which 6701 students were from government schools and 1251 from private schools, moreover, 3959 among these students were girls and 3993 boys. Total required sample size for 7952 students was worked out as 448 (Eq. (1)) and proportionally allocated (Eq.(2)) to each school (Table 1) according to number of secondary level students (class 9 and 10) in them (Chaudhry, 2009; Bowley, 1926).

$$n = \frac{N\hat{p}\hat{q}Z^2}{\hat{p}\hat{q}Z^2 + Ne^2 - e^2} \tag{1}$$

Where, N = total number of students in 9<sup>th</sup> and 10<sup>th</sup> class in selected secondary schools = 7952, p = population proportion = 0.50, q = opposite proportion q = (1-p) = 0.50, z = confidence level = 1.96, e = margin of error = 0.045, n = 448.

$$n_h = (N_h / N) * n \tag{2}$$

Where n<sub>h</sub> is the sample size for stratum h, N<sub>h</sub> is the population size for stratum h, and N is total population size, and n is the total sample size.

## 2.2. Study respondents

To meet the study objectives students of class 9th and 10th of age group 13–18 years were randomly selected to portray information. Data was collected in secondary school from face to face interviews with students with the permission of the local education department and school head. For data collection date and time was finalized with mutual understanding with the school heads and taking prior consent from both class teacher and students.

## 2.3. Conceptual framework

The conceptual framework of the study comprises four independent variables school role in improving parenting skills, respondent gender, parents' literacy status and parental importance to children's education and one dependent variable children's academic performance as given in Table 2.

## 2.4. Measurement of variables

For measurement of school role in improving parenting skills, the instrument developed by Epstein (1995) and her colleagues at Johns Hopkins University guided the assessment of students. In the present study school role in improving parenting skills consist of (5 items) and a positive response on 3 or more items was considered school active role. Attributes for measurement of respondents response over independent variable i.e. school role in improving parenting skills are (Yes and No). The scale for school role in improving parenting skills exhibited Cronbach's alpha coefficient value (α = 0.72) which is above 0.7 (Nachmias and Nachmias, 1992), therefore, the variables was indexed for multivariate analysis.

For measurement of student's academic performance, percent marks of the students in the last exam are considered. Attributes for measurement of respondents response over dependent variable i.e. Academic performance are A-1 Grade, 1st Division, 2nd Division, and 3rd division and below.

Respondents' gender was measured at two levels i.e. (male and female), literacy status of parents was measure at two levels i.e. (literate and illiterate), and the parental importance to children education was measured at two levels (more importance and less importance).

### 2.4.1. Data collection tool

Data was collected through a well thought out Interview Schedule.

## 2.5. Data analysis

The collected data was coded and entered in SPSS software for its analysis. Chi-square test and Kendall's Tau-c tests (Eqs. (3) and (4)) were applied to test the strength and direction of association of school role in improving parenting skills and children academic performance while keeping student gender, parent literacy status and parental importance to children education as control variables. Moreover, Fisher Exact test was introduced as an alternate to chi-square test where the condition of Chi-square test (Sufficiently large sample size that no expected frequency is less than five) was violated (Baily, 1982).

Measurement of Chi-Square values are based on the procedure proposed by Mary (2009).

$$\chi^2 = \sum_i \frac{(O_i - E_i)^2}{E_i} \tag{3}$$

Where O<sub>i</sub> represents the observed number of cases in category i, and E<sub>i</sub> represents the expected number of cases in category i

Kendall's Tau-c is expressed through formula below; (Nachmias and Nachmias, 1992).

$$T^c = \frac{2(n_c - n_d)}{n^2 \frac{(m-1)}{m}} \tag{4}$$

Where n<sub>c</sub> = Number of core cordart pairs, n<sub>d</sub> = Number of dicordant pairs, r = Number of the row, c = Number of columns and m = min (r, c)

**Table 1.** Allocation of required sample to selected schools.

School Type	Selected schools		Enrolment		Total students	Sample Size
	Urban	Rural	9 <sup>th</sup> class	10 <sup>th</sup> class		
Government Boys	2	10	1805	1435	3240	183
Government Girls	2	10	1799	1662	3461	195
Private	2	10	693	558	1251	70
Sub Total	6	30	4297	3655	7952	448

### 3. Results

#### 3.1. The findings in Table 3 showed association between school role in improving parenting skills and children academic performance

The results portrayed that 71.4% of the students who secure A-1 grade agreed that their school advising parents to listen to their child reading or read loud with their children, compared to 74.2% of those securing 1<sup>st</sup> division, 75.4% of those securing 2<sup>nd</sup> division and 46.6% of those securing 3<sup>rd</sup> division and below. The results showed that school advising parents to listen to their child reading or read aloud with their children was found highly significant ( $P = 0.000$ ) and positive ( $\text{Tau-c} = 0.163$ ) with students' academic performance. Furthermore, the results show that for all those students who secure A-1 grade, 80% agreed that their school informing parents on skills to assist students improvement, compared to 63.5% of those securing 1<sup>st</sup> division, 60% of those securing 2<sup>nd</sup> division and 42% of those securing 3<sup>rd</sup> division and below. The results showed a highly significant and positive ( $P = 0.000$ ,  $\text{Tau-c} = 0.192$ ) association between school informing parents on skills to assist student's improvement and students' academic performance. Pedagogy is emerging as a vast and important subject specialization that helps teachers to understand the psychological basis of learning. Effective understanding and implementation of these principles improve the learning process of children. Furthermore, enhanced positive results are important when both teachers and parents understand and implement these principles both at school and at home. Parents, being non-specialized teachers, require a basic understanding of these principles e.g. encouraging children to read aloud while parents listening to them or reading the lessons loudly with the children. Efforts from parents in the implementation of these learning strategies are linked to improve the learning process and subsequently to improve academic performance. Along with this efforts from school for improving parent skills to properly socialize their children and help their children in effective utilization of their time with focused on their school engagement positively contributed to better academic achievements of children as shown by highly significant and positive  $\text{Tau-c}$  values.

Moreover, the results show that for all those students who secure A-1 grade, 60% agreed that their school assisted parents to help students set their academic goals, compared to 51.2% of those securing 1<sup>st</sup> division, 38.5% of those securing 2<sup>nd</sup> division and 25% of those securing 3<sup>rd</sup> division and below. The results of school assisting families to help students set their academic goals and students' academic performance was found highly significant ( $P = 0.000$ ) and positive ( $\text{Tau-c} = 0.225$ ). Moreover, the results show that for all those students who secure A-1 grade, 88.6% agreed that their school provided information to families on how to monitor and discuss school work at home, compared to 62.3% of those securing 1<sup>st</sup> division, 44.6% of those securing 2<sup>nd</sup> division and 47.7% of those securing 3<sup>rd</sup> division and below. The results of the provision of information to families on how to monitor and discuss schoolwork at home and students' academic performance were found highly significant ( $P = 0.000$ ) and positive ( $\text{Tau-c} = 0.215$ ).

Setting goals and set path for achieving these goals are important for any planned, organized and directed efforts including education. The modern education system has adopted these principles and supports the students in setting their goals along with defining path for achieving these goals. A step ahead, these schools facilitate parents in helping their children not only to set the path and goals for their children but also to upraise parents about possible monitoring strategies to ensure the implementation of these plans. This planned support sparsely existed in the study area where only a limited number of parents were informed by the school of how to plan and monitor educational goals for their children. However, where existing these efforts were fruitful in securing enhanced academic achievements in children than the rest of the students as evident from highly significant and positive test results.

Moreover, In addition, the results portrayed that 82.9% of the students who secure A-1 grade agreed that their school gave regular

collaborative home work to students, compared to 75.8% of those securing 1<sup>st</sup> division, 50.8% of those securing 2<sup>nd</sup> division and 34.1% of those securing 3<sup>rd</sup> division and below. The results of giving regular homework to students and students' academic performance was found highly significant ( $P = 0.000$ ) and positive ( $\text{Tau-c} = 0.351$ ). Keeping in view the importance of education, it requires additional engagement of children in learning and educational activities beyond school. Spending added time in educational activities provide better learning opportunities through revision and practicing of subject matter. Moreover, it distributes the learning load between parents and teachers and facilitates completion of course subject. Parents generally indulged in homework of their children. It develops their interest in child education. Such parents are found better aware of educational problems of their children and keen to overcome these problems. Therefore, a highly significant and positive result was established between giving regular homework to students of both genders and their academic performance.

#### 3.2. The results in Table 4 highlighted the association between school role in improving parenting skills and children academic performance (controlling gender of the respondents)

The results indicated that for all those male students who secured A-1 grade, 58.3% agreed that their school actively involved in improving parenting skills, compared to 57.9% of those securing 1<sup>st</sup> division, 38.5% of those securing 2<sup>nd</sup> division and 30.2% of those securing 3<sup>rd</sup> division and below. Similarly, for all those female students who secured A-1 grade, 91.3% agreed that that their school actively improving parenting skills, compared to 80.6% of those securing 1<sup>st</sup> division, 73.1% of those securing 2<sup>nd</sup> division and 54.3% of those securing 3<sup>rd</sup> division and below. The association of improving parenting skills by school on the academic performance of children in context of respondents gender was positive ( $\text{Tau-c} = 0.248$ ) and significant ( $P = 0.004$ ) for males. The association of the above said variables was also positive ( $\text{Tau-c} = 0.199$ ) and significant ( $P = 0.003$ ) for female respondents. Value of level of significance and  $\text{Tau-c}$  for entire table show highly significant and positive ( $P = 0.000$  &  $\text{Tau-c} = 0.267$ ) association between school role in improving parenting skills and academic performance for both genders. Moreover, the findings of the study portrayed that the association of school role in improving parenting skills and children academic performance is spurious based on gender of the respondents as depicted by variation in Kendal  $\text{Tau-c}$  and chi square significance values for both genders. Where male respondents have a slighter edge over female respondents in securing better academic grades. It could be attributed to local cultural situation of patriarchy and male preferences that pave the way for gender based performance for male children and provide facilities in all walk of life including education.

#### 3.3. The results in Table 5 illustrated the association between school role in improving parenting skills and children academic performance (controlling parent literacy status of the respondents)

The results highlighted that for all those students whose parents were literate and their school actively involved in improving parenting skills, 81.8% secured A-1 grade, compared to 67.9% of those securing 1<sup>st</sup> division, 60% of those securing 2<sup>nd</sup> division and 35.6% of those securing 3<sup>rd</sup> division and below. Similarly, for all those students whose parents were illiterate and their school actively involved in improving parenting skills, 79.2% secured A-1 grade, compared to 70.9% of those securing 1<sup>st</sup> division, 47.5% of those securing 2<sup>nd</sup> division and 48.3% of those securing 3<sup>rd</sup> division and below. The association of school role in improving parenting skills and academic performance of children in context literate parents was positive ( $\text{Tau-c} = 0.329$ ) and highly significant ( $P = 0.000$ ). Similarly, the association of the above said variables was positive ( $\text{Tau-c} = 0.201$ ) and significant ( $P = 0.003$ ) for illiterate parent. Value of level of significance and  $\text{Tau-c}$  for entire table show a highly significant ( $P = 0.000$ ) and positive ( $\text{Tau-c} = 0.267$ ) association

**Table 2.** Conceptual framework.

Independent Variables	Dependent Variable
Gender	Children academic Performance
Parent literacy status	
Parental importance to children education	
School role in improving parenting skills	

between school role in in improving parenting skills and academic performance for both literate and illiterate parents. Furthermore, the results of Kendal Tau-c and chi square significance values depicted spuriousness of relation among school role in improving parenting skills and children academic performance while controlling parental literacy status. The results highlighted that school role in improving parenting skills is affected more positively on the academic performance of children having literate parents. The literate parents are in good position to understand the materials provided by school on child development and more involved in their children academics at home this may be the probable reasons of higher academic performance of children having literate parents. From above discussion it is depicted that role of school in child learning is not limited to only the boundry walls of school rather school can helps in learning of children at home by helping parents in understanding and implementing positive educational strategies at home. In this connection the schools upraise parents regarding setting educational goals, planning education strategies, monitoring educational plans at home, checking child school progress and facilitating children in their homework. Effective implementations of these strategies are positive

association of better educational outcomes in children. Moreover, results in Table 5 indicated that the higher proportion of students who secured A1 grade, their parents were illiterate. The illiterate parents because of their illiteracy are well aware of the importance of education in securing a better life, as these parents faced a lot of hurdles in their life due to their illiteracy. These parents therefore, wished and tries to provide every facilities to their children to secure better academic grades by their children, so as to help their children in securing better life standards. Similarly, the reasons behind higher achievements of children having illiterate parents are other than parental factors such as positive peer group, conducive school learning environment.

*3.4. Results in Table 6 disclosed the association between school role in improving parenting skills and children academic performance (controlling parental importance to education of the respondents)*

Results portrayed that for all those students whose school actively involved in improving parenting skills and their parents gives more importance to their education, 85.7% secured A-1 grade, compared to 45.5% of those securing 1<sup>st</sup> division, 53.8% of those securing 2<sup>nd</sup> division and 29.4% of those securing 3<sup>rd</sup> division and below. Similarly, for all those students whose parents gives less importance to their children education and whose school actively involved in improving parenting skills, 67.9% secured A-1 grade, compared to 51.5% of those securing 1<sup>st</sup> division, 65.4% of those securing 2<sup>nd</sup> division and 40.5% of those securing 3<sup>rd</sup> division and below. The association of school role in improving parenting skills on the academic performance of children in context of parent giving more importance to children education was positive (Tau-c = 0.244) and significant (P = 0.012). However, the

**Table 3.** Association between school role in improving parenting skills and children academic performance.

school role in improving parenting skills	Attitude	Children academic performance					Statistics
		A-1 Grade	1 <sup>st</sup> Division	2 <sup>nd</sup> Division	3 <sup>rd</sup> Division and below	Total	
Your school asks parents to listen to their child read or read aloud with their child	Yes	25 (71.4)	193 (74.2)	49 (75.4)	41 (46.6)	308 (68.8)	$\chi^2 = 25.196 (0.000)$ $T^c = 0.163$
	No	10 (28.6)	67 (25.8)	16 (24.6)	47 (53.4)	140 (31.2)	
Your school inform parents on how to assist students with skills they need to improve	Yes	28 (80)	165 (63.5)	39 (60)	37 (42.0)	269 (60)	$\chi^2 = 18.958 (0.000)$ $T^c = 0.192$
	No	7 (20)	95 (36.5)	26 (40)	51 (58)	179 (40)	
Your school assist families in helping students set academic goals	Yes	21 (60)	133 (51.2)	25 (38.5)	22 (25)	201 (44.9)	$\chi^2 = 22.514 (0.000)$ $T^c = 0.225$
	No	14 (40)	127 (48.8)	40 (61.5)	66 (75)	247 (55.1)	
Provides information to families on how to monitor and discuss school work at home	Yes	31 (88.6)	162 (62.3)	29 (44.6)	42 (47.7)	264 (58.9)	$\chi^2 = 23.998 (0.000)$ $T^c = 0.215$
	No	4 (11.4)	98 (37.7)	36 (55.4)	46 (52.3)	184 (41.1)	
Your school gives you regular homework	Yes	29 (82.9)	197 (75.8)	33 (50.8)	30 (34.1)	289 (64.5)	$\chi^2 = 60.469 (0.000)$ $T^c = 0.351$
	No	6 (17.1)	63 (24.2)	32 (49.2)	58 (65.9)	159 (35.5)	

**Table 4.** Association between school role in improving parenting skills and children academic performance (controlling gender of the respondents).

Gender	School role in improving parenting skills	A-1 Grade	1 <sup>st</sup> Division	2 <sup>nd</sup> Division	3 <sup>rd</sup> Division and below	Total	Statistics $\chi^2$ (P-Value) $T^c$	Level of Significance for Entire Table
Male	improving parenting skills	7 (58.3)	70 (57.9)	15 (38.5)	16 (30.2)	108 (48)	$\chi^2 = 13.376 (0.004)$ $T^c = 0.248$	$\chi^2 = 33.001 (0.000)$ $T^c = 0.267$
	Not improving parenting skills	5 (41.7)	51 (42.1)	24 (61.5)	37 (69.8)	117 (52)		
	Total	12 (100)	121 (100)	39 (100)	53 (100)	225 (100)		
Female	improving parenting skills	21 (91.3)	112 (80.6)	19 (73.1)	19 (54.3)	171 (76.7)	$\chi^2 = 13.936 (0.003)$ $T^c = 0.199$	
	Not improving parenting skills	2 (8.7)	27 (19.4)	7 (26.9)	16 (45.7)	52 (23.3)		
	Total	23 (100)	139 (100)	26 (100)	35 (100)	223 (100)		

**Table 5.** Association between school role in improving parenting skills and children academic performance (controlling parent educational status of the respondents).

Parent Educational status	School role in improving parenting skills	A-1 Grade	1st Division	2nd Division	3rd Division and below	Total	Statistics X2 (P-Value) Tc	Level of Significance for Entire Table
Literate	improving parenting skills	9 (81.8)	55 (67.9)	15 (60)	21 (35.6)	100 (56.8)	$\chi^2 = 17.794$ (0.000) Tc = 0.329	$\chi^2 = 33.001$ (0.000) Tc = 0.267
	Not improving parenting skills	2 (18.2)	26 (32.1)	10 (40)	38 (64.4)	76 (43.2)		
	Total	11 (100)	81 (100)	25 (100)	59 (100)	176 (100)		
Illiterate	improving parenting skills	19 (79.2)	127 (70.9)	19 (47.5)	14 (48.3)	179 (65.8)	$\chi^2 = 13.927$ (0.003) Tc = 0.201	
	Not improving parenting skills	5 (20.8)	52 (29.1)	21 (52.5)	15 (51.7)	93 (34.2)		
	Total	24 (100)	179 (100)	40 (100)	29 (100)	272 (100)		

association of the above said variables was positive (Tau-c = 0.067) and non-significant (P = 0.087) for parent giving less importance to children education. Value of level of significance and Tau-c for entire table show a significant and positive association (P = 0.001 & Tau-c = 0.144) between school role in improving parenting skills and academic performance with respect to parent giving importance to children education or not. It was depicted from Kendal Tau-c values and chi square significance values that the association of school role in improving parenting skills and the academic performance of children is spurious based on parental value towards children education. Children whose parents give more importance to children education and their school play active role in improving parenting skills are more liable to secure better educational grades than those whose parent give less importance to children education and their school did not play active role in improving parenting skills as depicted by higher Tau-c value in them. Moreover, results in Table 6 indicated that the higher proportion students who secured A1 grade were from parents who paid less attention to their studies. The probable reason for achievements of such students in higher grade is due to various factors other than parental importance to education such as positive peer group, conducive school learning environment.

**4. Discussion**

From ecological framework partnership between two most influential socializing spheres-family and school directly contributed to socio-emotional and cognitive development of children (Bronfenbrenner, 1987), which is directly associated with their academic performance. The current study has two basic aims. Firstly, the study investigate the association of children academic performance with school role in improving parenting skills. Secondly, to assess that whether the association between school role in improving parenting skills and children academic performance varies with keeping student gender, parental literacy status and parental importance to children education as control variables.

Similar to the findings of the previous studies the findings of this study suggest that learning process in children is a complex socio-psychological phenomenon for which several complex pedagogical approaches are designed. School teachers, during course of their training

learn and practice these approaches to systematically improve the learning process in children. Most of the parents, especially in rural areas of developing countries are unaware of these principles and follow conventional ways of teaching their children at home. The modern schooling system emphasis for devising such interventions those are helpful to the parents to facilitate their children in learning at home.

Reading with a child or lensing to child while, they are reading is one of the basic academic tools to make the student learn and improve the reading proficiency of different languages. This method is conventionally practiced at school and is effective in memorizing new ideas and concepts. A singing rhythm in this reading process can further improve the reading and learning abilities of the students. Therefore, most of the schools were found suggesting parents to use this basic learning tool, for improving the learning abilities of their children. There are, however, additional skills required on part of parents to keep an eye on the progress of their children and regularly check their work efficiency. For this purpose parents were in touch with school administration to polish their skills regarding this important aspect of child education. Schools are always on the lead role for child formal education. It is the school that takes the responsibility to train the parents and monitoring the school work of their children at home to discuss with their children. This important aspect of information provisions, however, is quiet weak in the study area.

These findings are in line with the findings of Lydia (2018) who exemplified educational endeavours as a journey where goals are set and achieved through planned efforts. Similarly, setting educational goals and its achievement plans improve intrinsic and extrinsic motivation level of the children. These motivational forces in turn provide energies to work hard, engaging team work polish leadership qualities and march towards academic achievements. Patel et al. (2014) investigated that under the modern concept of education some important interventions are introduced that target parents to improve learning process of their children at home. Merga (2017) added that if reading of language is supplemented by listening can improve the learning of language. Therefore, Jeremy (2018) proposed reading loud with children so that several of their senses are utilized for learning vocabulary, improved conversation, support writing and enhance communication skills. The study confirmed that reading habits, for example, out of school reading and reading for

**Table 6.** Association between school role in improving parenting skills and children academic performance (controlling parents' giving importance to children education).

Parent give importance to children education	School role in improving parenting skills	A-1 Grade	1st Division	2nd Division	3rd Division and below	Total	Statistics X2 (P-Value) Tc	Level of Significance for Entire Table
More importance	improving parenting skills	6 (85.7)	22 (66.7)	19 (48.7)	18 (35.3)	65 (50)	$\chi^2 = 11.676$ (0.009) Tc = 0.320	$\chi^2 = 33.001$ (0.000) Tc = 0.267
	Not improving parenting skills	1 (14.3)	11 (33.3)	20 (51.3)	33 (64.7)	65 (50)		
	Total	7 (100)	33 (100)	39 (100)	51 (100)	130 (100)		
less importance	improving parenting skills	22 (78.6)	160 (70.5)	15 (57.7)	17 (45.9)	214 (67.3)	$\chi^2 = 11.419$ (0.010) Tc = 0.156	
	Not improving parenting skills	6 (21.4)	67 (29.5)	11 (42.3)	20 (54.1)	104 (32.7)		
	Total	28 (100)	227 (100)	26 (100)	37 (100)	318 (100)		

pleasure and parental role is pivotal in developing children's interest in reading because healthy reading activities can help them to develop critical thinking and analytic skills. This could also develop their vocabulary to a great extent. Consequently, children exhibit improvement in their overall academic performance. The findings confirmed that if parents focused on reading improvement of their children in early ages, they could better develop reading as a routine activity (Bano et al., 2018).

Initiation of collaborative efforts from schools by adopting strategies like home visits, sending children progress reports, telephone calls, giving regular homework to children improves parents' motivation and involvement in children's education. This leads to proper supervision of the homework assignment by parents. Collaboration between teachers and parents leads to better academic performance in children (Miguel and Abulon, 2016). Assigning homework to students has various academic benefits such as it enables students to acquire knowledge, improve their learning skills, source of communication between children and parents and children and teachers, improve collaborative skills in students and ultimately contributed to their higher academic performance (Songsirisak and Jitpranee, 2019). However, excessive homework was reported to overburden the children. Also, over-emphasis from parents to complete the homework by hooks or crooks stopped the learning process and the educational activity becomes a ritual with no use of mind (Richard et al., 2017). Fernandez-Alonso et al. (2015) added that homework is also a positive social control mechanism for students and helps children to be more disciplined and conscious to perform better in school. An appropriate response from parents in completing a child's homework is more likely to accomplish better educational grades.

The parent-school interaction, as a meso level system of child socialization, is supplemented through the initiation of such activities from schools that facilitate parents to improve the learning process of children at home. Kaggwa (2003) further added that in developing countries these facilities are scarce and provided in a few educational institutions only. Moreover, the provision of quality education is gender biased in favor of males in patriarchal system. Therefore, it is the male gender that is benefited more from these facilities and exhibits better academic performance than girls under the school role in improving parenting skills (Arul and Barathi, 2016). Moreover, parental literacy status is one of the influential factors in shaping the academic performance of children. Literate parents are in good position to properly look after the educational needs of their children and take part in their educational tasks such as help them in their homework, check their daily diaries, etc.

The educational outcome of students are better when parents are educated than children whom parents are illiterate or who have a low level of education (UNESCO, 2008; Drajea, 2015). The illiterate parents faced many difficulties in being involved in their children's education (Menheere and Hooge, 2010). Students from highly educated parents achieved higher academic grades than students of low educated parents (Bakar et al., 2017). The findings of Bierman et al. (2015) supported these results that the level of parental education is the major determinant in children's educational outcomes, frequency and quality of how parents use home learning materials to shape the academic performance of their children. For example, illiterate parents are reluctant to be involved in such practices due to their low level of education. Giuliano et al. (2000) whereas, the participation of parents in these interventions increased with an increase in the level of education, with a more positive effect on the academic performance of their children (Sheldon and Epstein, 2005).

Parents who give importance to their children's education remain involved with their children in the educational activities at home, participate in school functions, meetings, and visit schools to know about their children's progress, engaged with the homework at home. These types of parents increase the motivation level of their children towards learning which is linked with their higher academic performance in school. It was found by Llamas and Tuazon (2016) that when the schools engage parents in the school activities the parents feel comfortable.

Stronger the collaboration between parents and teachers better would be the physical and academic performance of the school. Various parents training programs and workshops are devised to train parents in shaping their parenting style for efficient learning (DEECD, 2013). Parenting aspirations of child education, however, is the important factor determining successful outcomes of these programs. Those parents who are positive towards their children's education are more interested and more benefited from such training and mold their home environment accordingly (Siddiqui, 2011). Parental expectations and behavioral support to children in shape of discussion over school progress, checking homework assignments, visit children at school, etc. boost learning motivation in children that enhanced their academic performance (Zhao and Yanbi, 2012).

## 5. Conclusions

Teachers and parents are the most influential actors in shaping the educational outcomes of children. Therefore, school parent partnership as the meso level system is directly related to children's academic performance. The study results disclosed that school active role in capacity building interventions for parents like building capacity of parents on how to set academic goals for children, how to assist them in reading, how to discuss and monitor school progress of children and giving collaborative homework to students had a significant and positive association with the academic performance of children. Furthermore, it was concluded that student gender, parent literacy status and parental importance to education explained variation in academic performance with respect to school role in improving parenting skills as highlighted by the study results. The results disclosed that in a patriarchal society like that in the study area more emphasis was given to spending on education of boys in comparison to girls therefore, the boys' children are securing better academic grades. Furthermore, it was noted that children having literate parents and whose parents paid more attention to their education perform better in school, therefore, parental literacy and parental importance to education are the significant contributing factors of better academic outcomes in children.

## 6. Recommendations

The study suggested that to help children in acquiring a productive and nurturing environment for proper socialization and securing better educational outcomes the role of the school as a specialized agency of children education would not be limited to school only but also may contribute to promoting a conducive learning environment at home. Educational institutions should capacitate parents through the launching of learning initiatives for parents on topics like children's psychological development, child protection, how to promote conducive learning environment at home and how to efficiently participate in childhood education to empower parents for better support in children education. Communication from school to home or home to school is lacking especially on part of government schools, the government must initiate uniform policies and strategies for regular communication between home and school for both government and private schools to achieve fruitful results in children.

## 7. Limitations and implications of the study

This study included only students of secondary schools from District Malakand where Pushtun Culture is dominant with overwhelming patriarchal values. Future studies are needed in other parts of the country and other parts of world to confirm and verify the findings of the present study and to establish the universality or otherwise of association between school role in improving parenting skills and children's academic performance. Also, in the present study only student gender, parental literacy and parental importance to children education were kept as

control variables to found the association between the study variables. There is a need for further studies to find out other important predictors and their interactive effects on children academic performance either positively or negatively.

### Data availability statement

Data included in article.

### Declarations

#### Author contribution statement

N. Ali, A. Ullah: Conceived and designed the experiments the experiments, Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

M. Shah: Conceived and designed the experiments; and contributed reagents, materials, analysis tools or data.

A. Ali: Analyzed and interpreted the data.

S. A. Khan, A. Shakoor, A. Begum, S.I Ahmad: Contributed reagents, materials, analysis tools or data.

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All the require data is provided in the research article.

#### Additional information

No additional information is available for this paper.

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