

## **Gender Differences and Structural Relationships among Social Impacts, Performance Beliefs, Motivation and Academic Achievement of the Students at Intermediate Level**

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### **KEY WORDS**

Teacher-Student Relationship,  
Peers' Academic Value,  
Performance Beliefs,  
Motivation, Academic  
Achievement

### **ABSTRACT**

This research intended to scrutinize gender distinctions and the fundamental associations of task values, performance beliefs, teacher-student relationship, peers' academic value, students' intrinsic and extrinsic motivation and educational engagement and students' achievement. The sample of this research was 400 second year science students (Pre-Medical), in Lahore City, Pakistan. The data were analyzed using Independent sample *t*-test and Structural Equation Modeling. The results revealed no gender differences across all variables except students' extrinsic motivation. The results highlighted significant relationships between variables of the study. Results also demonstrated that those students who achieve higher grades were having good teacher-student relationships, and peer relationships, moreover such students were having higher performance beliefs, intrinsic motivation and extrinsic motivation. Most of the independent variables indirectly affected the dependent variables through different mediators. Besides, there was mediation effect of teacher student relationship, performance beliefs, academic value of peers, academic engagement, intrinsic motivation and extrinsic motivation on students' academic achievement.

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## **Introduction**

Discussion is a teaching technique involving an exchange of ideas with active learning and participation by all concerned” (Orlich, Harder, Trevisan, Brown & Miller, 2016, p. 258). In classroom discussion, teachers and students get involved in a two way exchange of ideas about the subject matter under discussion (Henning, 2008). The purpose of this study is to explore the experiences of university teachers and students about classroom discussion as a teaching method.

The learning and achievement of the students depends upon a number of important factors, such as motivation, performance beliefs, self-concept, commitment and academic engagement ( Eccles, 2002; Fan, 2011) Success or failure of the students is linked with expectancies and anticipations of individuals and their enactment (Atkinson, 1957). Student performance beliefs are directly related to the specific task and the expected value of the personal task, which in turn determine the behavior of the students (Fan, 2011). Noteworthy gender differences in the competency of the students in the school have been found by many researchers (Caprara, Vecchione, Bove, Vecchio, Barbaranelli, & Bandura, 2008; Eccles et al., 1993; Vallerand, Fortier, & Guay, 1997). Their results showed that females were more competent than males especially in language and artistic work. Similar findings were shared by other studies as Italian students 12-18 years of age showed that women had higher self-regulatory efficacy (Caprara et al., 2008) and women had greater learning prospects than men (Rigsby, Stull, & Morse-Kelley, 1997). The question why females perform differently in different subjects needs deep digging out into causes and cures. The present study intended to examine gender differences in teacher-student relationships, peers’ academic value, performance beliefs, and academic engagement. It also envisioned to explore the direct and indirect relationship of peers’ academic value, teacher-student relationship, and students’ performance beliefs with student academic engagement.

## **Literature Review**

Expectancy Theory has gained much attention in recent years. It has not only contributed to an improved understanding of attitudes and beliefs but also established useful approaches in predicting a wide array of intents and behaviors of students. Expectancy theory of motivation has been extensively functional to understand individuals’ task selections and behaviors.

Expectancies can be seen as the ability of individual’s beliefs or expectations for success (Chiang, Jang, Canter, & Prince, 2008). Research in the expectancy-value tradition have extended these definitions, and

contribute to the literature on how the expectations of individuals for achievement, personal task values, and performance beliefs intermediate their inspiration and accomplishment in educational and physical environments (Wigfield, 1994). Many researches have been conducted to explain the attitudes and beliefs of students using the theory of expectancy value (Eccles & Harold, 1991; Shapiro & Ulrich, 2002; Wigfield et al., 1997; Xiang, McBride, Guan, & Solmon, 2003).

Researches conducted to investigate gender differences in students' beliefs about capabilities and the individual's personal worth of task are abundant in number (Jacobs et al., 2002; Fredricks & Eccles, 2002; Wigfield & Eccles, 1992). Eccles (1983) established an expectancy model as an outline to considerate early adolescents' performance and their selection in the domain of Mathematics achievement. They projected that the performance of children, determination, and selection of achievement tasks are predicted more openly to their expectations of attainment in the tasks and the personal value attributed to success in these assignments.

Hampton and Mason (2003) study on high school students found that gender does not affect the overall motivation aspect. Contrary to this finding, in a nationwide population of 10 grade students (Fan, Lindt, Arroyo-Giner, & Wolters, 2009) females display much lesser ability in Mathematics, but more ability in languages. Vallerand et al. (1997) also found noteworthy gender differences in the competency of the students in the school in favour of girls. Same findings were shared by another global study of Italian students 12-18 years of age (Caprara et al., 2008). While examining gender differences in personal task value, one study indicated that there were substantial differences in reading between boys and girls, but not in Mathematics (Jacobs et al., 2002). In another study, Eccles et al. (1993) found that females are giving much worth to the reading, but not to mathematics, and the boys graded upper command in mathematics. Jacobs et al. (2002), and Eccles et al. (1993) informed that the girls were giving more value to linguistics and the artistic work after entering high school, whereas boy's worth steadily declined in the linguistic and artistic work.

Markus, Cross, and Wurf (1990) proposed the interdependence of societal associations that are probable to affect females' philosophy and feeling. Hughes and Kwok (2007) found that female students have more supportive teacher-student relationship than did male students. This result is consistent with the Birch and Ladd (1997), who found that teachers reported closer relationship with the girls as compared to boys which affect the girls performance positively.

Overall, all these studies have made us understand that the gender differences exist in school motivation, performance belief, subjective task value, and social impacts. It is increasingly recognized that social factors and educational expectations or achievement motivation play a vital role in promoting students' achievement and performance in educational context. In

spite of extensive research, an important gap in the research exists as traditional attempts have been made to describe gender differences in academic motivation that either do not consider the influence of social impacts or just focus on the main properties. It remains still unclear, how the associations between motivational and social factors differ between both groups and how young people experience social relations, achievement motivation, and performance belief of different gender.

Modern school psychologists have collective understanding that educational expectation is not developed in isolation; but developed in a complex network of environmental (Anderman & Kaplan, 2008). The expectancy value theory recognizes a big role in the beliefs, attitudes and behaviors of socializers in the development of expectancies and values of adolescents. And many studies indicate that students' educational expectation is closely linked to what they see as the encouragement, help and support given by their teachers (Furrer & Skinner, 2003; Patrick, Ryan, & Kaplan, 2007; Wentzel, 1998). It has been observed that the relationship between the relationship between the teacher and students will be a strong indicator of beliefs (Fan et al., 2009; Patrick et al., 2007) and motivation (Wentzel, 1998). Adolescents from starting spend more and more time with their peers (Berndt, 1999; Steinberg, 1986) and create a strong bond with their peer's opinions, values, beliefs and behaviors (Fan, 2011). It is proved by research that students who choose friends with negative behaviors and low academics often experience a decline in their own motivation, behaviors, and academics (Ryan, 2001). On the contrary, students enter into friendship with the most positive behavioral characteristics develop more positive behavior in the classroom (Nelson & DeBacker, 2008), experience an escalation in motivation (Ryan, 2001), espouse academic goals (Urdu, 1997) and validate academic achievement progressively (Berndt, 1999; Ryan, 2001).

Many researchers and educators in socio-psychological sciences have concerns about children's performance in achievement perspectives. An achievement perspective is one in which a child is worried about its potential for standards to meet expected performance activity (Watkinson, Dwyer, & Nielsen, 2005). The behaviors may help to decide the child to carry out specific tasks include; exercise persistence, intensity and effort in the performance of these functions; and the choice of strategies and actions to achieve the objectives of the task. Therefore, Expectancy theory helps to predict that decisions of individuals to take part in the performance tasks directly related to their expectations for a successful implementation of these tasks and the values they hold for the various options available to them (Watkinson et al., 2005). Thus, the primary objective of this study was to add to the literature by examining the gender differences, the main effects and the structural relationships between students' intrinsic and extrinsic motivation, performance beliefs, task values, teacher–student relationships,

peer's academic value, educational engagement and learning achievement.

**Methodology**

**Population and Sample**

Students of FSc (Pre-Medical) studying in Lahore District were the population of study. Convenient sampling method was used to collect data from 400 second year students. In this research a Likert type questionnaire was used to measure five variables of the study i.e *Academic Engagement*, *Peer relationship*, *Teacher-Student Relationship*, *Performance Belief*, *Intrinsic Motivation and Extrinsic Motivation*. Moreover, academic achievement and socio economic status of the students were also measured. The reliability of the questionnaire was also investigated and the Cronbach Alpha values were; *Academic Engagement* 0.812 , *Peer relationship* 0.68, *Teacher-Student Relationship* 0.77, *Performance Belief* 0.80, *Intrinsic Motivation and Extrinsic Motivation* 0.70. The data were analyzed through SPSS by various statistical techniques such as Structural Equation Modeling to identify the fundamental relations between different variables and independent sample *t* test to see the gender differences.

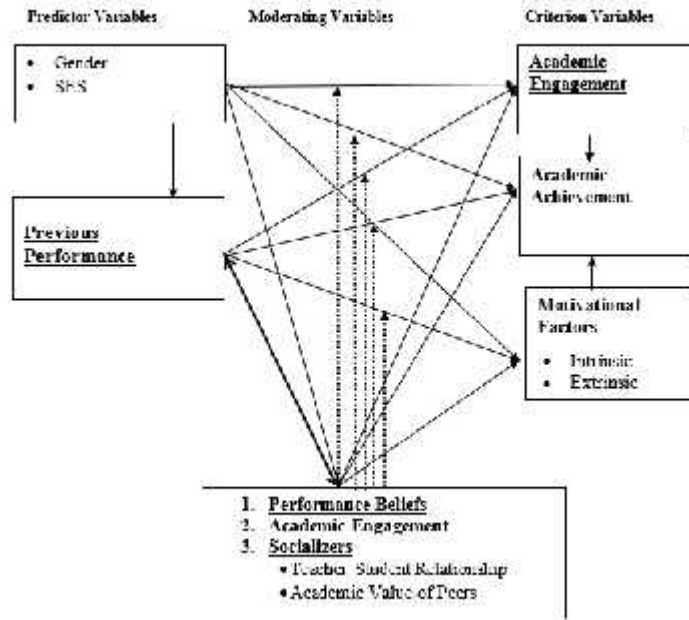


Figure 1: Hypothetical Model of the Study

### Findings

To address the primary research inquiries of the current research, independent sample *t*-test and path analysis under structural equation modelling (SEM) procedure was used by utilizing AMOS v.18.

Table 1

*Mean Gender difference in Academic Engagement, Peer Relationship, Teacher-Student Relationship, Performance Belief, Intrinsic Motivation and Extrinsic Motivation*

Independent variables	Mean	SD	t-values	P
1. Academic Engagement	M 81.61 F 82.70	13.90 14.34	.766	.444
2. Peer Relationship	M 25.73 F 26.73	5.71 5.24	1.806	.072
3. Teacher-Student Relationship	M 54.02 F 54.55	9.53 9.06	.561	.575
4. Performance Belief	M 38.90 F 39.35	8.66 8.66	.519	.604
5. Intrinsic Motivation	M 20.01 F 20.48	4.43 4.20	1.081	.281
6. Extrinsic Motivation	M 10.42 F 11.28	2.60 2.79	3.202	.001

Table 1 shows that no significant gender differences were found except students' extrinsic motivation ( $t = 3.202$ ,  $p = .001$ ), where girls were found more motivated as compared to the boys.

### Structural Equation Modeling

There are four criteria to test the model, for example, model identification, model specification, model estimation and model testing (Hair, Sarstedt, Ringle, & Mena, 2012; Schumacker & Lomax, 2004). The following figures and tables describing the direct and indirect relationships of variables under study.

Testing of Hypothetical Model

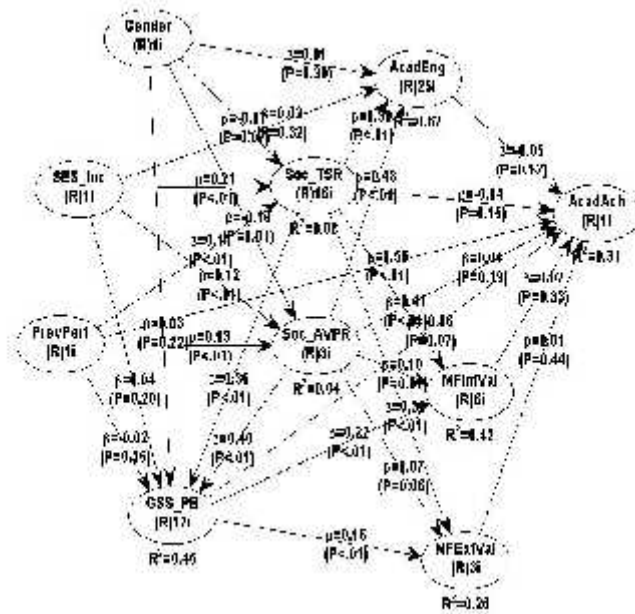


Figure 2: Statistical Model of Structural Relationships among Variables.

The model explained the structural relationships among social impacts, performance beliefs, motivation and academic achievement of the students at intermediate level. It gives beta values and p values which explains direct and indirect relationships of all the variables involved. The detailed description is discussed in the tables 2 and 3.

Hypotheses of Direct Effect of Independent Variables on Dependent Variable

In the hypothetical model given in figure 1, subsequent particular hypotheses were anticipated to check.

H<sub>1</sub>. Students’ gender and socio economic status have significant effect on college students’ academic engagement, students’ teacher student relationships, academic value of peers, and performance belief.

H<sub>2</sub>. Students’ previous performance and performance belief have significant effect on college students’ academic achievement, students’ teacher student relationships, academic value of peers and performance belief and college students’ intrinsic and extrinsic motivation.

H<sub>3</sub>. Teacher student relationship and students’ academic value of peers has significant effect on college students’ academic achievement, academic engagement, performance belief, and college student’s intrinsic and extrinsic

motivation.

H<sub>4</sub>. Student's motivation has significant effect on college student's academic achievement, academic engagement, and performance belief.

Table 2. Direct effects of Predictor Variables on Criterion Variables

Independent Variables	Academic Achievement		Academic Engagement		Teacher Student Relationships		Peer Relationships		Performance Belief		Extrinsic Value		Intrinsic Value	
	Beta( )	P-value	Beta( )	P-value	Beta( )	P-value	Beta( )	P-value	Beta( )	P-value	Beta( )	P-value	Beta( )	P-value
Gender			0.012	0.391	-0.07	0.065	-0.10	0.014	0.033	0.222				
Socio-Economic Status			0.021	0.318	0.206	<0.001	0.120	0.003	0.036	0.202				
Academic Performance	0.564	<0.001			0.143	<0.001	0.125	0.002	-0.02	0.362				
Academic Engagement	-0.052	0.117												
Teacher Student Relationships	-0.044	0.155	0.389	<0.001					0.357	<0.001		<0.001	0.345	0.415
Peer Relationships	0.133	0.186	0.479	<0.001					0.399	<0.001		0.057	0.069	0.101
Performance Belief	-0.064	0.071										<0.001	0.163	0.223



Intrinsic Motivation	0.332						
Extrinsic Motivation	0.019	0.443					
R <sup>2</sup> (Adj. R <sup>2</sup> )	0.006	0.293	0.612	0.072	0.037	0.45	0.416
							0.254

Table 2 shows that college students' gender has insignificant direct effect on students' academic engagement ( =0.012, p=0.391), teacher-student relationship ( =-0.07, p=0.065), performance belief ( =0.033, p=0.222) and academic engagement ( =0.021, p=0.318) which means that higher academic engagement and teacher student relationship, performance belief and academic engagement does not depend on students' gender. Gender has significant direct effect on peer relationship ( =-0.10, p=0.014) and teacher-student relationship ( =-0.206, p=<0.001) which means better peer relationship and teacher student relationship depends on gender.

Socio economic status has also significant direct effect on peer relationship ( =-0.120, p=0.003) which means college students with better socio-economic status showed better peer relationships as compared to those having lowest socio-economic status. Socio economic status has insignificant direct effect on performance belief ( =0.036, p=0.202) which means higher performance belief does not depend on socio economic status of the college students.

Previous performance has significant direct effect on academic achievement ( =0.564, p=<0.001), teacher student relationship ( =0.143, p=<0.001), peer relationship ( =0.125, p=0.002) which means college students with better previous performance and better teacher student and peer relationship showed higher academic achievement as compared to those having low previous performance. But previous performance has insignificant direct effect on performance belief ( = -0.02, p=0.362) which means college students having better previous performance does not affect the performance belief of the college students. Academic engagement has insignificant direct effect on academic achievement ( = -0.052, p=<0.117) which means college student's better academic achievement does not depend on academic engagement of the college students.

Teacher student relationship has insignificant direct effect on academic achievement ( = -0.044, p=<0.155) which means college students with better teacher student relationship does not depend on better academic achievement of the college students. Teacher student relationship has significant direct effect on academic engagement ( =0.389, p=<0.001), performance belief ( =-0.357, p=<0.001), extrinsic motivation ( =0.345,

$p < 0.001$ ) and intrinsic motivation ( $\beta = 0.415$ ,  $p < 0.001$ ) which means motivated college students with better teacher student relationships, strong performance beliefs and showed higher level of academic engagement as compared to those having poor teacher student relationships

Peer relationship has insignificant direct effect on academic achievement ( $\beta = 0.133$ ,  $p = 0.186$ ) significant direct effect on academic engagement ( $\beta = 0.489$ ,  $p < 0.001$ ) performance belief ( $\beta = 0.399$ ,  $p < 0.001$ ) intrinsic motivation ( $\beta = 0.101$ ,  $p = 0.011$ ) extrinsic motivation ( $\beta = 0.069$ ,  $p = 0.057$ ) which means college students with better peer relationships showed higher level of academic engagement and achievement, better performance belief and are more motivated as compared to those having poor peer relationships

Performance belief has insignificant direct effect on academic achievement ( $\beta = -0.064$ ,  $p = 0.071$ ) intrinsic motivation ( $\beta = 0.223$ ,  $p < 0.001$ ) extrinsic motivation ( $\beta = 0.163$ ,  $p < 0.001$ ) which means motivated college students better academic achievement does not depend on performance belief of students. Intrinsic motivation and Extrinsic motivation has insignificant direct effect on academic achievement (Intrinsic,  $\beta = 0.019$ ,  $p = 0.332$ ) (Extrinsic,  $\beta = 0.006$ ,  $p = 0.436$ ) which means college motivated students does not have better academic achievement.

#### **Alternative Hypotheses of Indirect Effects of Independent Variables on Dependent Variable**

H<sub>1</sub>. Academic engagement, performance belief, academic value of the peers, and teacher student relationship of the students significantly mediates the relationship between gender and academic achievement, between gender and motivation, and between socio economic status of the students and students' academic achievement.

H<sub>2</sub>. Teacher student relationship and academic value of peers significantly mediates the relationship between gender and performance belief, gender and academic engagement, between socio economic status of the students and academic engagement.

H<sub>3</sub>. Students' academic value of peers, performance belief and teacher student relationship significantly mediates the relationship between SES and motivation of the students, between previous performance of the students and students' academic achievement and students' intrinsic motivation.

H<sub>4</sub>. Teacher student relationship and Academic value of peers significantly mediate the relationship between previous performance of the students and students' academic engagement, performance belief and students' extrinsic motivation.

H<sub>5</sub>. Performance belief and Academic engagement significantly mediate the relationship between teacher student relationship and students' academic achievement.

H<sub>6</sub>. Intrinsic and Extrinsic motivation significantly mediate the

relationship between teacher student relationship and students’ academic achievement.

H7. Performance belief significantly mediates the relationship between teacher student relationship and students’ intrinsic motivation and academic achievement and between peer relationship of the students and students’ motivation.

H8. Academic engagement and motivation significantly mediate the relationship between peer relationship of the students and students’ academic achievement, and between performance belief of the students and students’ academic achievement.

Table 3: Indirect effects of Predictor Variables on Criterion Variables

Variables	Gender	Economic Status	Socio	Previous Performance	Teacher student Relationship	Peer Relationships	Performance Belief
	Beta( )	P-value	Beta( )	P-value	Beta( )	P-value	Beta( )
Academic Achievement	0.003	0.472	-0.02	0.326	-0.031	0.237	0.005
Academic Engagement	-0.072	0.05	0.138	<0.001	0.116	0.004	0.002
Performance Belief	-0.062	0.078	0.121	0.003	0.101	0.01	0.089
Intrinsic Motivation	-0.043	0.16	0.133	0.001	0.091	0.018	0.005
Extrinsic Motivation	-0.034	0.217	0.105	0.008	0.072	0.049	0.03

Note: Academic engagement, Teacher student relationship, Performance belief, Academic value of peers, = Gender Mediators

Academic engagement, Teacher student relationship, Performance belief, Academic value of peers, = SES Mediators

Teacher student relationship, Performance belief, Academic value of peers, = PP Mediators

Academic engagement, Performance belief, Intrinsic value, Extrinsic value= TSR’s Mediators

Academic engagement, Performance belief, Intrinsic value, Extrinsic value = AVP's Mediators

Intrinsic value, Extrinsic value = PB Mediators

The mediation analysis examined the extent to which students' academic engagement, teacher student relationship, peer relationship, performance belief, intrinsic value and extrinsic value mediated the relationship between different variables. As we see in the above table, Gender ( $\beta = 0.003$ ,  $p = 0.472$ ) had insignificant indirect impact on academic achievement which means academic engagement, teacher student relationship, performance belief and academic value of the peers of the students insignificantly mediates the relationship between gender and academic achievement. Gender ( $\beta = -0.072$ ,  $p = 0.05$ ) had significant indirect impact on academic engagement which means teacher student relationship and academic value of peers significantly mediates the relationship between gender and academic engagement. Gender ( $\beta = -0.062$ ,  $p = 0.078$ ) also had significant indirect impact on Performance belief which means teacher student relationship and academic value of peers significantly mediates the relationship between gender and performance belief. Gender ( $\beta = -0.043$ ,  $p = 0.16$ ) had insignificant indirect impact on intrinsic motivation which means performance belief, teacher student relationship and academic value of peers insignificantly mediate the relationship between gender and intrinsic motivation. Gender ( $\beta = -0.034$ ,  $p = 0.217$ ) had insignificant indirect effect on extrinsic motivation which means performance belief, teacher student relationship and academic value of peers insignificantly mediate the relationship between gender and extrinsic motivation.

Socio economic status ( $\beta = -0.02$ ,  $p = 0.326$ ) had insignificant indirect impact on academic achievement which means performance belief, teacher student relationship, academic value of peers and academic engagement insignificantly mediate the relationship between SES of the students and students' academic achievement. Socio economic status ( $\beta = 0.138$ ,  $p < 0.001$ ) had significant indirect impact on academic engagement which means student's teacher student relationship and academic value of peers significantly mediates the relationship between SES of the students and academic engagement. Socio economic status ( $\beta = 0.121$ ,  $p = 0.003$ ) had significant indirect impact on intrinsic motivation which means students' academic value of peers, performance belief and teacher student relationship significantly mediates the relationship between socio economic status and intrinsic motivation of the students. Socio economic status ( $\beta = 0.105$ ,  $p = 0.008$ ) had significant indirect impact on extrinsic motivation which means students' academic value of peers, performance belief and teacher student relationship significantly mediates the relationship between socio economic status and extrinsic motivation of the students.

Previous performance ( $\beta = -0.011$ ,  $p = 0.402$ ) had insignificant indirect

impact on academic achievement which means performance belief, teacher student relationship, and academic value of peers insignificantly mediate the relationship between previous performance of the students and students' academic achievement. Previous performance ( $\beta = 0.116$ ,  $p=0.004$ ) had significant indirect impact on academic engagement which means teacher student relationship, and academic value of peers significantly mediate the relationship between previous performance of the students and students' academic engagement. Previous performance ( $\beta = 0.101$ ,  $p=0.01$ ) had significant indirect impact on performance belief which means teacher student relationship, and academic value of peers significantly mediate the relationship between previous performance of the students and performance belief. Previous performance ( $\beta = 0.091$ ,  $p=0.018$ ) had significant indirect impact on intrinsic motivation which means performance belief, teacher student relationship, and academic value of peers significantly mediate the relationship between previous performance of the students and students' intrinsic motivation. Previous performance ( $\beta = 0.072$ ,  $p=0.049$ ) had significant indirect impact on extrinsic motivation which means performance belief, teacher student relationship, and academic value of peers significantly mediate the relationship between previous performance of the students and students' extrinsic motivation.

Teacher-student relationship ( $\beta = -0.031$ ,  $p=0.237$ ) had insignificant indirect impact on academic achievement which means performance belief, academic engagement, intrinsic value and extrinsic value insignificantly mediate the relationship between teacher student relationship of the students and students' academic achievement. Teacher-student relationship ( $\beta = 0.08$ ,  $p=0.005$ ) had significant indirect impact on intrinsic motivation which means performance belief significantly mediate the relationship between teacher student relationship of the students and students' intrinsic motivation. Teacher-student relationship ( $\beta = 0.058$ ,  $p=0.03$ ) had significant indirect impact on extrinsic motivation which means performance belief significantly mediate the relationship between teacher student relationship of the students and students' extrinsic motivation.

Peer relationship ( $\beta = -0.046$ ,  $p=0.146$ ) had insignificant indirect impact on academic achievement which means performance belief, academic engagement, intrinsic value and extrinsic value insignificantly mediate the relationship between peer relationship of the students and students' academic achievement. Peer relationship ( $\beta = 0.089$ ,  $p=0.002$ ) had significant indirect impact on intrinsic motivation which means performance belief significantly mediate the relationship between peer relationship of the students and students' intrinsic motivation. Peer relationship ( $\beta = 0.065$ ,  $p=0.018$ ) had significant indirect impact on extrinsic motivation which means performance belief significantly mediate the relationship between peer relationship of the students and students' extrinsic motivation. Performance belief ( $\beta = 0.005$ ,  $p=0.452$ ) had insignificant indirect impact on

academic achievement which means intrinsic motivation and extrinsic motivation significantly mediate the relationship between performance belief of the students and students' academic achievement.

### **Discussion**

This research investigates the structural relationship between performance beliefs, school motivation, and academic achievement of the students at intermediate level in Lahore by using expectancy value model. The main objectives of this research was to scrutinize gender distinctions and detect the fundamental associations of task values, performance beliefs, teacher-student relationships, peer's academic value, motivation and educational engagement.

The descriptive findings delivered illustrative evidence that students' extrinsic motivation is evidently different across gender groups. But the male and female students did not have any comparative distinction on intrinsic motivation, performance belief, teacher-student relationship and friends academic value. Despite this gender difference, similar findings were evident among other variables.

The results highlighted somewhat significant relationships between variables either directly or indirectly, along with some variables that had insignificant relationships as well. Furthermore, the independent variables have significant indirect impact on dependent variables which mean the independent variables indirectly affect the dependent variables through different mediators and most of the independent variables directly affected the dependent variables. Besides, there are some sort of mediation of teacher-student relationship, performance belief, academic value of peers, academic engagement, intrinsic motivation and extrinsic motivation which means at the end because of these variables students' academic achievement can be effected. Findings clarify significant roles of peers and teachers that have effects on students' school motivation. Results also demonstrated that friends' academic value had significant relation with intrinsic and extrinsic motivation. This finding is not consistent with a prior finding by Nelson and DeBacker (2008), who reported non-significant relationship between peer academic value and their self-efficacy, but is in accordance with the findings of Goodenow and Grady, and expectancy theory of motivation (Eccles, 1983; Eccles et al., 1993; Goodenow & Grady 1993).

Previous researches mainly rely on data analysis techniques such as univariate and multivariate analysis. SEM is a latest data analysis technique. To address two main research hypotheses of the current research, Path analysis under structural equation modeling (SEM) technique was adopted using four criteria to test the model, such as; model identification, model specification, model estimation and model testing (Hair et al., 2012). This research study follows the already specified model of expectancy value theory, thus the primary goal of this research was the model testing. For this

purpose, different coefficients were computed. All indices of refined hypothetical model are confirming that sample data fit the model well somehow. There are somewhat structural relationship directly and indirectly among most of the hypothetical variables and their assumed relationships.

### **Conclusion**

Based on the findings of the study, we may conclude that there were no significance gender differences in academic engagement, students peer relationship, their perceived teacher-student relationship, performance beliefs, students intrinsic and extrinsic motivation. There was significant and moderate relationship between previous performance of the students and present academic achievement of the students. The findings of this study confirmed that most of the variables are directly related to each other significantly. The results showed that gender affects the student peer relationships which means male and female peer relationship may be different, and socio economic status of the students effects the teacher student relationships and peer relationships of the students that mean belonging to middle class families or elite class families significantly change the students TSR's and PR's. Results also demonstrate that those students who achieve higher grades in previous sessions would have good teacher student relationships, peer relationships and also achieve higher grades in upcoming sessions. Findings of this study also exhibit that those students with good teacher-student relationships and peer relationships have higher performance beliefs, intrinsic motivation and extrinsic motivation. Along with, the students who had higher performance beliefs would achieve higher academic achievement and they are highly intrinsically and extrinsically motivated to do their tasks.

Similarly, most of the independent variables have significant indirect impact on dependent variables which means the independent variables indirectly affect the dependent variables through different mediators. Besides, there are some sort of mediation effects of teacher student relationship, performance belief, academic value of peers, academic engagement, intrinsic motivation and extrinsic motivation which means because of these variables students' academic achievement can be effected. All indices of refined hypothetical model are confirming that sample data fit the model well somehow. And there are somewhat direct and indirect structural relationships among most of the hypothetical variables and their assumed relationships.

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