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Relationship between Students' Academic Emotions and their Achievement at Secondary Level

Aqsa Qaswar[a], Kashif Iqbal[b], Shaheena Kanwal[c*], Rizwan Abbas[d]

Department of Education, Institute of Southern Punjab Multan, Pakistan. Department of Education, Institute of Southern Punjab, Multan. Visiting Lecturer, Department of Education, University of Layyah, Punjab, Pakistan. Department of Education, Institute of Southern Punjab Multan, Pakistan.

[*]**Email:** shaneenakanwal@gmail.com

***Abstract*:** This study aimed to explore the nature and characteristics of academic emotions experienced by secondary level students, to investigate the impact of educational emotions on scholarly achievement, to identify factors that contribute to the development of positive academic emotion and to determine the connection between pupil's educational feelings and secondary level accomplishment. An adopted questionnaire, serving as the primary research instrument, was distributed among 1116 participants, selected through random sampling techniques, after obtaining requisite permissions. Data collected through questionnaire was analysed through SPSS. Inferential tools such as the t-test, ANOVA, and correlation coefficient were employed to compare means and discern the impact of variables on academic achievements. In the empirical findings, a significant variance was noted in students' perceptions of academic emotions, specifically between those from Tehsil Multan City or Shujabad and those from Multan City or Jalalpur. The strength of the relationship between cognitive test anxiety, perceived parental expectation, and academic achievement was also assessed. The findings reveal that positive emotions, such as enjoyment and pride, are associated with higher academic achievement, while negative emotions, such as anxiety and frustration, correlate with lower performance. The study emphasizes the importance of emotional well-being in educational contexts and suggests that fostering positive academic emotions can improve student achievement. Additionally, it highlights the need for emotional support and effective teaching strategies to mitigate negative emotions in students. The results provide valuable insights for educators and policymakers to create more emotionally supportive learning environments at the secondary level

Key Words: relationship, Academic Emotion, Achievement, correlation coefficient

1. Introduction

Education is a crucial tool for growth and progress (Hafeez et al., 2020). In today's world, the educational arena is marked by intense rivalry and competition. Students frequently experience stress due to the weight of academic expectations, as these outcomes often dictate future choices. This constant pressure can lead to overwhelming nervousness, stress, and apprehension, commonly referred to as Stress in education

Like different forms of nervous, a mild amount of Fear of school is common among pupils. However, it becomes excessive, the gland for adrenaline becomes overactive, leading to biochemical shifts in both the Mental and physical. Students have trouble with schoolwork as a result of this psyche. biological disorders such as migraines, high blood pressure, sleeplessness, and others. Conversely, Academic accomplishment is defined as well as the

ability to read, write and resolve issues and perform mathematical tasks (Reynolds 2002).

To achieve academic success, a relaxed atmosphere for learning environments are essential. Both parents and teachers are involved concur these students face significant pressure, especially through methods like consistency of grading, in Their learning achievements pursuits. (Barksdale-Ladd & Thomas, 2000). Significant learning panic often fosters a disadvantage atmosphere for learning. Therefore, there's likely a connection between academic anxiety and academic performance.

Positive academic emotions, such as interest, enjoyment, and enthusiasm, are associated with higher levels of motivation and engagement in learning. Students who experience these emotions are more likely to be actively involved in their studies and perform better academically (Pekrun et al., 2005). Positive academic emotions can enhance students' self-efficacy beliefs and confidence in their abilities to succeed academically. This, in turn, can lead to greater effort, persistence, and ultimately higher achievement (Pajares, 2002). Academic emotions can influence students' cognitive processing and the use of effective learning strategies. For example, anxiety and stress have been found to impair information processing and hinder learning, while positive emotions facilitate information integration and retrieval (Fredrickson, 2001). Academic emotions can impact students' goal setting and achievement orientation. Positive emotions can foster a mastery-oriented mindset, where students focus on developing their skills and mastering challenging tasks, leading to higher achievement (Eccles & Wigfield, 2002).

Statement of the problem

The research investigates the correlation between students' academic emotions and their performance in secondary education. The statement of problems addresses the extent of the effect of academic emotions on learning outcomes, the identification of specific influential emotions, the interaction between external factors and academic emotions, potential demographic variations, and strategies for fostering positive academic emotions to enhance secondary-level student achievement.

1.1 Research Objectives

The study has the following objectives:

1. Explore the nature and characteristics of academic emotions experienced by secondary level students
2. To investigate the impact of educational emotions on scholarly achievement
3. To identify factors that contribute to the development of positive academic emotion
4. Determine the connection between pupil's educational feelings and secondary level accomplishment.

1.2 Research Questions

The subsequent inquiries were tired to be addressed by this research:

1. How do different academic emotions experienced by secondary level students relate to their academic achievement?
2. What are the factors that contribute to the development of positive academic emotions among secondary level students?
3. How do negative academic emotions (e.g., anxiety, stress) impact the academic achievement of secondary level students?
4. How do academic emotions interact with motivation and engagement in secondary level students?
5. How can educators and schools effectively promote positive academic emotions and support students in managing negative emotions?
6. Are there individual differences in the relationship between academic emotions and achievement at the secondary level?

1.3 Significance of the Study

Study of the relationship between academic emotions at the secondary level holds significant importance for several reasons. The study of academic emotions provides insight into students' emotional experiences in the educational context. It allows researchers and educators to understand the factors that contribute to positive or negative emotions among secondary level students. By studying this relationship, educators can gain insights into the factors that contribute to successful learning outcomes. Consequently, educators can introduce interventions and supportive measures aimed at fostering positive emotions and mitigating the effects of negative emotions. This, in turn, leads to an enhancement in students' academic performance. Exploring academic emotions aids in comprehending variations in emotional encounters among individuals and their influence on accomplishments.

Recognizing that students may have different emotional profiles can help educators provide tailored support and interventions to meet their specific emotional needs and maximize their potential for success. Academic emotions are an integral part of a holistic approach to education. By considering students' emotional experiences alongside their cognitive development, educators can promote a well-rounded education that addresses both academic and emotional well-being, fostering students' overall growth and development. To summarize, examining the correlation between academic emotions and accomplishments in secondary education yields valuable insights that contribute to nurturing student welfare, amplifying motivation and involvement, guiding teaching methodologies, bolstering academic success, providing tailored assistance, and fostering comprehensive education.

2. Literature Review

Only two meta-analytical reviews have delved into the correlation between academic emotions and scholastic accomplishment. Firstly, Tze et al. (2016) performed a meta-analysis to explore the link between boredom and educational results. They identified a moderately negative average correlation between boredom and overall performance (r = -.24), alongside unfavorable correlations with academic motivation and study learning approaches. Similarly, Loderer et al. (2019) Conducted a meta-analytical assessment examining the sources and consequences of achievement emotions in technology-related contexts. They discovered a slight positive average correlation between enjoyment and learning outcomes (r = .18).

Loderer et al. (2019) conducted a comprehensive review that encompassed a wider array of activity emotions, yet their investigation was confined to technology-related educational contexts. This restriction limits the applicability of their findings to learning environments devoid of technology enhancements. Therefore, it is essential to explore whether these effects remain consistent across learning scenarios not reliant on technology, especially considering that not all students utilize information and communication technology (ICT) for learning purposes (OECD, 2015). Furthermore, it's imperative to note that both meta-analyses failed to address the distorting impact of measurement error, a recognized statistical artifact that systematically reduces the magnitude of correlations. (Schmidt & Hunter 2015).

2.1 Perceptions of the learning environment Learning environment

It is a fundamental element that has the potential to impact students' cognitive and emotional learning as well as their learning goals. With the research that have been undertaken, especially in the 1960s and the early 1970s, Rudolf Moos and Halbert Walberg laid the groundwork for future research on the educational surroundings. In numerous subsequent studies, the classroom environment was acknowledged as a crucial factor, and its influence on pupils' attitudes and accomplishments was examined. asserted that a classroom setting characterized by a sense of ease in student-teacher collaboration, along with the fulfillment of both their social and academic requirements, plays a pivotal role in attaining desired learning outcomes. Likewise, Ülgen (1995) Highlighted the importance of creating suitable learning environments that account for the unique attributes of individual students, as this is imperative for effective learning to occur.

Moreover, it's recognized that such favorable learning environments or classroom atmospheres play a constructive role in fostering students' feelings of security. Nonetheless, research also underscored that adverse aspects within the learning environment can pose challenges potentially impacting student achievements. Consequently, the establishment of a learning environment that encourages heightened student engagement and the constructive processing of acquired information remains highly pertinent, enabling the enhancement of both cognitive and motivational proficiencies. Hence, when crafting suitable individualized learning environments, it becomes imperative to approach the matter from various perspectives and address potential physical constraints. While facilitating students' access to educational technologies, it's equally vital to facilitate interactions between students and between students and teachers. Within these interactions, the cultivation of values like respect, patience, tolerance, and empathy, which can have a beneficial impact on the educational atmosphere should be actively encouraged (Şahin & Özbay, 1999).

2.2 Achievement Emotions

Emotions linked directly to achievement tasks and their outcomes are referred to as achievement emotions. (Pekrun, 2006). As a result, situations associated with achievement activities are acknowledged as sources of achievement emotions. Various examples of such emotions that emerge based on specific activities include learning-centered emotions like enjoyment, pride, anger, shame, hopelessness, and boredom. Additionally,

emotions related to achievement, Achievement emotions include feelings of joy from learning, monotony while classes, and worry from difficult assignments. Researchers have classified two types of achievement emotions, experienced either during the task or after its completion, contingent upon the task's outcome.

The result of a task or the anticipation of success/fear of failure can trigger anticipatory emotions for the future. Conversely, feedback subsequent to accomplishment can elicit reflective emotions like pride or shame. (Pekrun, Elliot, & Maier, 2006). These emotions could also encompass the feelings an individual experience during a specific timeframe, influenced by the encountered or undergone circumstances (Pekrun, 2006). Additionally, there are emotions that can reoccur in familiar scenarios, like the instance of exam anxiety. Yet distinct from habitual emotions, situational achievement emotions can also emerge. As an illustration, certain achievement emotions may only manifest when dealing with subjects like mathematics. (Pekrun, 2006). Lichtenfeld et al. (2012) stated that a student experiences a sense of pride when achieving a high math grade, feels apprehensive when grappling with unfamiliar lesson concepts, and encounters boredom when the topic fails to capture their interest. Stipek and Gralinski (1991) examined the pride and shame levels of third-grade students regarding their math course, and discovered that female students exhibited less pride upon achieving success.

Additionally, the study revealed that female students displayed heightened concern about potential embarrassment as opposed to others to their male counterparts. In another study, Putwain and Best (2011) Conducting research involving a group of forty elementary school students, the investigators aimed to determine the influence of fear on exam anxiety and test outcomes. The study's outcomes indicated that students' anxiety levels escalated in correlation with their fear levels, but at the level of nervousness had no effect on their test performance. Similarly, Peker and Sentürk (2012) analyzed fifth-grade students' math anxiety in terms of certain factors. The results of their investigation unveiled that, in conjunction with campus-related factors, gender, and academic performance, students' anxiety levels were influenced by their engagement in the math course as well as the teacher's influence. Another examination concentrated on anxiety, conducted by Alkan (2011), underscored that fourth-grade elementary school students experiencing elevated levels of math-related anxiety and lacking self-assurance were inclined to evade posing questions. Evident from the previously mentioned studies, the exploration of students' achievement emotions has predominantly revolved around their connection to test-related anxiety.

2.3 The Link Between Perceptions of Learning Environment and Achievement

Within the field of biology, the current study studied the relationship between students' perceptions of the learning environment and their accomplishment feelings. Existing empirical research in the literature shows a consistent relationship between perceived learning settings and accomplishment feelings (Kohoulat et al., 2017; Ayiro, 2014). The prevailing research concerning emotions in conjunction with perceived classroom environments predominantly focuses on anxiety and various other emotions primarily within the domain of mathematics.

Regarding research that encompasses other achievement emotions in conjunction with anxiety, the findings were also discussed. Franzel et al. (2007) The study examined the connections between students' observed classroom surroundings and their emotions in the context of mathematics, including emotions like as delight, worry, wrath, and boredom. Employing a multilevel approach, they scrutinized these associations and found that the perceived quality of instruction and the perceived esteem from peers exhibited a positive correlation with enjoyment and a negative correlation with anxiety, anger, and boredom. Additionally, they highlighted that perceived peer esteem was notably and inversely linked to anxiety and anger.

3. Research Methodology

3.1Research design

In this study, quantitative research was conducted. The study was primarily descriptive. Design of research was survey design.

3.2 Population and sample

Population of this research was secondary school students in district Multan of Punjab school education department. According to the statistics, there 71886 secondary school students in district Multan. Population of public school was 17218 students, including 8911 male students and 8307 female students. Population of private schools was 13582 students, including 6006 male students and 7576 female students. Due to the variety of the population, a proportional stratified random sampling technique was implemented. The sample for this research was confirmed using the sample size chart organized by Krejcie and Morgan (1970). The sample for this research

consist 1116 secondary school students from a total of 1116 secondary school students, 635 students were selected from public school including 268 male students and 367 female students and 725 students were selected from private school including 361 male students and 364 female students.

3.3 Research Tool

The adopted questionnaire used in this study includes a brief explanation of the study's objective and a definition of research efficiency. Participants will provide information on their personal experiences with various forms of research. The survey is divided into two parts, each with two sections. Section 1 gathers biographical information, such as age, gender, and research efficiency, asking participants to select at least one type. Section 2 focuses on remarks related to research efficiency, using a five-point Likert scale (1=strongly disagree to 5=strongly agree), with a total of 28 statements. Validity will be ensured through expert input from the education department at the Institute of Southern Punjab, and a pilot test will be conducted with 19 higher secondary students. This test aims to address any ambiguity related to item clarity, difficulty, and understanding. Feedback from the pilot confirmed that the participants had no issues with the instructions or the 28 items, requiring 12-15 minutes to complete the instrument. Since the feedback was satisfactory, no amendments will be made.

3.4 Data Collection Procedure

Data collection process for this research focusing on the students' academic emotion and the performance at secondary education level was systematic. First, an organized sociometric questionnaire was developed based on the affective dimensions for academic learning, for instance, pleasure, satisfaction, fear, and anger as well as other student characteristics. The participants were selected from different schools in the chosen school districts, and they were in the secondary level of education The participants were recruited in a cross-sectional basis and were selected based on gender, type of school (private and public), and geographical location (urban and rural). Before data collection the participants were informed on the goal and purpose of the study and they consented to participate. The questionnaires were grouped to be filled during school time in order to guarantee high response rate and minimize on variation. To enhance validity, the current study conducted the pilot test with a reduced sample size before the actual study taking into consideration the participants' feedback. The last data collection process took two weeks and through personal visits to the various schools they saw to it that the questionnaires were given out and received without bias.

3.5 Data analysis

Cronbach's Alpha reliability of the tool's reliability will be established through the utilization of SPSS software. This software will assess the internal consistency of the instrument. The widely employed method of Cronbach's Alpha formula will be used to ensure the internal consistency of the tools in quantitative survey research. (DeVillis, 2006; Cronbach, 1951). Cronbach alpha value for all the 28 items of two sections will be estimated as 0.74. The administration of the tool will occur subsequent to obtaining authorization from the appropriate institutional authorities for the purpose of data collection. Self-visit will have preferred during the working hours of institution for questionnaire distribution. Guidelines will be also provided to fill in the questionnaire at the time of administration. Personal guidance will be also provided to the students who will facing difficulties in responding the items. Descriptive statistics (percentage, mean and standard deviation) will be used to explain that how the measurement from different strata and stratum are spread out from the average mean (expected value). Inference statistics (t-test, ANOVA, and correlation coefficient) will be employed to compare strata and stratum mean. It will be used to identify which variable have more impact on the academic achievement and to find out the strength of relationship between cognitive test anxiety, perceived parental expectation and academic achievement respectively. The research encompassed gathering information from various groups of participants. Following the acquisition of permission from relevant authorities, a constructed research tool (questionnaire) was directly provided to the participants. They were instructed to complete the questionnaire in the specified data collecting site. A total of 1116 respondents successfully completed the questionnaire.

4. Results

Table 1: Demographic information of secondary school students

Variable	Group	Frequency	Percent

Location	Urban	588	50.6
	Rural	528	49.4
	Total	1116	100.
Gender	Male	587	52.6
	Female	529	49.4
	Total	1116	100.
Age	14-15	555	50.6
Years	16-17	561	49.4
	Total	1116	100.
Sector	Public	552	50.6
	Private	564	49.4
	Total	1116	100.
Obtain Marks in 9^{th} class	201-250	269	12.2
	251-300	319	14.5
	301-350	285	11.0
	351-more	243	11.0
	Total	1116	100.
Tehsil	Multan City	275	12.5
	Multan Sadar	311	14.1
	Shujabad	286	12.0
	Jalalpur pirwala	244	11.1
	Total	1116	100.

Table 1 presents that with reference to school tehsil, 275(12.5%) of the respondents were from tehsil Multan city, 311(14.1%) of the respondents were from tehsil Multan sadder, 286(12.0%) of the respondents were from tehsil Shujabad and 244(11.1%) of the respondents were from tehsil Jalalpur. With reference to school sector, 552(50.6%) of the respondents were from public schools and 564(49.4%) of the respondents were from private schools.

Table 2: Students' perception of academic emotions

Sr.no	Statement	Agree%	N	Disagree	Mean	S.D
1	Feel safe in my school.	42.0	242	405	2.8826	1.4140
2	My opinions are respected for my school.	36.4	232	468	3.1192	1.5054
3	If I would always choose this school.	43.4	241	391	2.8674	1.4054
4	I remain always happy in my school.	38.3	259	429	3.0125	1.3729
5	I will never drop out of this school.	42.4	213	429	2.9794	1.3926
6	I am an important part of this school.	40.6	230	432	2.9821	1.3478
7	Overall, I feel good about being in this school	39.2	252	426	2.9991	1.4290
8	During positive emotions I change my thinking.	39.2	176	502	3.923	1.4773
9	I keep my emotions to myself about my studies.	32.0	326	432	3.1263	1.3370
	Total	353.9	217	3914	27.891	12.681

Table 2 presents the analysis of student's responses about academic emotion. Which are also represented graphically in Figure 1.

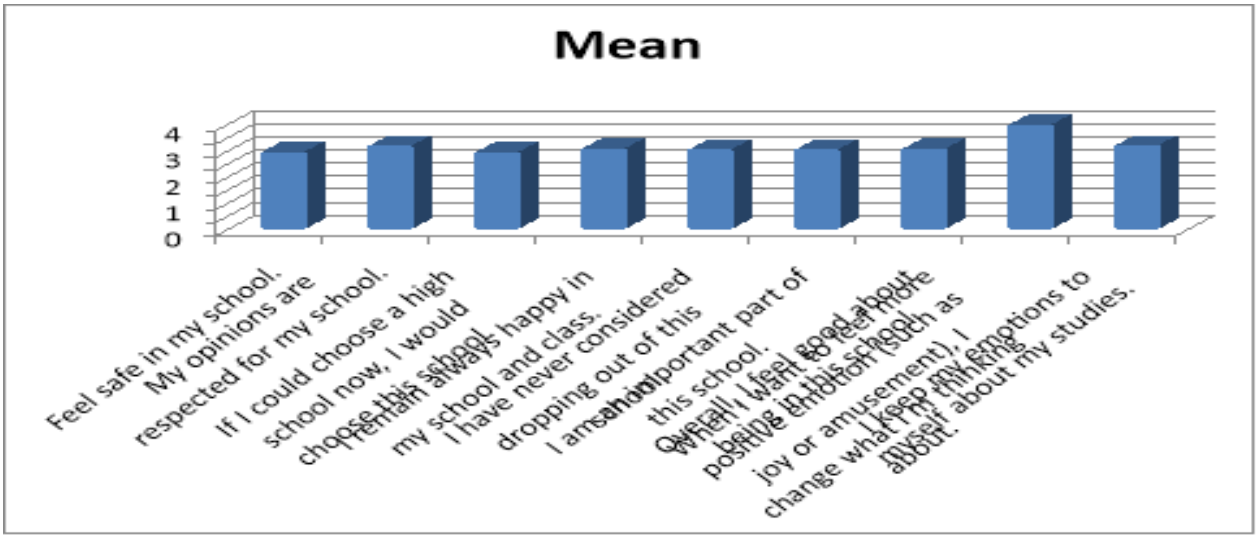


Figure 1 shows larger part of the respondents agreed with most of the statements It can, hence, be concluded that there are positive affirmations by the students with respect to their perception of academic emotion. Overall, the findings (Mean ,27.8916 SD =12.68188) from the survey depicted that larger part of the participants recognized that students have positive approach towards academic emotions

Table 3: Students' perception of academic emotions

Sr.no	Statement	Agree	N	Disagree	Mean	S.D
10	During positive emotions I change my thinking.	46.5	171	426	2.9068	1.44
11	I use positive emotions for my class work also.	37.2	252	448	3.0394	1.4332
12	I change my thinking for positive emotions.	40.7	210	451	3.0233	1.3974
13	I control my emotions by changing thinking about the situation.	39.8	232	439	2.9713	1.4545
14	I deal good with emergencies in my studies.	47.0	227	364	2.8163	1.3682
15	I feel happy most of the time during my academic activities	42.2	196	337	2.2007	1.3359
16	I concentrate on a pleasant activity during my class work	39.8	243	428	2.9606	1.4350
17	I keep the feeling locked up inside for my aim in life.	45.6	242	365	2.8306	1.3740
18	I talk to someone about how I feel	45.1	236	375	2.7518	1.4406

	Total	303.1	153	2893	19.918	9.8664

Table 3 presents the analysis of student's responses about academic emotion. Which are also represented graphically

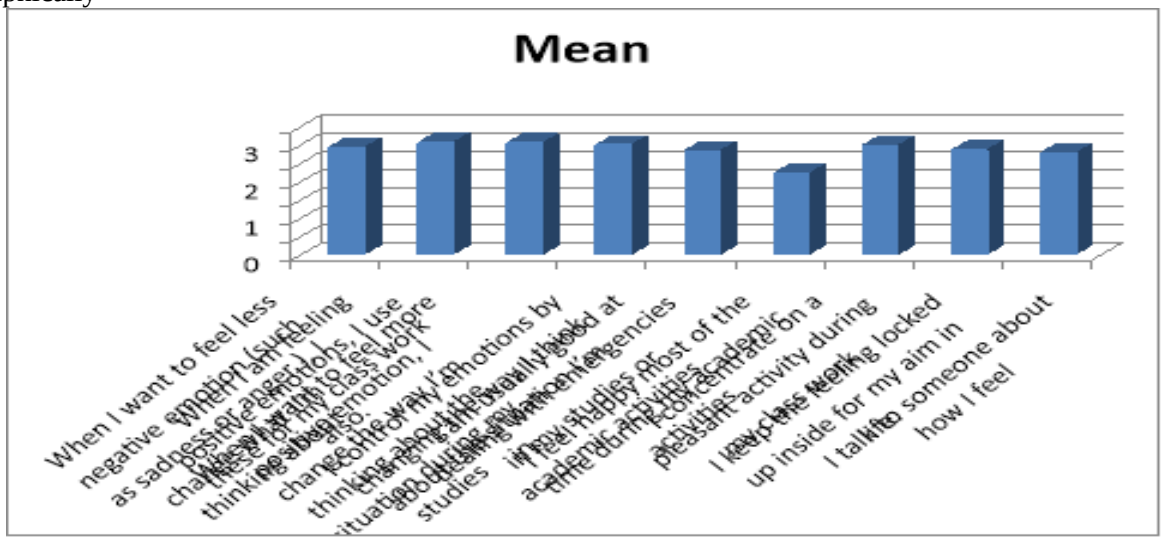


Figure 2 shows larger part of the respondents agreed with most of the statements It can, hence, be concluded that there are positive affirmations by the students with respect to their perception of academic emotion. Overall, the findings (Mean ,19.9184 SD =9.8664) from the survey depicted that larger part of the participants recognized that students have positive approach towards academic emotions.

Table 4: Students' perception of academic emotions

Sr. No	Statement	Agree	N	Disagree	Mean	SD
19	I know what to do during exam.	45.6	148	459	2.8898	1.45345
20	I understand my actions and reactions in my studies.	38.2	254	435	2.9866	1.43399
21	I understand teachers' mood about my academic work.	37.9	262	430	3.0206	1.36073
22	I understand my emotions about my class work.	38.1	258	432	2.9982	1.38019
23	I stay positive during crises in my studies.	38.4	234	453	3.0215	1.40323
24	I can manage anxiety during exam days especially.	42.3	264	379	2.9014	1.45274
25	I can deal when things go wrong during activities.	42.6	220	420	2.9588	1.38994
26	During discussion, I used to be calm down.	40.1	267	401	2.9023	1.39902
27	I look for positive outcomes before taking actions.	42,3	175	468	3.0493	1.42693

28	I analyze its pros and cons of every action.	37.0	257	444	3.0063	1.40879
	Total	4498(403.0)	2339	4321	29.7348	14.10901

Table 4 presents the analysis of student's responses about academic emotion. Which are also represented graphically in Figure 3.

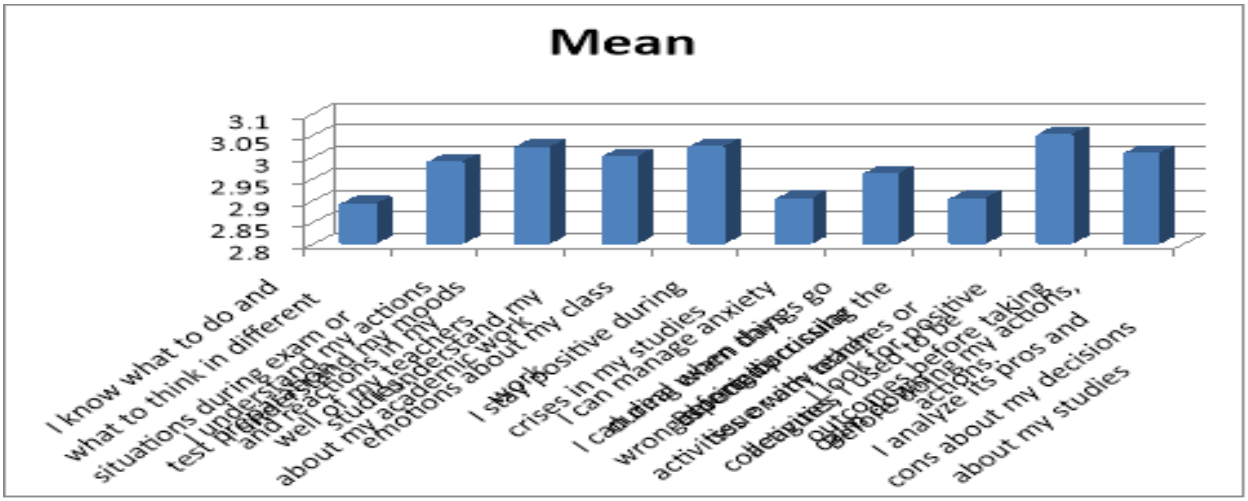


Figure 3 shows larger part of the respondents agreed with most of the statements It can, hence, be concluded that there are positive affirmations by the students with respect to their perception of academic emotion. Overall, the findings (Mean, 29.7348 SD =14.10901) from the survey depicted that larger part of the participants recognized that students have positive approach towards academic emotions.

Differences in Students' Perception of academic emotion

This section presents differences of students' perception of academic emotions with respect to school tehsil, school location, gender, age group, school sector, marks in 9th class. Analysis was performed by using independent sample t-test and ANOVA with multiple comparisons.

Table 5: School location based differences in students' perception academic emotion

Variable	Group	N	Mean	SD	Df	T	Sig
Location	Urban	588	83.0374	6.371	1114	4.425	.000
	Rural	529	84.9129	7.77335			

Table 5 presents analysis on school location based differences in students' perception of academic emotion. With respect to students' school location, an independent samples t-test indicated significant results (df = 1114, t =4.425, sig. value .000 < 0.05). It is concluded from Table 5 that there were considerable disparities in urban and rural secondary school pupils' perceptions of academic feelings.

Table 6: School gender based differences in students' perception academic emotion

Variable	Group	N	Mean	SD	Df	T	Sig
Gender	Male	587	83.831	6.6505	1114	.461	.645
	Female	529	84.028	7.6285			

Table 6 presents analysis on school Gender based differences in students' perception of academic emotion. With respect to students' school Gender, an independent samples t-test indicated significant results (df = 1114, t = 461, sig. value .645 < 0.05). It is concluded from Table 6 showed there were no substantial variations in male and female secondary school learners perceptions of academic emotions.

Table 7: School sector based differences in students' perception academic emotion

Variable	Group	N	Mean	SD	Df	T	Sig

Sector	Public	552	83.962	6.6554	1114	173	.863
	Private	564	83.888	7.5682			

Table 7 presents analysis on school Sector based differences in students' perception of academic emotion. With respect to students' school Sector, an independent samples t-test indicated significant results (df = 1114, t = 173, sig. value .863 < 0.05). It is concluded from Table 7 that There were no substantial variations between public and private secondary school pupils' perceptions of academic feelings.

Table 8: School Age based differences in students' perception academic emotion

Variable	Group	N	Mean	SD	Df	T	Sig
Age	14-15	555	84.01	.5004	1114	.409	.682
	16-17	561	83.83	.4976			

Table 8 presents analysis on school Age based differences in students' perception of academic emotion. With respect to students' school Age, an independent samples t-test indicated significant results (df = 1114, t = .409, sig. value .682 < 0.05). It is concluded from Table 8 that There were little differences in 14-15 and 16-17 secondary school learner's perceptions of academic feelings.

Table 9: School tehsil based differences in students' perception academic emotion

Variable		Sum of Squares	df	Mean Square	F	Sig.
School Tehsil	Between Groups	563.407	3	187.802	3.72	.011
	Within Groups	56092.270	1112	50.443		
	Total	**56655.67**	**1115**			

Table 9 presents the result of One-way Analysis of Variance (ANOVA) that was performed to analyze school tehsil based difference in students' perception of academic emotions. Students' perception of Academic emotion was as F= 3.723, Sig. =.011

Table 10: School tehsil based differences in students' perception academic emotion

School Tehsil (I)	Mean	School tehsil(J)	Mean Diff (I-J)	Std. Error	Sig.
Multan City	82.7164	Multan Sadder	-1.38331	.58790	.087
		Shujabad	-1.83608	.59983	.012
		Jalalpur	-1.61151	.62463	.049
Multan Sadder	84.0997	Multan City	1.38331	.58790	.087
		Shujabad	-.45277	.58187	.864
		Jalalpur	-.22819	.60739	.982
Shujabad	84.5524	Multan City	1.83608	.59983	.012
		Multan sadder	.45277	.58187	.864
		Jalalpur	.22458	.61896	.984
Jalalpur	*84.3279*	*Multan City*	*1.61151*	*.60739*	*.049*
		Multan Sadder	*.22458*	*.61896*	*.982*
		Shujabad	*-.22458*	*.61896*	*.984*
Total	*83.9247*		*-0.00361*		

Table 10 shows the results of Tacky test that was used to analyze students' Tehsil based difference in their perception of academic emotions preferences.

Table 10 highlights the students with Tehsil Shujabad have better perception of academic emotion than the students of other Tehsil at secondary level. It is concluded from Table 10 that there was statistically significant difference of students' perception of academic emotion preferences between the students with Tehsil Multan City or Shujabad and Multan City or Jalalpur.

Table 11: Obtained Marks based differences in students' perception academic emotion

Variable		Sum of Squares	Df	Mean Square	F	Sig.
Obtain marks	Between Groups	8088.345	3	2696.115	61.7	.000
	Within Groups	48567.332	1112	43.676		
	Total	**56655.677**	**1115**			

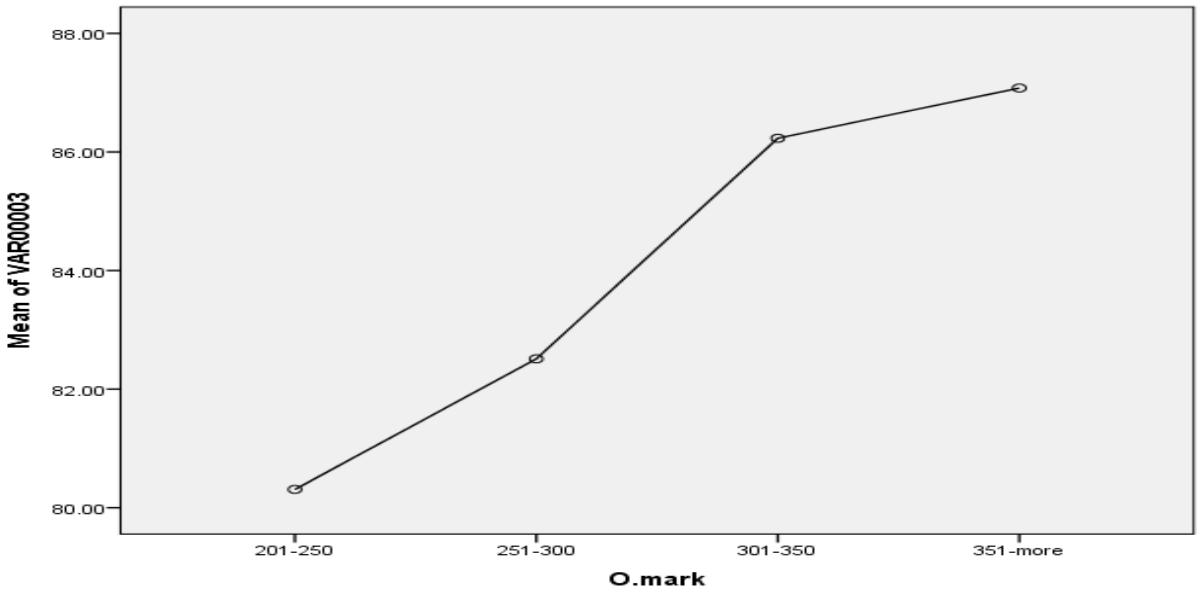
Table 11 presents the result of One-way Analysis of Variance [ANOVA] that was performed to analyze school tehsil based difference in students' perception of academic emotions. Students' perception of Academic emotion was as F= 61, 73 Sig. =.000

Table 12: Results of Tacky Test

O. Marks (I)	*Mean*	*O. Marks (J)*	*Mean Diff(I-J)*	*Std. Error*	*Sig*
201-250	*80.3086*	*251-300*	*-2.20242*	*.54706*	*.000*
		301-350	*-5.92303*	*.56179*	*.000*
		351-more	*-6.76964*	*.58489*	*.000*
251-300	*82.5110*	*201-250*	*2.20242*	*.54706*	*.000*
		301-350	*-3.72061*	*.53867*	*.000*
		351-more	*-4.56722*	*.56272*	*.000*
301-350	*86.2316*	*201-250*	*5.92303*	*.56179*	*.000*
		251-300	*3.72061*	*.53867*	*.000*
		351-more	*-.84661*	*.57705*	*.458*
351-more	*87.0782*	*201-250*	*6.76964*	*.58489*	*.000*
		251-300	*4.56722*	*.56272*	*.000*
		301-350	*.84661*	*.57705*	*.458*

Table 12 shows the results of Tacky test that was used to analyze students' Obtained marks based difference in their perception of academic emotions preferences.

Table 12 highlights the students with Obtained marks as 351 and more above have better perception of academic emotion than the students of other Obtained marks at secondary level. It is concluded from Table 12 that there was statistically significant difference of students' perception of academic emotion preferences between the students with Obtained marks 351 or more.



Differences in Students' academic achievements

This section presents differences of students' academic achievement with respect to school tehsil, school location, gender, age group, school sector, marks in 9th class. Analysis was performed by using independent sample t-test and

ANOVA with multiple comparisons. Results are presented in Table 4.12 to Table 4.19.

Table 13: School location based differences in students' Obtained marks

Variable	Group	N	Mean	SD	Df	T	Sig
Location	Urban	588	2.2925	.960	1114	5.195	.000
	Rural	528	2.6250	1.17			

Table 13 presents analysis on school Location based differences in students of academic achievement. With respect to students' location, an independent samples t-test indicated significant results (df = 1114, t = .5.195, sig. value .000 < 0.05) It is concluded from Table 13 that there were not significant differences in students' of academic achievement of rural and urban secondary school students.

Table 14: School age based differences in students' Obtained marks

Variable	Group	N	Mean	SD	Df	T	Sig
Age	14-15	555	2.421	1.1234	1114	.868	.386
	16-17	561	2.477	1.0350			

Table 14 presents analysis on Student age based differences in students of academic achievement. With respect to students' age, an independent samples t-test indicated significant results (df = 1114, t = .868, sig. value .386 < 0.05) It is concluded from Table 14 There were no substantial discrepancies in academic attainment between learners in grades 14-15 and 16-17.

Table 15: School gender based differences in students' Obtained marks

Variable	Group	N	Mean	SD	Df	T	Sig
Gender	Male	587	2.364	1.011	1114	2.787	.005
	Female	529	2.544	2.544			

Table 15 presents analysis on school gender based differences in students of academic achievement. With respect to students' gender, an independent samples t-test indicated significant results (df = 1114, t = .2.787, sig. value .005 < 0.05) It is concluded from Table 15 that there were no significant differences in students' of academic achievement of male and female secondary school students

Table 16: School sector based differences in students

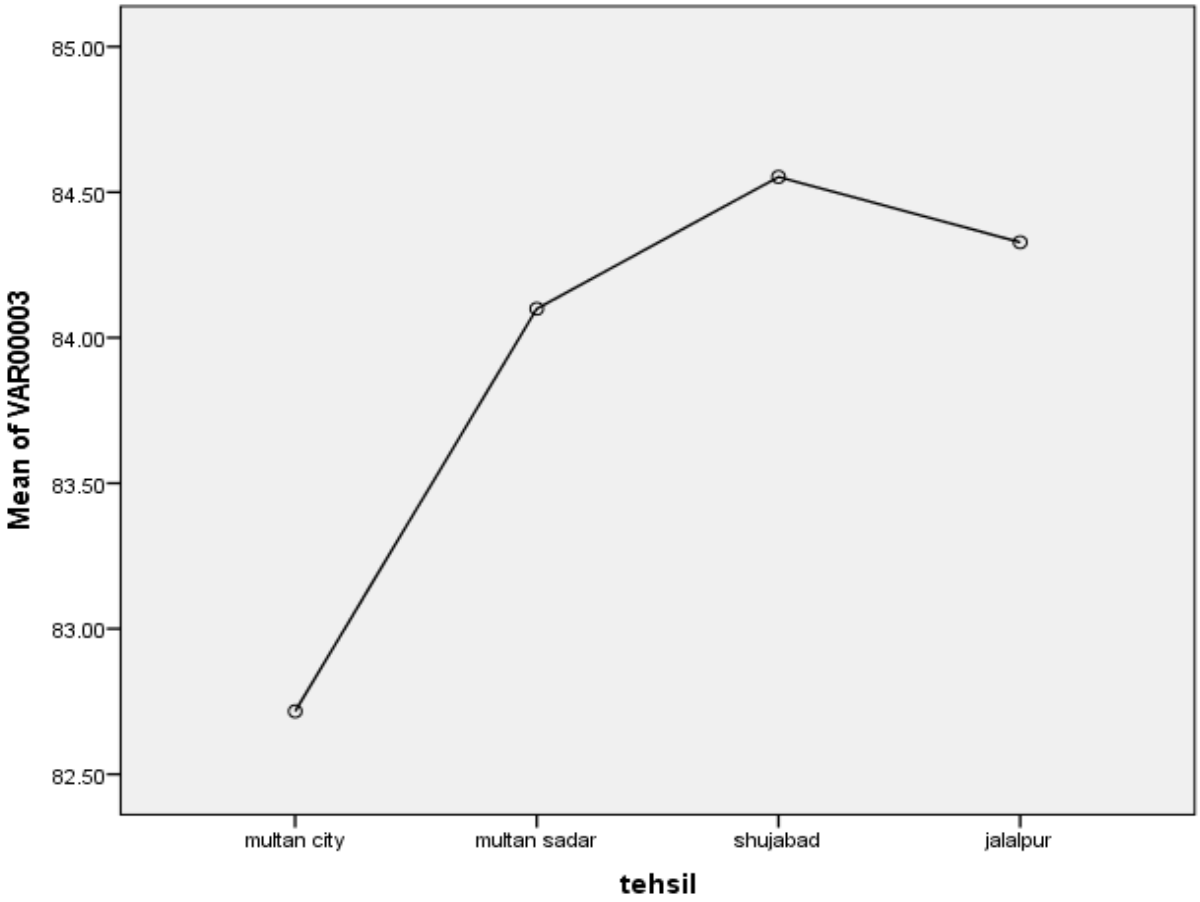
Variable	Group	N	Mean	SD	Df	T	Sig
Sector	Public	552	2.427	1.1247	1114	.682	.495
	Private	564	2.471	1.0345			

Table 16 presents analysis on school sector based differences in students of academic achievement. With respect to students' school sector, an independent samples t-test indicated significant results (df = 1114, t = .682, sig. value .495 < 0.05) It is concluded from Table 16 that there were no significant differences in students' of academic achievement of public and private secondary school students.

Table 17: School tehsil based difference in students

Variable		Sum of Squares	Df	Mean Square	F	Sig.
School Tehsil	Between Groups	3.480	3	1.160	.995	.394
	Within Groups	1296.710	1112	1.166		
	Total	**1300.190**	**1115**			

Table 17 presents the result of One-way Analysis of Variance [ANOVA] that was performed to analyze school tehsil based difference in students' academic achievement. Students' Academic achievement was as F= .995, Sig. =.394. it is concluded that there were no significant differences in student academic achievement with respect to school tehsil.



Correlation Between academic emotion and student achievement

This section provides the relationship between academic emotions and student achievement at secondary level. Analysis was done through Pearson correlation test results are presented in table 18

Table 18: Relationships between student's achievement and academic achievement

		(Achievement)	***(Academic Emotion)***
Achievement(A)	*Pearson Correlation*	*1*	
	Sig.(2-tailed)		
Academic Emotion(AE)	*Pearson Correlation*	*.369*	
	Sig.(2-tailed)	*.000*	*1*

Table 18 presents the result of Pearson's R relationships between student's achievement and academic achievement. These comes about in table 18 shows significant relationship is positive (r=.369) for achievement and academic emotion.

4.1 Discussion

Therefore, according to the outcome, it is evident that a large proportion of the participants approved the students' positive feelings about the emotions pertaining to academics. Some of the participants appreciated students' positive attitude to these emotions. They also recommend that significant differences exist in the perceived

academic emotion by secondary school students in the urban areas than those in the rural areas with no significant differences for gender. Moreover, there was a very slight variation in the experience of academic emotions between the students who study in public and private schools as well as between students of age group 14-15 and those of age group 16-17. Nevertheless, a statistically significant difference in students' perception of academic emotions was found depending on the region, namely Tehsil Multan City or Shujabad, Multan City or Jalalpur. No statistic differences were observed in perception of academic achievement by gender and type of school the students attended. Similarly, there is no significant variations in the matter of academic performance whether a student belongs to higher or lower school tehsil of the relevant area. In sum, the authors can state that there is a positive correlation between students' academic emotions and the students' achievements, which underlines the importance of academic emotions in the context of the students' performance. The results of the present study support and extend the prior work concerning the relationship between academic emotions and performance of students. The Effects of Enjoyment Pride and Curiosity on Academic Achievement: A Review of the Literature A number of works focus on the benefits of experiencing positive emotions like enjoyment practice pride and curiosity on academic performance. According to Pekrun et al. (2002) teaching approach known as "Control-Value Theory" is assertive of the fact that positive emotions promote learning as they increase motivation and cognition, this aspect is supported by the majority of participants who recognized students' favorable disposition towards academic emotions in this study.

In particular, the significant differences in academic emotion perceptions between urban and rural students support earlier studies that have claimed that, environmental and socioeconomic factors do affect feelings in education. Students that live in rural areas tend to experience less resources and structures that can help with frustration and anxiety and students that live in urban areas tend to work more with resources and emotional support that they receive in school (Williams et al., 2017). Therefore, the fact that the gender differences in the academic emotion perceptions were negligible, is in disparity with some previous research where female students are reported to have higher anxiety in contrast to male student's higher academic pride (Goetz et al., 2008). This may be due to changing social and cultural practices particularly the new roles that women are playing and better support structures in schools.

Lack of significant variations in the adolescents' perceptions between public and private school students and different age group can be appropriate with the study results of Rodriguez et al. (2014) which revealed that the school environment and age do not significantly influence emotional perceptions once basic academic and emotional needs are met. The study does have significant variations in emotion perceptions across regions which implies that there are cultural as well as social factors that affect students in their respective regions concerning the approach towards academic tasks which has also been supported by cross sectional educational research as carried out in China for instance by (Chen et al., 2019).

Last but not the least, high level of correlation between the academic emotions and achievements strengthens the generally accepted notion that those students who regulate their emotions well will do better in their academic pursuits. This is in line with previous studies revealing that though emotions such as enjoyment and pride improve the performance, negative emotions such as anxiety and frustration decrease the performance (Pekrun, 2006). Therefore, the results support the need to incorporate mental health to play a central role in determining the outcomes of academic performance.

5. Conclusion

This work has effectively examined the type and the process by which secondary level students' hold academic emotions. In the study, it was ascertained that students often perceive feelings of enjoyment, pride, anxiety or frustration in learning environments. These emotions are not only dependent on learners' personality but also learning environment and social learning context. To examine the emotional aspects of the learners is important as it helps to explain the students' experiences and their reactions to academic tasks.

The research carried out regarding the relationship of the academic emotions to the academic performance showed that the positive emotions like enjoyment emotions and pride emotions influenced the degree of academic performance significantly. Learning happens when a student is emotionally involved and is also confident about this achievement and that is why strongly supported emotions lead to academic success. On the other hand, the negative emotions include frustration levels and anxiety which are known to lead to low grade levels. Therefore, there is a need to go an extra mile to try to come up with ways that can help students overcome emotional and cognitive demands that they go through in their day to day activities in school. Moreover, this work revealed a

number of the factors which play an essential role in promoting positive academic emotions. In the findings ambience support, teaching strategies, peer-pressure and personal motivation came out to be important predictors that influence positive emotional experiences. Friendly emotions = higher academic achievement, academically negative emotions = lower academic achievement The result of the study reinforces the fact that academic emotions are centrally linked with the student's secondary-level academic achievement, it underlined the notion that students' affective states of learning should be in the centre of attention of both educators that work at the second level of education and policymakers.

5.1 Recommendations

Based on the finding of the study there were some recommendations as:

1. Devise strategies to amplify positive academic emotions, such as designing captivating and purposeful learning encounters.
2. Provide resources for managing negative emotions, like anxiety-reduction techniques and stress management workshops.
3. Foster a supportive classroom environment that encourages open expression of emotions and provides avenues for seeking help.
4. Provide teacher training on recognizing and addressing students' academic emotions.
5. Educate teachers on strategies for creating emotionally supportive classrooms and adapting teaching methods to address various emotional states.

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