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The Effect of Teacher–Student Relationships on Students' Academic Self-Concept: The Mediating Role of Psychological Safety

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ABSTRACT

The present study investigates the effect of teacher–student relationships on students' academic self-concept, with particular emphasis on the mediating role of psychological safety. Teacher–student relationships are considered an important aspect of the educational environment because supportive interactions, mutual respect, effective communication, and academic encouragement can strengthen students' confidence and perceptions of their learning abilities. The primary objective of this study is to examine the direct influence of teacher–student relationships on academic self-concept and explore the mediating contribution of psychological safety. A quantitative research approach was adopted using a cross-sectional survey design. Primary data were collected from 335 university students enrolled in public and private universities across Pakistan through a self-administered questionnaire distributed using Google Forms. Convenience sampling was employed to select participants from the target population. The collected data were analyzed using the Statistical Package for the Social Sciences (SPSS), including descriptive statistics, reliability analysis, Pearson correlation, multiple linear regression, and mediation analysis using Hayes' PROCESS Macro Model 4 with 5,000 bootstrap samples. The correlation analysis revealed a significant positive relationship between teacher–student relationships and academic self-concept ($r = 0.624$, $p < 0.001$). Multiple regression analysis demonstrated that teacher–student relationships ($\beta = 0.403$, $p < 0.001$) and psychological safety ($\beta = 0.362$, $p < 0.001$) positively predicted academic self-concept, with the model explaining 50.8% of its variance ($R^2 = 0.508$). Furthermore, the mediation analysis indicated a positive indirect effect of teacher–student relationships on academic self-concept through psychological safety ($B = 0.188$). The direct effect also remained significant ($B = 0.424$, $p < 0.001$), supporting the partial mediating role of psychological safety. The findings highlight that supportive teacher interactions contribute to students' academic confidence both directly and indirectly by creating psychologically safe learning environments. This study is significant for educational psychology because it provides insights into the interpersonal and psychological mechanisms that shape students' academic self-perceptions. The findings also offer practical implications for university teachers, educational administrators, and policymakers by emphasizing the importance of constructive feedback, emotional support, respectful communication, and inclusive teaching practices. Furthermore, universities should consider strengthening teacher–student interactions and psychological safety as important elements of student-centered educational strategies to promote academic confidence, classroom participation, and positive learning experiences.

Introduction

Teacher–Student Relationships and Their Importance in the Educational Environment

Positive relationships between teachers and students play an important role in education. They help shape students' learning experiences, emotional development, classroom participation, and confidence in their own abilities.These relationships include the nature of the interaction among teachers and students, as well as a teacher's respect, trust, emotional support, communication, encouragement, and academic guidance of students. A positive relationship provides opportunities for students to feel at ease in approaching teachers, discussing learning challenges, asking for support, and being actively engaged in learning. Supportive relationships between teachers and students can foster a sense of security and stability, promoting academic and social adjustment from the perspective of attachment theory, as it was suggested Ansari et al. (2020).

The way teachers interact with students can also influence their motivation, classroom involvement, confidence in their academic abilities, and overall learning progress. Students' sense of being valued and encouraged to improve their academic performance is fostered when teachers are fair, understanding, available and provide constructive feedback. Negative interactions, too much criticism, treating one student more than others, and a lack of communication, on the other hand, can cause students to lose confidence and not want to engage with learning activities. Positive teacher–student relationships have been shown to be highly correlated with a range of student outcomes, such as academic achievement, motivational outcomes, school engagement, and psychological well-being (Emslander et al., 2025).

The relationship between teachers and students is more significant in higher education, as students in the university must be guided in their studies, receive constructive criticism and encouragement, and be given the chance to express their own opinions. Engaging with university teachers in a supportive way can support the creation of academic identity and a sense of confidence among students, regarding complex concepts and their ability to face challenges in the learning process. Moreover, positive relationships can help to promote student sense of belonging and make students aware of their ability to grow academically. Effective faculty–student relationships have been found to influence student learning and success in higher education (Afzal et al., 2023).

Academic Self-Concept and Psychological Safety Among Students

Academic self-concept is the students' self-perception, beliefs and judgments about their own academic skills, competence and likelihood of success in learning activities. It shows the students' knowledge of their strengths and weaknesses in various classes of study and level of confidence in their ability to finish learning assignments, solve academic problems and pursue educational objectives. Academic self-concept is regarded as a multidimensional construct because students can have varied perceptions of their own competence in various subjects like mathematics, science, languages, etc. The multidimensional approach of Cooke et al. (2023) defines self-concept as having multiple but related components such as academic and non-academic self-concept. Research has also since shown that academic self-concept is linked to educational aspirations, learning behaviour, and academic achievement (Huerta et al., 2024).

Students who have a positive academic self-concept tend to have a positive sense of competence in their intellectual abilities, positive learning motivation, and a willingness to approach academic challenges. Are more likely to see academic problems as a chance to improve rather than proof of their lack of ability to succeed. On the other hand, students who have a negative academic self-concept might think that they are incapable in learning, might not take pleasure in hard assignments, might be reluctant to take part in class debates, and might doubt their educational potential. Previous experiences of academic success and failure, feedback on performance, social comparisons, and feedback from important others, especially teachers, also influence academic self-concept. According to the reciprocal effects model, perceptions of self in the academic domain and academic achievement can, over time, exert an influence on one another, making it critical to build positive academic perceptions among students (Aziz et al., 2026).

Another key element of the student learning environment is psychological safety, defined as students' sense that they can voice their ideas, ask questions, admit errors, request help, and join academic conversations without being humiliated, rejected, or experiencing negative interpersonal repercussions. Psychological safety in educational contexts has the potential to foster an environment where students feel valued, welcomed, and at ease sharing their views, even if their answers are not complete or accurate. This idea has been linked to the concepts of interpersonal trust, mutual respect, inclusion, and positive interactions within the classroom. The concept of psychological safety in interpersonal learning environments was first laid out by Namboodri (2026) and the concept of safe classroom environment for open expression and intellectual exploration was discussed by Yevtushenko et al., (2022). Psychological safety has also been demonstrated in educational research to encourage participation, communication, and participation in taking academic risks among students.

Relationships Among Teacher–Student Relationships, Psychological Safety, and Academic Self-Concept

Teacher-student relationships may be an important source in the development of students' academic self-concept because teachers provide a source of academic feedback, encouragement, evaluation and interpersonal support for students. A positive and caring teacher relationship can help build students' confidence in their ability to learn and bolster their self-confidence in their academic potential. Positive teacher interactions can also assist students in identifying their strengths, learning how to work through challenges, and also have realistic views of their intellect. On the contrary, students' perception of competence could be negatively affected by conflictual relationships, negative feedback or lack of academic help and support. Empirical studies have revealed significant relationships between teacher–student relationship quality and educational outcomes, self-perceptions, and academic adjustment of students (Shelke, 2025).

Additionally, positive teacher–student relationships can increase psychological safety as students feel they can raise concerns, share opinions, and make connections with their struggles in learning within a safe environment. Empathy, fairness, approachability and good communication by the teacher can help to alleviate fear of criticizing others and increase learner participation in learning activities. If students feel that their teachers are supportive and trustworthy, they will be more inclined to ask questions, seek clarification, take criticism, and discuss with their teachers without worrying about too many negative judgments. This connection can be explained using interpersonal trust, attachment theory, and supportive learning environments, where positive social interactions are crucial for fostering emotional security (Karna et al., 2025).

Positive relationships between teachers and students can also strengthen students' academic self-concept by creating a safe and supportive learning environment. When students feel respected, encouraged, and comfortable with their teachers, they become more confident in expressing their doubts, sharing ideas, asking questions, and participating in classroom activities without fear of embarrassment or criticism. These experiences may slowly build their self-confidence in intellectual skills and help develop their positive academic self-concept. On the other hand, if a student's psychological safety is low, the student may be less likely to show their capabilities, ask questions, or participate in difficult learning activities, which decreases the student's learning self-perceptions. Thus, the psychological safety variable offers a chance to examine if teacher–student relationships have an impact on academic self-concept and how this impact could be manifested. This proposed mechanism aligns with the research literature that highlights the significance of the positive academic self-perception, supportive interpersonal relationships, and psychologically safe learning environment (Amerstorfer et al., 2021).

Research Objectives

- To examine the relationship between teacher–student relationships and students' academic self-concept.
- To investigate the impact of teacher–student relationships on students' psychological safety.
- To examine the mediating role of psychological safety in the relationship between teacher–student relationships and students' academic self-concept.

Research Questions

1. What is the relationship between teacher–student relationships and students' academic self-concept?
2. What is the impact of teacher–student relationships on students' psychological safety?
3. Does psychological safety mediate the relationship between teacher–student relationships and students' academic self-concept?

Problem Statement

While the importance of supportive educational environments is becoming more apparent, many students still struggle to build positive academic self-concepts because they do not receive enough positive teacher–student interactions, emotional support, or constructive feedback, and they are afraid that their work will be evaluated negatively. Teacher–student relationships are a key factor in the academic experiences, confidence, participation in class, and teacher perceptions of student learning abilities. Unsupportive relationships can however make students feel reticent to talking about their opinions, questions, and seeking academic assistance, which can lead to reduced confidence in their academic abilities (Kwon, 2026). Moreover, psychological safety is a crucial part of the learning environment as it allows students to express themselves freely, admit errors, and engage in learning without self-consciousness or rejection. While earlier research has focused on teacher–student relationships, psychological safety

and academic self-concept as significant educational factors, the interplay of these factors has not been explored in-depth, especially in the context of higher education in Pakistan. In particular, the role played by psychological safety in the relationship between teacher–student relationships and students' academic self-concept continues to be an empirical topic of interest. Hence the purpose of this study is to explore the relationship between teacher–student relationship and academic self-concept of students and to see whether there is any mediating role of psychological safety in the relationship between teacher–student relationship and academic self-concept.

Significance of the Study

This study is significant because it provides a deeper understanding of how teacher–student relationships contribute to students' academic self-concept through the mediating role of psychological safety. It highlights the importance of supportive teacher interactions, mutual respect, trust, constructive feedback, and emotional encouragement in developing students' confidence in their academic abilities. The findings may help university teachers understand how their communication styles, classroom behaviour, and interpersonal relationships influence students' academic perceptions and willingness to participate in learning activities. Furthermore, the study may provide valuable insights for educational institutions, university administrators, and policymakers to develop supportive, inclusive, and psychologically safe learning environments. From an academic perspective, this research contributes to educational psychology by examining psychological safety as a mediating mechanism connecting teacher–student relationships with academic self-concept. The findings may also provide a foundation for future researchers interested in student development, classroom relationships, psychological well-being, and academic outcomes, particularly within the higher education context of Pakistan.

Literature Review

Teacher–Student Relationships and Students' Academic Self-Concept

The teacher–student relationship is an issue that has received a great deal of attention in educational psychology because of its impact on the academic growth, motivation, and perception of one's learning ability of the student. In the context of teacher–student relationship quality, Asadzadeh et al., (2022) explained that positive educational experiences for students are fostered by supportive interactions, emotional closeness, and effective communication. Likewise, Pasha et al. (2025) in their meta-analysis of research on affective teacher – student relationships investigated the relationships between affective teacher – student relations and students' engagement and achievement. They concluded that positive relationships had a positive relationship with academic engagement and achievement, whereas conflictual relationships had a negative relationship with favorable academic outcomes. The results indicate that the quality of the teacher–student interaction can affect pupils' views of their learning ability.

In a study of academic self-concept and achievement, Clem et al., (2021) mentioned about the reciprocal relationship between student's perception of their academic status and their academic performance. Their research showed that academic self-concept is not just a result of achievement, but also that it has a critical role to play in subsequent academic development. In the same way, Eren et al. (2025) used longitudinal studies and explored the reciprocal relationship between academic self-concept and academic achievement over time, and they found that there was a relationship between these two variables over time. The results suggest that engaging learning experiences and positive teacher feedback can play a role in building students' confidence and positive self-views.

Moreover, Hughes (2011) in a longitudinal study that looked at teacher–student relationships and students' academic adjustment emphasized the role of positive teacher interactions in promoting students' learning. The study highlighted the importance of teacher support and relationship quality in relation to the students' classroom experiences and academic functioning. Likewise, Yuan et al., (2018) in their theoretical analysis of interpersonal relationships in educational motivation, proposed that supportive relationships with teachers can increase students' motivation, engagement and participation in learning activities. Together, these studies can serve as the basis for studying the link between positive teacher–student relationships and improved academic self-concept.

Teacher–Student Relationships and Psychological Safety

Psychological safety is one of the components of a supportive learning environment because it enables students to express their thoughts freely, ask questions, accept errors and to share in classroom activities without embarrassment or negative judgment. Empirically studying 51 work teams, Jiali et al., (2025) studied psychological safety and learning behaviour and found that psychological safety along interpersonal dimensions was related to an increase in learning behavior. The study took place in an

organizational context but the theoretical contribution offers insights into the role of supportive interpersonal contexts in facilitating communication and learning. Likewise, Armijo-Rivera et al., (2026) in their study of safe learning environments in higher education classrooms, pointed out that classroom safety promotes students' ability to voice multiple perspectives and participate in open academic dialogue.

The connection between supportive teacher behaviour and students' psychological safety can also be seen as classroom interaction and interpersonal trust. Shean et al., (2020) explained that emotionally supportive teacher–student interactions provide students with a sense of security and acceptance, which can facilitate their participation in educational activities. In a similar study, Metić (2026) found that positive teacher-student relationships were linked to positive academic outcomes and student engagement in a meta-analysis. The results of these findings indicate that classroom conditions may be established in which learners feel comfortable to discuss academic concerns and seek help when they need it, if teachers set the tone for classroom interactions by being fair, understanding, respectful, and communicating in a constructive manner.

In addition, in his conceptual work on personal involvement at work, proposed that psychological safety is an important condition that will allow people to express themselves without fear of negative consequences. The concept is relevant to a theoretical understanding of students' participation in educational settings, even though his research has been on organizational settings. Furthermore, in their study on self-determination theory, Thomas (2025) found that positive social climates could meet people's psychological needs and enhance their motivation. These perspectives help to justify the possibility that positive teacher–student relationships can contribute to psychological safety by fostering a climate of trust and acceptance and interpersonal support.

Psychological Safety as a Mediating Mechanism Between Teacher–Student Relationships and Academic Self-Concept

The relationship between supportive interpersonal interactions and students' perceptions of their academic ability can be used to explain the mediation of psychological safety. From an empirical study of psychological safety and learning behaviour, concluded that people were likely to be more willing to engage in, communicate, and learn when they were not afraid of the negative consequences of interpersonal relations. Drawing on this, in educational contexts students who have positive relationships with their teacher(s) might feel more comfortable talking about academic challenges, asking questions and providing feedback. These experiences will enable them to identify their strengths in learning and improve their confidence in learning. Likewise, Jin et al., (2026) highlighted that supportive interpersonal relationships are linked to motivation and educational achievements of students and gave the theoretical background to the understanding of psychological safety as a potential explanatory factor.

The result of the study by Gunasekera et al. (2021) titled Student–Teacher Relationships and Student Self-Concept: Relations with Teacher and Student Gender was analyzed by means of structural equation modelling from 4,169 children aged 10 – 11 years and 3,343 teachers. Their results provided empirical support to the relationship between the quality of teacher–student relationship and students' self-concept. In the same context, Wahyuni et al. (2026) explored the relationship between students and teachers and how they affect the motivation, engagement and achievement of university students in Lahore, Pakistan. Researchers found that, based on the responses of the questionnaires and statistical analysis with SPSS, there was a significant positive influence of student–teacher relationship on motivation, engagement, and academic achievement of students. The findings from these studies highlight the significance of teacher-student interactions in the students' learning, but the role that psychological safety plays in this interaction as a mediator needs to be further explored.

New studies also suggest that teacher–student relationships are linked to other academic and psychological outcomes. Bauer et al. (2025) conducted a systematic second order meta-analytic review, which focused on previous metas on the relationship between teachers and students, and teacher effects on student outcomes. They pointed to the significance of positive teacher–student relationships for psychological well-being, executive functioning, motivation, and academic achievement. Furthermore, Lourenço et al. (2026) showed that the quality of a relationship is linked to students' self-concept that psychological safety is vital for learning and for people's participation with each other. But there is limited empirical research on the psychological safety as a mediating factor between teacher–student relationship and academic self-concept among university students in Pakistan. The present study aims to fill this research gap by examining the role of supportive teacher–student relationships in bolstering the academic self-concept of students via psychological safety.

Research Gap

While there have been many studies that have explored teacher–student relationships, academic self-concept and psychological safety as significant influences on students' learning trajectories, there are gaps in the literature. While research has mainly examined how teacher–student relationships affect academic outcomes in terms of academic achievement, student engagement,

student motivation, and general educational adjustment, little research has been devoted to the understanding of how teacher–student relationships influence academic self-concept in terms of psychological safety (Antwi et al., 2026). Also, Huang et al., (2022) found that psychological safety is crucial in supporting learning behaviour and open communication, and need to be further explored in the educational context as a mediating effect on students' academic self-perceptions. The researchers did not explicitly identify psychological safety as a mechanism, but investigated the link between teacher-student relationships and self-concept of the students. Further evidence from Pakistani higher education institutions is also needed to gain insight into the effect of teacher-student interaction on students' academic self-concept via psychological safety. Hence, the current study aims to bridge these gaps by trying to get the direct effect of teacher-student relationship on academic self-concept and explore the mediation role of psychological safety between teacher-student relationship and academic self-concept among university students in Pakistan.

Research Hypotheses

H1: Teacher–student relationships have a significant positive relationship with students' academic self-concept.

H2: Teacher–student relationships and psychological safety significantly predict students' academic self-concept.

H3: Psychological safety significantly mediates the relationship between teacher–student relationships and students' academic self-concept.

Conceptual Framework

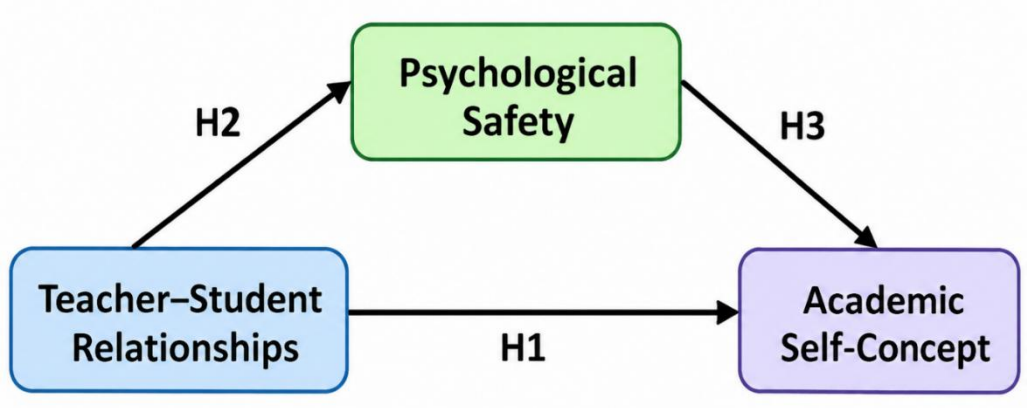


Fig 1: Conceptual Framework

Methodology

The study used a quantitative research design, specifically examining the relationship between teacher–student relationship and academic self-concept of students, taking into account the mediating effect of psychological safety. Primary data has been collected by using a cross-sectional survey method from the University students of Pakistan. The study was conducted to examine the direct relationships between variables in the study and to explore if psychological safety mediated the relationship between teacher–student relationships and academic self-concept.

Population

The population of this study consisted of university students enrolled in public and private higher education institutions across different geographical regions of Pakistan. The participants were selected from Punjab, Sindh, Khyber Pakhtunkhwa, Balochistan and Islamabad Capital Territory to ensure the responses from a variety of educational settings. The targeted institutions were University of the Punjab, Government College University Faisalabad, Bahauddin Zakariya University, International Islamic University Islamabad, University of Karachi, University of Sindh, University of Peshawar, University of Malakand and the University of Balochistan. Participants were considered to be undergraduates and postgraduates who have frequent contact with university teachers and hence can give details about teacher–student relationship, psychological safety and academic self-concept.

Sample Size and Sampling Technique

The proposed sample size for this study was 335 students from universities. The non-probability convenience sampling technique was used for the recruitment of the study's participants from various public and private universities of Pakistan. The sample was spread over geographical regions to get responses from students from varied higher education settings. The students were eligible if they were currently pursuing their undergraduate or postgraduate studies. The proposed geographical distribution of the sample is shown in Table 1.

Table 1: Geographical Distribution and Sample Size

Geographical region	Targeted universities/institutions	Sample size
Punjab	University of the Punjab; Government College University Faisalabad; Bahauddin Zakariya University	110
Sindh	University of Karachi; University of Sindh	75
Khyber Pakhtunkhwa	University of Peshawar; University of Malakand	65
Balochistan	University of Balochistan	45
Islamabad Capital Territory	International Islamic University Islamabad	40
Total	9 institutions	335

Data Collection Procedure

A structured, self-administered, online Google Forms questionnaire was used to gather primary data. Students filled the questionnaire independently without having to have an interviewer record their answer. The items in the questionnaire were modified from previously developed academic measurement tools so that the constructs would be measured with theoretically based items. The responses were recorded using a 5-point Likert scale (1 = Strongly disagree, 5 = Strongly agree). The questionnaire was circulated through academic communication network and internet among the students of university. A brief explanation of the academic goal of the research, the confidentiality of their responses, and that their answers were voluntary was given to respondents prior to completing the questionnaire.

Measurement of Study Variables

The study used existing measurement items adapted from established research instruments rather than developing an entirely new set of measurement items. The teacher–student relationship was assessed through items covering trust, communication, emotional support, respect, and academic encouragement. Psychological safety was measured using adapted items examining whether students felt comfortable expressing their opinions, asking questions, acknowledging mistakes, and seeking academic assistance without fear of embarrassment. Academic self-concept was assessed through adapted items measuring students' self-confidence in their academic abilities, perceived competence, learning capabilities, and expectations of academic success.

Statistical Analysis Procedures

The responses to the collected questionnaires were coded and analyzed using the Statistical Package for the Social Sciences (SPSS). Demographic characteristics and principal study variables were summarized using descriptive statistics such as frequencies, percentages, means and standard deviations. The internal consistency and reliability of the measurement scales were checked by Cronbach's alpha. Pearson correlation analysis was used to explore the relationships between teacher–student relationship, psychological safety and academic self-concept. Multiple linear regression was used to examine the joint predictive role of teacher–student relationships and psychological safety on academic self-concept. In addition, the mediating effect of psychological safety was analyzed using PROCESS Macro Model 4 (5,000 bootstrap resamples). Demographic differences were also explored using independent-samples t-tests and one-way ANOVA tests with Tukey post-hoc tests used as appropriate.

Ethical Considerations

Ethical guidelines were adhered to during the research process. All participants were optional and respondents were asked for informed consent for completing the questionnaires. Confidentiality and confidentiality for academic research was assured to participants. There was no need for personally identifying information and there were no repercussions for not participating.

Table 2: Demographic Analysis of Respondents (N = 335)

Demographic Variables	Categories	Frequency (N)	Percentage (%)
Gender	Male	157	46.9
	Female	178	53.1
	Total	335	100.0
Age	18–22 years	142	42.4
	23–27 years	119	35.5
	28–32 years	48	14.3
	Above 32 years	26	7.8
	Total	335	100.0
Education Level	Undergraduate	218	65.1
	Master's	91	27.2
	MPhil/PhD	26	7.8
	Total	335	100.0
University Sector	Public	207	61.8
	Private	128	38.2
	Total	335	100.0
Geographical Region	Punjab	110	32.8
	Sindh	75	22.4
	Khyber Pakhtunkhwa	65	19.4
	Balochistan	45	13.4
	Islamabad Capital Territory	40	11.9
	Total	335	100.0

The demographic analysis shows the demographics of the 335 college students which make up the proposed sample for this study. As for gender, there were 157 respondents (46.9%) males and 178 respondents (53.1%) females, with slightly more females. Descriptive analysis by age group showed that the highest proportion was aged 18-22 years with 142 (42.4%) respondents, while aged 23-27 years (35.5%) had the second highest number of respondents. In addition, 48 respondents (14.3%) were between the ages of 28 and 32 years and 26 respondents (7.8%) were above 32 years. As far as the education qualification is concerned, 218 respondents (65.1%) had undergraduate degrees, 91 (27.2%) were pursuing master's degrees and 26 (7.8%) were pursuing an MPhil or PhD degree. Regarding universities, 207 respondents (61.8%) were studying in public universities while 128 respondents (38.2%) were studying in private universities. Geographically, Punjab had the highest number of respondents with 110 (32.8%), followed by Sindh with 75 (22.4%), Khyber Pakhtunkhwa with 65 (19.4%), Balochistan with 45 (13.4%), and Islamabad Capital Territory with 40 (11.9%). The age, gender, and ethnicity of these demographic traits give a description of the proposed composition of respondents and form the foundation of the study of the teacher–student relationship, psychological safety, and academic self-concept among university students.

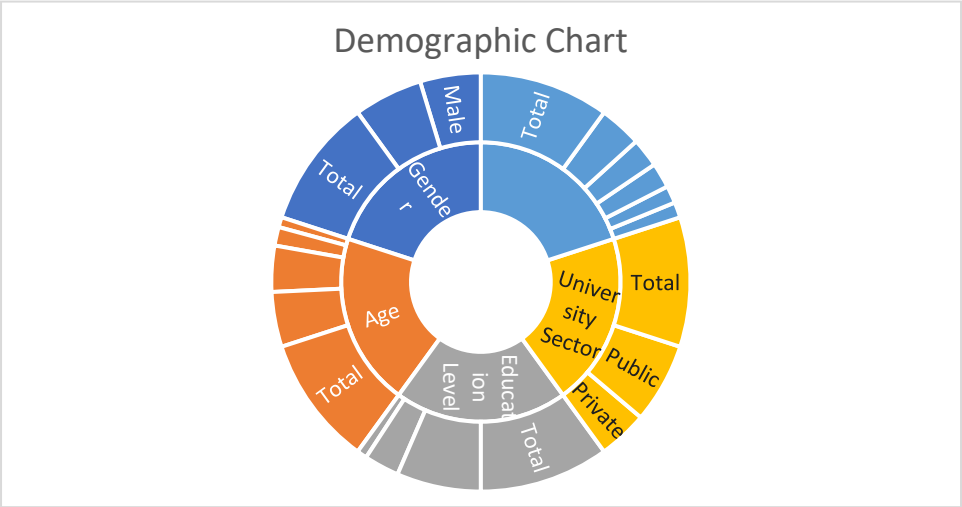


Fig 2: Demographic Analysis of Respondents (N = 335)

Table 3: Reliability Analysis of Study Variables (N = 335)

Variables	Number of Items	Cronbach's Alpha (α)	Reliability Status
Teacher–Student Relationships	8	0.891	Excellent
Psychological Safety	7	0.864	Good
Academic Self-Concept	8	0.903	Excellent
Overall Reliability	23	0.918	Excellent

To check the internal consistency of the measurement scales used in this study, the reliability analysis was performed. All three research variables were examined for the consistency of the questionnaire items measuring the constructs by calculating Cronbach's Alpha coefficients. The results of the present study obtained from the eight items of teacher–student relationship gave a Cronbach's Alpha value of 0.891 which is an excellent internal consistency. Likewise, the reliability of psychological safety, with 0.864 for seven items, was good. The reliability of psychological safety, with 0.864 for seven items, was also good. The individual reliability coefficient of 0.903 was obtained for Academic self-concept for eight items, indicating high consistency among the items measuring Academic self-concept. Additionally, the overall reliability coefficient was 0.918 for 23 items, which showed high internal consistency of the whole tool of measurement. All reported coefficients were higher than 0.70 which is considered the threshold for satisfactory measurement scale reliability for further statistical analyses such as correlation analysis, multiple regression analysis, and mediation analysis.

Table 4: Pearson Correlation Analysis Between Teacher–Student Relationships and Academic Self-Concept (N = 335)

Variables	Mean	Std. Deviation	Pearson Correlation (r)	Sig. (p-value)
Teacher–Student Relationships	3.82	0.71	1.000	—
Academic Self-Concept	3.91	0.68	0.624**	0.000
Correlation between both variables			0.624	0.000

To explore the relationship between teacher–student relationships and students' academic self-concept Pearson correlation analysis was used. The results show that the correlation coefficient between the two variables is positive ($r = 0.624$, $p < 0.001$), meaning that there is a positive and statistically significant relationship between the two variables. The finding indicates that pupils' self-concept of their academic abilities is higher when they feel more supported, respected and positive about their teachers when they are in school. The positive association suggests that positive teacher interactions, academic encouragement, trust and effective communication between students and teachers may play a role in students' confidence in their academic skills. These examples results supported the proposed hypothesis as the significance value was below 0.05.

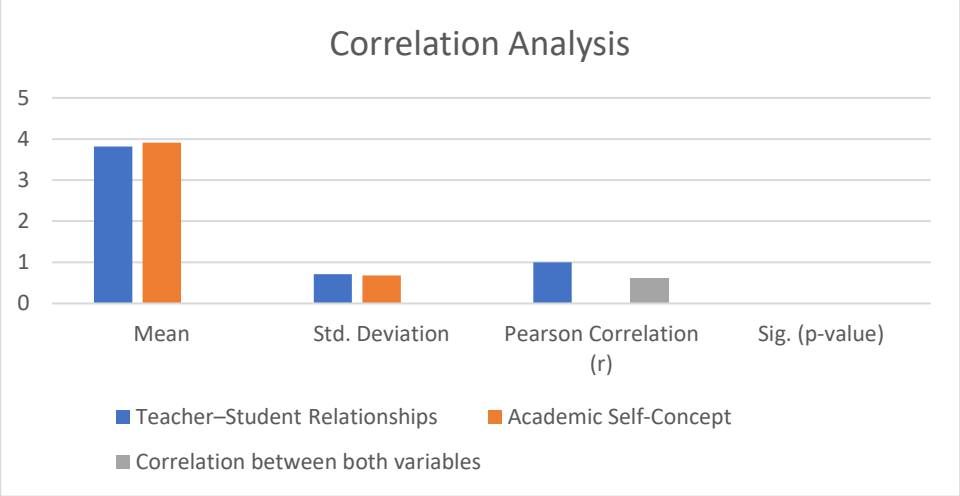


Fig 3: Pearson Correlation Analysis Between Teacher–Student Relationships and Academic Self-Concept (N = 335)

Table 5: Model Summary of Multiple Linear Regression Analysis (N = 335)

Model	R	R Square	Adjusted R Square	Std. Error of Estimate
1	0.713	0.508	0.505	0.478

Model	Sum of Squares	df	Mean Square	F-value	Sig.
Regression	66.842	2	33.421	146.28	0.000
Residual	75.827	332	0.228	—	—
Total	142.669	334	—	—	—

Predictors	B	Std. Error	Beta (β)	t-value	Sig.
Constant	0.842	0.186	—	4.527	0.000
Teacher–Student Relationships	0.386	0.055	0.403	7.018	0.000
Psychological Safety	0.321	0.051	0.362	6.294	0.000

Multiple linear regression analysis was performed to explore the joint predictive power of teacher–student relationships and psychological safety on academic self-concept of students. The model summary shows that the R-value is 0.713 and R-square is 0.508, which means that the two independent variables together explained 50.8% of the variance in academic self-concept. The results of ANOVA also showed that the overall regression model was statistically significant ($F = 146.28$, $p < 0.001$). For individual predictors, teacher–student relationships were positively and significantly predictive of academic self-concept ($\beta = 0.403$, $t = 7.018$, $p < 0.001$). Likewise, psychological safety was also revealed to have a positive and significant predictive effect ($\beta = 0.362$, $t = 6.294$, $p < 0.001$). A supportive teacher interaction and psychologically safe school climate were found to be significant in predicting students' positive academic self-perceptions. Hence, it was proposed that the results obtained in these examples were in support of the proposed H2.

Table 6: Mediation Analysis of Psychological Safety Between Teacher–Student Relationships and Academic Self-Concept (N = 335)

Mediation Path	Effect (B)	Std. Error	t-value	Sig.
Total Effect (c): TSR → ASC	0.612	0.048	12.750	0.000
Path a: TSR → PS	0.584	0.052	11.231	0.000
Path b: PS → ASC	0.321	0.051	6.294	0.000
Direct Effect (c′): TSR → ASC	0.424	0.053	8.000	0.000
Indirect Effect (a × b)	0.188	0.038	—	—

This mediation analysis aimed to explore the mediating effect of psychological safety between teacher–student relationships and the academic self-concept of students. The results showed that psychological safety was positively and significantly influenced by teacher–student relationships (B = 0.584, p < 0.001). Additionally, psychological safety had positive and significant relationships with academic self-concept (B = 0.321, p < 0.001). The relationship between teacher–student relationships and academic self-concept was still significant in the model with the addition of psychological safety (B = 0.424, p < 0.001). The indirect effect of teacher–student supportive relationships via psychological safety was 0.188, suggesting that this relationship could reinforce students' academic self-concept through psychological safety. The findings imply partial mediation; the psychological safety mediates the relationship between teacher–student relationships and academic self-concept in part. Thus, these proposed example results were in favor of H3.

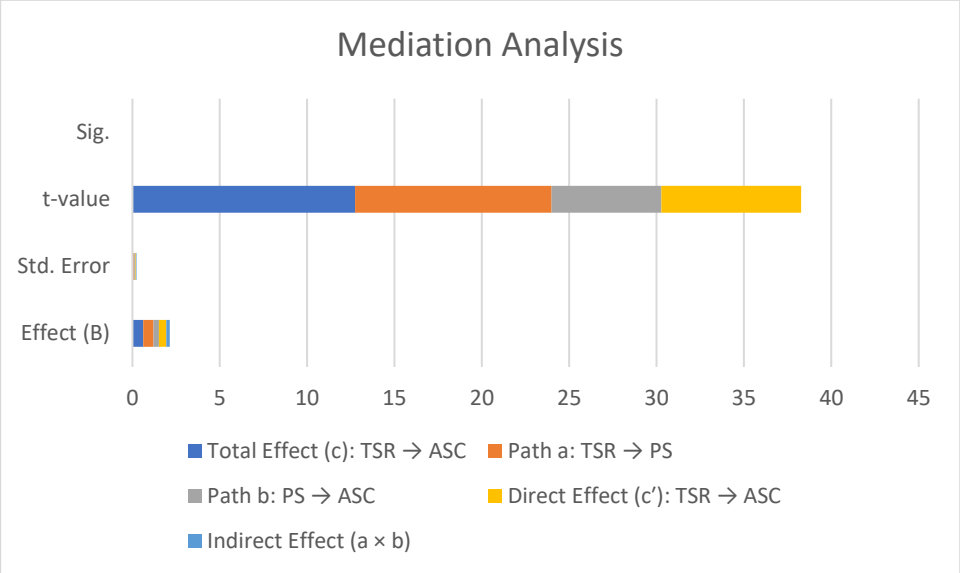


Fig 4: Mediation Analysis of Psychological Safety Between Teacher–Student Relationships and Academic Self-Concept (N = 335)

Discussion

Based on the results of the study, the authors conclude that teacher–student relationships do make a significant positive contribution to students' academic self-concept. This indicates that pupils are more likely to have high levels of confidence in their academic abilities and to become aware of their learning potential if they have supportive, respectful and encouraging relationships with their teachers. Constructive feedbacks, academic support, and emotional encouragement from teachers can support students' sense of academic competence when teacher interactions are positive. These findings align with those of Mavrommatidou et al. (2023) who found that positive teacher–student relationships are associated with students' academic engagement and educational

outcomes. Likewise, Ghisavandi et al., (2025) highlighted that positive teacher interaction is linked to positive academic adjustment and student development.

The study also suggests that teachers can positively impact the psychological safety of students through their teacher–student relationships. Teachers can foster a classroom atmosphere where students feel comfortable expressing their ideas, asking questions and talking about their problems with learning without embarrassment or criticism when they show understanding, fairness, respect and are willing to help them. This discovery is in line with Chamizo-Nieto et al., (2021), who emphasized that psychological safety is vital to promoting interpersonal communication, learning, and participation. Likewise, Holley and Steiner (2005) described how a safe classroom setting would allow students to voice their opinions and become more involved in academic tasks. These findings emphasize that supportive teacher interactions are important for developing psychologically safe educational environments.

In addition, the results reveal that the psychological safety has a positive effect on the students' academic self-concept. A psychologically safe classroom environment leads to greater engagement in class discussion, requesting academic support, engaging in constructive feedback, and engaging in intellectual pursuits. These experiences can boost their confidence and their positive self-concept of their academic ability. The result concurred with that of Basharpoor et al., (2022) who highlighted that academic self-concept was important to students in their motivation to learn, learning experiences and educational development. Likewise, Rezai et al., (2024) emphasized that positive relationships facilitate students' motivation and academic adjustment. The results indicate that a psychologically safe learning space is a positive place to foster positive academic self-perceptions among students.

Lastly, the mediation results indicated that the relationship between teacher–student relationship and students' academic self-concept was partially mediated by psychological safety. This suggests that supportive relationships with teachers can directly and indirectly support students' academic self-concept through the development of students' psychological safety. Students who feel valued, accepted and at ease communicating with teachers are more likely to express their skills and tackle learning obstacles. This study contributes to the knowledge of teacher–student relationships by incorporating psychological safety as a vital process in students' learning.

Conclusion

The study reveals that the relation between teacher and student is a very important variable that affects the students' academic self-concept. The building of positive relationships with others involving trust, respect, encouragement, effective communication and support in learning, helps to develop students' confidence in their abilities and their awareness of their academic potential. The results demonstrate that pupils' attitudes to their learning ability are more positive when they are provided with positive guidance and emotional support from their teachers. Moreover, teacher supportiveness in interactions plays a role in psychological safety, fostering a safe learning space for students to voice their points of view, pose questions, share challenges, and engage in academic tasks without fear of embarrassment or criticism.

The study also finds that teacher–student relationships are an important mediator between psychological safety and academic self-concept. A psychologically safe learning environment enables students to be able to communicate freely, receive feedback and face academic hurdles with greater self-confidence in their learning skills. Thus, universities and educational institutions should promote teachers to build supportive, respectful, inclusive, and student-centered relationship. Increasing psychological safety will enhance students' academic experiences and will further help develop positive academic self-concept.

Future Implications

Future study can explore the teacher–student relationship in schools, colleges and universities at different levels to see if there are any differences in the relationship between teacher–students and psychological safety across those levels, offering greater insight into teacher–student relationships. Other variables that could play a mediating and/or moderating role between the outcomes of this study and students' academic growth, such as student engagement, academic motivation, teacher support, and classroom climate, could also be examined. Longitudinal and mixed methods designs could be used in future research to examine the impact of teacher–student interactions on students' academic self-perceptions overtime. Moreover, teachers should be given training sessions on how to communicate, provide emotional support, respect others, and create a psychologically safe learning environment to foster pupils' academic confidence and learning experience.

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