

Interpersonal Relationship in Social Competence and Academic Performance: A Mediation Analysis

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Abstract

This study explored the mediating role of interpersonal relationships in the relationship between social competence and academic performance among university students. It aimed to evaluate the effect of social competence and interpersonal relationships on academic performance and examine the mediating effect of interpersonal relationships. A quantitative survey design was employed. The population included public and private-sector general universities in Punjab. A sample of 866 undergraduate students was selected through multistage sampling from nine universities. Three adapted instruments were used: the Multi-dimensional Social Competence Scale, Teacher-Student Relationship Inventory, and Peer Inventory Scale. Data were analyzed using multiple regression, AMOS version 26, and Macro Process Model. Results showed that social competence did not directly predict academic performance but significantly influenced it through interpersonal relationships. The results of the study were that interpersonal relationships significantly mediate the positive indirect effect of social competence on academic performance. The study recommended structured training programs, open communication, peer mentoring, and academic counseling to enhance social competence and academic success.

Keywords: Social Competence, Interpersonal Relationship, Academic Performance.

Introduction

In higher education, students are expected to develop not only academic excellence but also social and emotional competences essential for success in a dynamic global environment. Social competence—defined as the ability to interact effectively, form relationships, and adapt socially—plays a vital role in shaping academic outcomes (Øzerk & Silveira-Zaldivar, 2021). Universities increasingly prioritize fostering social competence to prepare students for academic and professional challenges (Ispiryan, 2023). Social competence enhances students' ability to collaborate, communicate, and engage actively in learning. It supports constructive peer interactions, academic help-seeking, and cooperative learning, all linked to improved academic performance (Shernoff, 2010). Students with strong social competence show higher classroom engagement, emotional regulation, and motivation—factors closely tied to academic success (Akbaribooreng et al., 2015). A key pathway linking social competence to academic performance is the quality of interpersonal relationships. Positive peer and student-teacher relationships foster belonging, emotional support, and collaborative learning, boosting academic engagement (Kiuru et al., 2020; Chen & Peng, 2008). In contrast, poor relationships can lead to isolation and hinder

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performance. Socially competent students tend to build supportive networks and manage conflicts effectively, reinforcing academic success through strong interpersonal bonds (Taylor, 1982). However, the mediating role of interpersonal relationships in this link remains underexplored (Lin & Kuo, 2024). This study investigates how interpersonal relationships mediate the relationship between social competence and academic performance among undergraduates. By examining these pathways, the research aims to inform strategies that support both the social and academic development of students.

Objectives of the Study

- To find out the effect of social competence and interpersonal relationships on academic performance of undergraduate students
- To investigate the mediating role of interpersonal relationship in relationship between social competence and academic performance of undergraduate students.

Statement of the Problem

Despite the increasing recognition of social competence as a critical determinant of academic performance, its specific influence on university students' academic outcomes remains insufficiently explored, particularly regarding the mediating role of interpersonal relationships (Ispiryan, 2023). Although previous research has established direct associations between social competence and academic performance, there is limited empirical investigation into how interpersonal relationships facilitate or mediate this relationship (Yang & Wang, 2023). In higher education settings, where students are expected to manage greater independence and social complexity, social competence is essential for fostering supportive interpersonal relationships with peers and faculty, which in turn can enhance engagement, motivation, and academic success. However, there is a lack of detailed empirical evidence outlining these indirect pathways through which social competence translates into improved academic performance via interpersonal relationships (Hajovsky et al., 2023). Furthermore, comparative studies examining these dynamics across different higher education contexts are scarce. In Pakistan, public and private universities differ substantially in terms of institutional culture, infrastructure, and student support services, highlighting the need for research that considers these institutional variations. The core problem addressed by this study, therefore, is the inadequate understanding of how social competence affects academic performance through interpersonal relationships, particularly among students in public and private universities in Punjab, Pakistan. This study aims to bridge this gap by analyzing both the direct and mediated effects of social competence on academic performance, ultimately contributing to the development of targeted strategies to enhance students' academic and social development.

Literature Review

Social competence encompasses the social, emotional, and cognitive skills necessary for effective interaction in diverse contexts, including communication, empathy, emotional regulation, and conflict resolution (Hachem et al., 2022). In education, socially competent students form meaningful relationships, participate in group learning, and seek academic support, enhancing their academic outcomes (Vafa & Elhami Athar, 2021). With changing workforce demands, universities increasingly emphasize social competence to prepare students for 21st-century challenges (Robertson & Vinson, 2022; Demirdis, 2025). Academic performance, often measured by GPA, is influenced not only by cognitive ability but also by social and emotional factors. Students with strong interpersonal skills and self-regulation tend to be more motivated, organized,

and engaged (Richardson & Bond, 2012). Interpersonal relationships, especially peer and student-teacher connections, foster collaboration, reduce isolation, and enhance academic success (Rabo, 2022; Sointu et al., 2017). Research shows that socially competent students form stronger interpersonal relationships, which provide emotional support and enable academic collaboration (Uleanya, 2020; Ofori & Addai, 2018; Griggs et al., 2009). However, the mediating role of interpersonal relationships between social competence and academic performance remains underexplored. Recent studies highlight the need to examine these dynamics within different institutional contexts, such as public and private universities, to understand how social competence and interpersonal relationships influence academic outcomes (Magro et al., 2022).

Methodology

The present study employed a quantitative approach using a survey research design to objectively examine the mediating role of interpersonal relationship between social competence and academic performance. Quantitative research utilizes predetermined instruments to generate statistical data, ensuring objectivity and allowing for robust analysis. Survey research, which gathers individuals' perspectives through numerical data, was used to collect information from a selected sample at a single point in time. To ensure representativeness, a multistage stratified random sampling technique was applied. First, Punjab was divided into three geographical regions: Southern, Central, and Northern Punjab. From a total of 69 general universities in Punjab, 13% (nine universities—six public and three private) were randomly selected, with equal representation from each region. In the second stage, two departments from sciences, social sciences, and arts and humanities were randomly chosen, considering faculty availability across the selected universities. Finally, in the third stage, 866 BS undergraduate students were conveniently selected from these departments based on their availability.

Data Analysis

Table 1: Description of the Sample

Department	Gender	PU	SU	BZU	IUB	FJWU	KUM	SUL	SPUM	WU	Total
Education	M	12	10	13	14	8		21	8	-	86
	F	17	28	3	9	12	-	5	10	3	87
	Total	29	38	16	23	20		26	18	3	173
Psychology	M	4	6	10	10	-	6	5	6	3	50
	F	8	7	5	12		12	44	16	6	110
	Total	12	13	15	22		18	49	22	9	160
English	M	1	5	7	7	6	8	2	18	28	82
	F	4	5	3	18	-	20	5	13	4	72
	Total	5	10	10	25	6	28	7	31	32	154
Computer science	M	1	9	22	10	4	4	4	21	15	90
	F	6	6	6	-	7	15	-	6	7	53
	Total	7	15	28	10	11	19	4	27	22	143
Chemistry	M	4	8	10	11	3	1	5	4	-	46
	F	21	10	2	-	16	3	2	16	6	76
	Total	25	18	12	11	19	4	7	20	6	122
Islamic studies	M	-	1	4	23	8	-	4	4	4	48
	F	2	17	9	10	4	-	4	8	10	64
	Total	2	18	13	33	12	-	8	12	14	112
Total	M	22	39	66	74	34	19	37	51	52	394
	F	58	73	29	50	49	50	60	61	42	472
	Total	80	112	95	124	83	69	97	112	94	866

The data shows a higher overall participation of female students (472) compared to male students (394) across all departments and universities. Education and Psychology departments have the highest enrollment, especially among females, reflecting a gendered trend in academic interest areas. Notably, certain universities like PU and SPUM have a strong female presence in traditionally male-dominated fields like Computer Science and Chemistry, indicating shifting gender dynamics in higher education.

Table 2: Effect of Social Competence and Interpersonal Relationships on Academic Performance of Undergraduate Students

Variables	<i>Beta</i>	<i>B</i>	Std. Error	<i>Sig.</i>
Constant	2.79		.24	.000
Social competence	.07	.04	.07	.327
Interpersonal Relationships	.23	.16	.05	.000
R^2	.030			

N = 866, Sig = 0.05

The regression results show that interpersonal relationships significantly predict academic performance ($\beta = .16$, $p < .001$), indicating a meaningful positive contribution. In contrast, social competence does not significantly predict academic performance directly ($\beta = .04$, $p = .327$), suggesting its influence may be indirect or mediated. The model explains only 3% of the variance in academic performance ($R^2 = .030$), indicating that while interpersonal relationships are important, other variables may also contribute substantially.

Mediation Analysis

Mediation analysis is a statistical procedure used to examine the relationship between two variables by incorporating a mediating variable. This process helps to understand the indirect effect of the independent variable on the dependent variable through the mediator. A mediating variable, also known as an intermediate variable, plays a crucial role in explaining how or why this relationship (VanderWeele, 2016).

Figure 1: Exploring the mediating role of interpersonal relationships in the relationship between social competence and academic performance

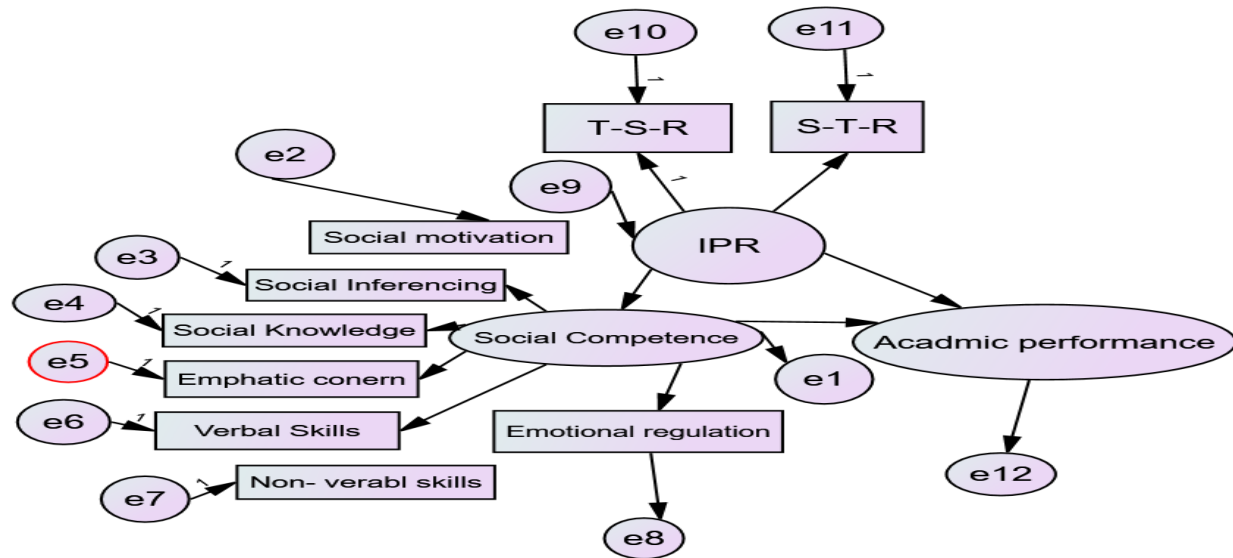


Table 3: Exploring the Mediating Role of Interpersonal Relationships in the Relationship between Social Competence and Academic Performance

Effects	<i>B</i>	<i>SE</i>	<i>T</i>	<i>P</i>	LLCI	ULCI
Direct Effect						
SC → AP	.072	.079	.901	.367	-.084	.228
Indirect Effect						
SC → IPR → AP	.115	.036			.045	.188
Total Effect						
SC → AP+SC → IPR → AP	.187	.071	2.63	.008	.047	.327

Note: β = Effect size; CI= class interval; LL= Lower limit; UL= Upper limit.

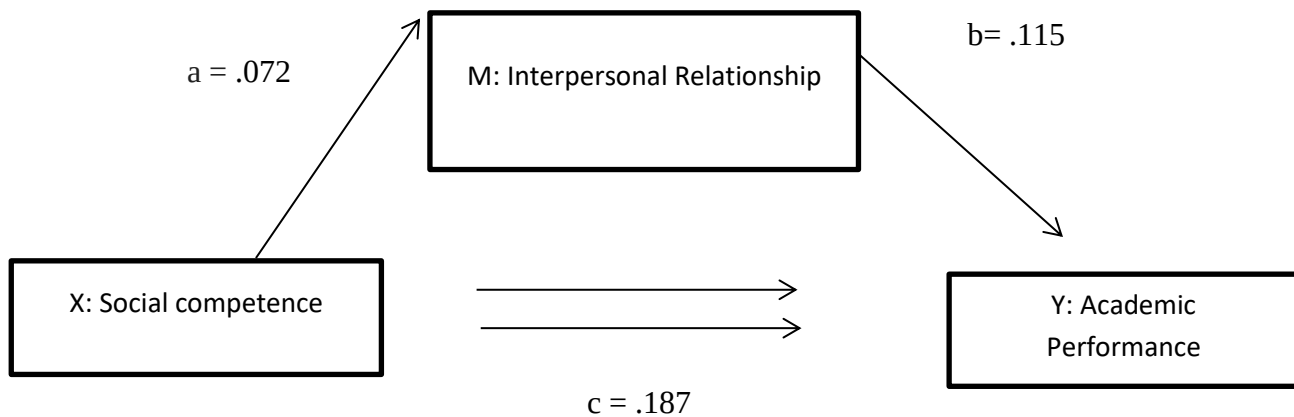
Figure 2: Mediation Framework

Table 3 illustrated the mediating role of interpersonal relationships (IPR) in the relationship between social competence (SC) and academic performance (AP). The direct effect of social competence (SC) on academic performance (AP) is $\beta = 0.072$, (p-value = 0.367) since the p-value was greater than 0.05, the direct effect was not statistically significant.

However, the indirect effect of social competence on academic performance through interpersonal relationships was statistically significant ($\beta = 0.115$), indicated that interpersonal relationship serve as a mediator in the relationship between social competence and academic performance.

The total effect, which combines the direct effect of SC on AP and the indirect effect through IPR, is $\beta = 0.187$, (p = .008). Since the p-value was less than 0.05, the total effect was statistically significant.

Discussion

The current study examined the effect of social competence on academic performance among undergraduate students, focusing on the mediating role of interpersonal relationships. Findings revealed that interpersonal relationships significantly predict academic performance, while social competence does not have a significant direct effect. These results support Wentzel et al. (2010), who emphasized that strong connections with family, teachers, and peers are linked to academic motivation and accomplishment. Similarly, R  ppel and Walter (2015) found that students with strong social support have better psychological well-being, contributing to academic success. Daly et al. (2014) explained this through the social capital hypothesis, which posits that emotional support and guidance from relationships positively influence academic outcomes. Juvonen and Knifsend (2012) also noted that supportive peer networks enhance students' confidence and sense of belonging. Contrary to these findings, some studies highlight the direct role of social competence. Nayak and Kumar (2018) reported that students with strong social skills handle challenges, resolve conflicts, and seek academic help effectively, improving their academic outcomes. Tabassum et al. (2024) also emphasized that socially competent students manage stress and academic demands more effectively through social networks. The mediating role of interpersonal relationships found in this study aligns with Wentzel (1998), who reported that close peer relationships enhance motivation. Vollet et al. (2017) similarly argued that social competence alone may not improve academic performance unless it fosters meaningful social bonds. However, Hall and DiPerna (2017) found that social competence directly predicts academic performance through prosocial behavior, communication, and self-regulation. Chandra and Kumar (2022) and

Bozkurt Yükcü and Demircioğlu (2021) supported these findings, suggesting that differences may arise from contextual or cultural factors. Ohrt and De La Garza (2014) highlighted that social competence promotes self-regulation and collaboration, contributing to academic success. Leach (2014) maintained that its impact depends on building strong relationships. Wentzel et al. (2021) found that socially competent students succeed academically when supported by peers and teachers. In contrast, Robinson (2022) and Taylor (1982) observed that social competence fosters emotional control and problem-solving, enabling students to manage academic tasks independently, even without strong relationships. These mixed findings indicate both support and contradiction regarding the direct and indirect effects of social competence on academic performance. The current study affirms that interpersonal relationships mediate this relationship. As Akbaribooreng et al. (2015) noted, such research reveals both congruent and incongruent results, likely reflecting variations in context, sample, and educational settings.

Conclusion

This study investigated the effect of social competence and interpersonal relationships on academic performance and explored the mediating role of interpersonal relationships. Social competence alone did not have a statistically significant direct effect on academic performance, indicating it is not a strong direct predictor. However, interpersonal relationships had a significant positive effect on academic performance. The results showed that interpersonal relationships significantly mediated the relationship between social competence and academic performance. The indirect effect of social competence on academic performance through interpersonal relationships was statistically significant, as was the total effect. These findings highlight the crucial role of interpersonal relationships in translating social competence into improved academic performance. While social competence may not directly impact academic success, it contributes by fostering stronger interpersonal relationships, which positively influence academic outcomes.

Recommendations

- Universities should design and implement integrated programs that combine academic and social development initiatives.
- Institutions of higher learning should incorporate social competence development into their academic programs.
- Universities should foster a supportive academic environment by encouraging open and effective communication between faculty and students.

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