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Examining Peer Support in students at University Level: A confirmatory Factor Analysis for Peer Support Perception Scale (PSPS) In Higher Education in Pakistan

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ABSTRACT

This study provides Confirmatory Factor Analysis of the Peer Support Perception Scale (PSPS), developed by Nur Eva (2024), focusing on students from two universities in Pakistan. Peer support involves the sharing of knowledge, experience, and emotional, social, or practical assistance among students, which is essential for fostering academic success, psychological well-being, and social integration among university students worldwide. Given that the PSPS is still relatively new, validating its reliability and accuracy within the specific cultural and demographic context of Pakistani universities is necessary. This study examines the psychometric properties of the Peer Support Perception Scale (PSPS) developed by Nur Eva (2024) among a total sample of 100 university students, enrolled in two universities of Pakistan. The instrument includes four subscales, namely Informational Support(IS), Instrumental Support(InS), Companionship Support(CS), and Esteem Support(ES). Using Confirmatory Factor Analysis (CFA) and reliability analysis, the scale's factor structure and internal consistency (Cronbach's alpha) were evaluated. Results showed that item 3 had a low factor loading value below the acceptable cutoff, and was therefore removed to improve the overall model fit. All other items demonstrated acceptable CFA loadings of 0.71 to 0.95 indicating strong associations with their respective factors. The reliability results revealed Cronbach's alpha value of 0.84 for overall scale and for subscales (1) IS = 0.83, (2) InS= 0.79, (3) CS = 0.80 and (4) ES= 0.81, confirming excellent internal consistency. These findings indicate that the PSPS is a reliable and valid



instrument for measuring peer support in university students, supporting its application in the Pakistani higher education context.

Keywords: Peer support, Peer Support Perception Scale (PSPS), University students, Confirmatory Factor Analysis (CFA), Higher education, Reliability

INTRODUCTION

Peer support plays an important part in forming students' academic engagement and mental wellbeing, serving as a vital resource within the educational environment. As Students deal with the obstacles of higher education, the encouragement, empathy, and shared experiences offered by peers can significantly influence their psychological health and commitment to learning. Peer support, according to Darby Penney (2018), is a structured approach of offering and receiving assistance that is based on the ability of individuals to react emotionally to shared challenges. The concept of mutuality informal relationships, and the special significance of lived experience as the foundation for support are what set it apart.

Unlike formal mentorship or top-down interventions, peer support involves reciprocal interactions where students actively share experiences, provide encouragement, and collaboratively solve problems. Research demonstrates that this informal network of social support is instrumental in mitigating stressors associated with academic life. For example, Camacho-Morles et al. (2021) highlight that students who regularly participate in structured peer support programs report reduced symptoms of anxiety and depression. The shared understanding and empathy among peers create a safe environment that fosters openness and emotional resilience.

The influence of peer support extends beyond emotional benefits to tangible academic outcomes. Students who feel supported by their peers tend to demonstrate higher motivation and engagement in classroom activities. Wentzel et al. (2021) suggest that peer encouragement directly correlates with increased participation, persistence in challenging tasks, and a willingness to seek help when needed. This enhanced academic engagement often translates into improved academic achievement and satisfaction with the educational experience. (Altermatt, 2019)

Evidence from Pakistan shows that university students face distinct academic and social challenges. For instance, Javaid et al. (2024) found that first-year undergraduates in Punjab reported significant stress linked to heavy workloads, competitive environments, financial constraints, and language-related difficulties, with such stress negatively affecting academic achievement. Within this context, peer networks often act as informal support systems. Supporting this, Riaz et al. (2025) demonstrated that peer support networks strongly predict resilience to social media-related vulnerabilities among Pakistani university students. Together, these findings highlight the central role of peer support in student adjustment and well-being. Therefore, validating the PSPS among university students in Faisalabad is essential to ensure its cultural relevance and psychometric accuracy.

Research Objectives

1. To assess construct validity of the Peer Support Perception Scale (PSPS) by confirming its four factor structure using Confirmatory Factor Analysis (CFA), ensuring the scale accurately reflects its intended dimensions among university students in Pakistan.
2. To evaluate the reliability of the PSPS by examining the internal consistency of the overall scale as well as each of its four subscales using Cronbach's alpha among university students in Pakistan.

LITERATURE REVIEW

In recent years, the significance of peer support in educational environments has gained significant attention from researchers and educators alike. Peer support encourages the sharing of resources and learning strategies, making it easier for students to navigate academic challenges collaboratively. Worley et al. (2023) found that peer-led study groups, tutoring, and discussion forums contribute to higher academic adjustment and stronger interpersonal connections among students. Nur Eva (2024) defined peer support as a voluntary interpersonal relationship characterized by mutual affection, the sharing of positive experiences, and reciprocal interactions that promote social and emotional development.

The systematic review by Le, Sok, and Heng (2024) emphasizes the significant benefits of peer mentorship in higher education. It shows that peer mentorship enhances academic performance, including improvements in GPA, test scores, and passing rates. Beyond academics, it helps reduce stress and anxiety while increasing resilience, motivation, and self-esteem, which support better mental health and sustained academic persistence. The review also highlights how peer mentorship fosters social integration by helping diverse students connect and adjust to university life, creating a supportive academic community. Additionally, it underscores the importance of well-designed programs and good mentor-mentee compatibility for maximizing effectiveness.

Ulmanen, Tikkanen, and Pyhältö (2024) examine how peer support influences students' overall life happiness, finding that its positive effects occur indirectly through fostering a sense of relatedness and encouraging active academic involvement. Their study shows that peer support itself does not directly enhance life happiness; instead, meaningful social connections and engagement in learning mediate this relationship. A strong feeling of relatedness being connected and supported by peers is crucial for motivating students and increasing their academic participation, which in turn significantly impacts their happiness beyond the classroom.

The study by Zhu et al. (2025) found that perceived peer support positively influences academic adjustment among higher vocational college students. This effect occurs because peer support boosts students' academic hope and strengthens their professional identities, which together enhance their motivation and ability to cope with academic challenges. The findings highlight the importance of supportive peer networks in fostering both students' psychological empowerment and successful academic outcomes.

Rustham, Aras, and Munsiri (2022) looked into how peer social support affected academic resilience in high school students taking online courses during the Makassar pandemic. The substantial academic and psychological strain that students were experiencing as a result of the switch to distance learning served as the impetus for the study. The study indicates that the greater the perceived peer social support, the higher the academic resilience demonstrated by students, enabling them to better navigate challenges and negative emotions associated with online learning. The study concludes that peer social support is a relevant factor in strengthening academic resilience in adolescents during periods of remote education.

Hakimzadeh et al. (2016) investigated the impact of using structural equation modeling to examine the impact of peers' experienced support on students' participation in Academic pursuits and overall contentment with life. Their findings revealed that peer support positively influences academic engagement, meaning that students who experience peer support tend to be more involved and motivated in their academic work.

According to Oduwaye, Kiraz, and Sorakin's (2023) literature analysis, peer support programs have a major positive impact on students' mental wellbeing. These initiatives help students feel less stressed, anxious, and alone by fostering a sense of community and emotional support. According to the review's empirical findings, students who take part in peer support programs report feeling more confident and having better coping skills, which helps them deal with the demands of both personal and academic life. For both domestic and overseas students dealing with particular stressors, peer support serves as a protective factor by fostering a supportive environment that promotes experience sharing and establishes relationships.

Ladd and Herald (2009), in their chapter "Peers and Motivation" from the Handbook of Motivation at School, explore how peer support significantly influences students' academic motivation, particularly during early adolescence. They emphasize that the degree to which students feel participated and connected to their peer groups is known as embeddedness, and it fulfills the basic psychological need for relatedness as described by Self-Determination Theory. This sense of belonging generates positive emotions and creates a supportive, less competitive environment, which in turn fosters intrinsic motivation and mastery goals. The authors highlight that as students' progress through adolescence, peers increasingly take on the role of emotional and instrumental supporters in academic contexts, sometimes replacing parental support. This growing importance of peer connections contributes to changes in students' motivation to learn, with stronger peer embeddedness linked to greater enjoyment and engagement in academic tasks.

METHODOLOGY

Sample

The sample included 100 university students in Faisalabad. This study employed a convenience sampling technique, where participants are selected based on their availability and ease of access to the researcher.

Table 1
Sample Distribution by University

University	Number of Students
Government College University Faisalabad(GCUF)	56
University of Agriculture Faisalabad(UAF)	44
Total	100

Instrument

The study employed the Peer Support Perception Scale (PSPS), originally developed by Eva (2024). The PSPS consists of 20 items distributed across four dimensions: Informational, Instrumental, Companionship, and Esteem Support. Minor modifications were made to ensure contextual appropriateness, while maintaining the theoretical structure. Each item is rated on a five-point Likert scale. Scoring on the Likert scale is as follows in Table 2

Table 2
Representation of Likert-Type Scale

Range of Score	Description
1	Almost Never
2	Very rarely
3	Sometimes
4	Very Often
5	Almost always

The representation of the subscales of PSPS, their scope, no of items and example items are discussed in Table 3.

Table 3
Description of Subscales, Their scope, Number of Items, Example Items

Subscale	Scope	No of items	Example Items
IS	Provision of evidence or substantiation for information.	5	My friends remind me to do my assignments.
InS	Instrumental help refers to provision of practical aid or support.	5	My friends help me with assignments.
CS	Assistance from a companion. individuals may depend on their peers for engaging in social activities.	5	My friends do projects with me.

ES	The provision of assistance or resources aimed at promoting and enhancing an individual's self-esteem.	5	My friends congratulate me when I have got a good grade.
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Data Collection

Data were collected through surveys administered to the students. Participants provided responses anonymously to ensure honest reporting. Ethical considerations, including informed consent, were adhered to.

Psychometric Validation of the PSPS

The validation of the Peer Support Perception Scale (PSPS) developed by Eva (2024) was conducted to establish its reliability and validity. The scale's content was grounded in a well-established theoretical framework of peer support, ensuring its conceptual relevance. Construct validity was assessed using Confirmatory Factor Analysis(CFA) performed through LISREL version 8.80 to verify that the factor structure aligned with the four proposed dimensions: Informational, Instrumental, Companionship, and Esteem support. Reliability was confirmed through internal consistency metrics measured by Cronbach's alpha for full scale and each subscale of PSPS. These comprehensive validation steps support the PSPS as a robust tool for research and practical application in higher education in Pakistan.

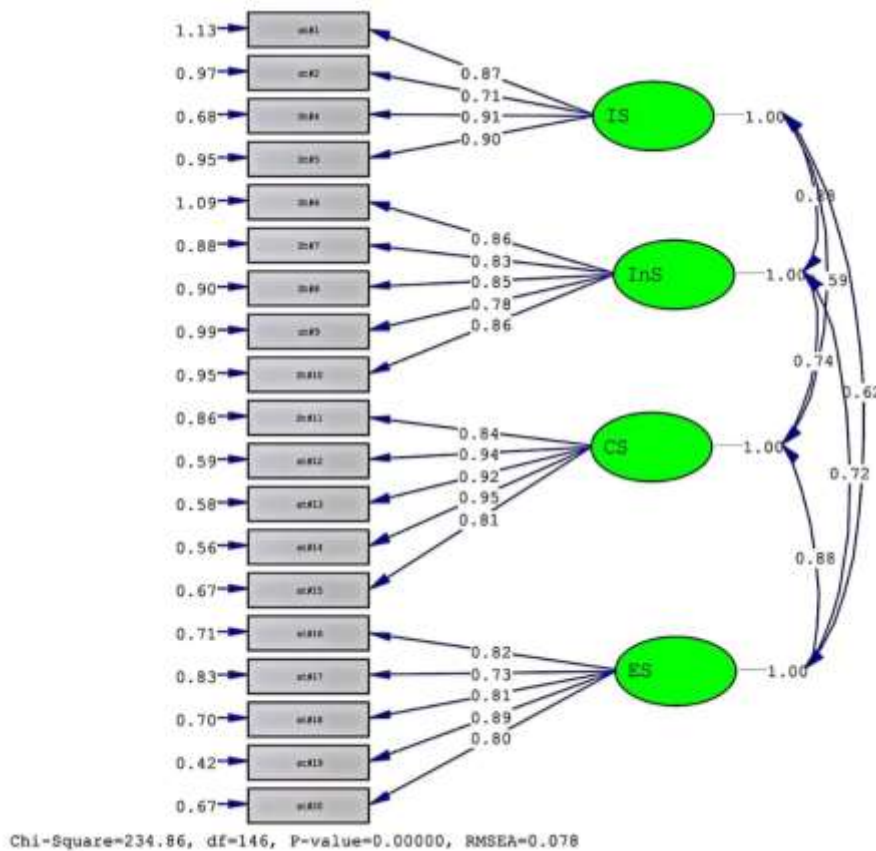


Figure 1:

Confirmatory Factor analysis of Peer Support Perception Scale (PSPS)

Item 3 from subscale Informational Support (IS) have value less than the commonly accepted cutoff value of 0.40 for factor loadings. means that it does not strongly relate to the underlying factor it is supposed to measure and thus does not contribute well to the construct's validity. Therefore, it is removed from the scale to improve the overall model fit and measurement quality.

Table 4
Finalized Factor Loadings for Questionnaire Items

Sr.#	Statements No.	IS	InS	CS	ES
1	St#1	0.87			
2	St#2	0.71			
3	St#3	0.91			
4	St#4	0.90			
5	St#5		0.86		
6	St#6		0.83		
7	St#7		0.85		
8	St#8		0.78		
9	St#9		0.86		
10	St #10			0.84	
11	St#11			0.94	
12	St#12			0.92	
13	St#13			0.95	
14	St#14			0.81	
15	St#15				0.82
16	St#16				0.73
17	St#17				0.81
18	St#18				0.89
19	St#19				0.80

Table 4 shows finalized factor loadings for PSPS items. All items have acceptable CFA values above the typical cutoff of 0.40, indicating that they adequately load on the intended factor and contribute meaningfully to the construct measured.

Table 5
Reliability of Factors of Peer Support Perception Scale (PSPS)

Factors	Items in Final Scale	No. of Items	Reliability Value
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Informational Support(IS)	1,2,3,4	4	0.83
Instrumental Support(InS)	5,6,7,8,9	5	0.79
Companionship Support(CS)	10,11,12,13,14	5	0.80
Esteem Support(ES)	15,16,17,18,19	5	0.81
PSPS		19	0.84

Table 5 shows the reliability results for the Peer Support Perception Scale (PSPS) and its four subscales demonstrate excellent internal consistency as indicated by the Cronbach's alpha values. Each subscale showed alpha values of 0.83 (IS), 0.79 (InS), 0.80 (CS) and 0.81 (ES) and the overall reliability of the scale was excellent, with a Cronbach's alpha coefficient of 0.84. This indicates strong internal consistency and confirms the PSPS as a reliable instrument for assessing peer support among Pakistani university students.

3.5 Conclusion

The present study validated the Peer Support Perception Scale (PSPS) among Pakistani university students, confirming its four-factor structure (informational, instrumental, companionship, and esteem) as originally proposed by Eva (2024). The PSPS demonstrated strong internal consistency with Cronbach's alpha value 0.84 overall. Also, confirmatory factor analysis supported good model fit, suggesting that the PSPS is a psychometrically sound tool for use in current cultural context.

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Annexure

Peer Support Perception Scale (PSPS)

Read each statement carefully and choose the response that best presents your experience with peer support using the following scale.

Frequency scale

1	Almost Never
2	Very rarely
3	Sometimes
4	Very Often
5	Almost always

1. Informational support						
Sr#	Statements	1	2	3	4	5
1	My friends remind me to do my assignments.					
2	My friends gave me information about educational activities.					
3	My friends provide the information I need to solve a problem.					
4	My friends provide me with information about the social media they use.					
2. Instrumental support						
5	My friends help me with assignments.					
6	My friends lent me their course notes.					
7	My friends lend me their stationary.					

8	My friends share their snacks.						
9	My friends lend me money when I need it.						
3. Companionship support							
10	My friends are willing to discuss it with me.						
11	My friends do projects with me.						
12	My friends go to the canteen with me.						
13	My friends accompany me to chat when we have time.						
14	My friends are willing to spend time off together with me.						
4. Esteem support							
15	My friends congratulate me when I have got a good grade.						
16	My friend reminded me to stay enthusiastic when my learning results were declining						
17	My friends remind me of the strengths I have						
18	My friends cheer me up when I have a problem.						
19	My friends sincerely value my opinion						