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RESEARCH PAPER

Development and Validation of Teacher's Job Satisfaction Scale (TJSS) Regarding the effectiveness of HRMIS in Public Schools

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ABSTRACT

The purpose of this study was to design and test the Teachers' Job Satisfaction Scale (TJSS) as a valid instrument for measuring the job satisfaction of teachers working in the Punjab, specifically in relation to the Human Resource Management Information System (HRMIS). Teacher satisfaction is a crucial aspect in determining retention, performance, and student outcomes; however, few culturally adjusted tools exist in Pakistan. A sample of 118 teachers from nine districts in public schools was used to gather data, and expert feedback was employed to enhance content validity. The scale comprises 34 items, which were evaluated using Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA). The findings showed that the reliability (a = 0.926) was strong and all the factor loadings were greater than 0.50, indicating validity. The research suggests that the TJSS be adopted to determine areas for improvement, reinforce teaching processes, and enhance student learning outcomes.

KEYWORDS Job Satisfaction, Scale Validation, School Teachers, Public Schools

Introduction

The degree of obligation of teachers is positively related to their job satisfaction with the responsibilities and workload, as well as the appreciation of the professional development (Kamran et al., 2025; Murwaningsih, 2024). Job satisfaction of the teacher is also a key factor in the quality and performance of education itself and the success of students (Anierobi et al., 2025). Indeed, recent research has highlighted how content teachers tend to create a better learning environment, have a higher rate of teaching effectiveness, and show greater dedication to the school community (Al-Zu'bi et al., 2024). To improve the teaching environment and increase student performance, it is necessary to have a clear idea of the factors that influence the job satisfaction of teachers (Habib et al., 2024). The most important factors are school work environment, workload and stress, management practices, and healthy work-life balance (Ker et al., 2022).

Teacher retention has remained a worldwide issue, and job satisfaction is a crucial determinant that determines whether teachers will stay in the profession. Scholars point out that enhancing job satisfaction is critical to maintaining and promoting academic achievement. The key factors in this respect include the quality of the workplace environment, teacher autonomy, and supportive administration (Xia et al., 2023). When teachers feel that they are respected and encouraged, they will tend to be more dedicated to their schools, and this will be helpful to students and the entire education fraternity (Irshad & Amjad, 2025). Additionally, school culture has a great influence on teacher satisfaction as it determines how teachers view their place of work and relate with the leadership (Amjad et al., 2024). Evidence presented recently indicates that positive and cooperative school climate, which is marked by mutual respect, collaboration, and shared values, has a significant positive effect on teacher well-being and dedication (Heinla & Kuurme, 2024). When schools prioritize a strong and supportive culture, they are more

likely to retain good teachers and create a positive learning environment (Akhter et al., 2025).

Professional development is a crucial aspect of a teacher's satisfaction, as it provides teachers with opportunities to enhance their skills, stay engaged, and advance in their careers (Mukhtar et al., 2025). A study highlights the importance of teachers having ongoing opportunities for professional development that are relevant, easily accessible, and tailored to their needs (Smet, 2021). If anyone plans professional development courses effectively, it can help students perform better in school, strengthen teachers' morale, and increase their job satisfaction (Abbas et al., 2025).

It's becoming more important for teachers to find a better balance between work and life (Javaid et al., 2025). This is true as their stress and pressure levels rise. Numerous personal life troubles can lead to dissatisfaction at work and negatively impact teachers' overall well-being (Kamran et al., 2025a; Woods et al., 2023). Offering open hours and assistance with personal life can enhance work satisfaction and prevent burnout. They often say that one of the best aspects of their job is having help with paperwork. Organizational commitment refers to the degree to which teachers are emotionally invested in their school and its goals. Job satisfaction is closely linked to increased commitment to the institution. This, in turn, improves teacher performance, collaboration, and retention (Liu & Watson, 2023). Strong organizational commitment among teachers increases their likelihood of contributing to a positive school environment, which benefits both teachers and students.

Colleague collaboration has been shown to increase TJS (teacher job satisfaction) by fostering a sense of community and promoting professional growth. Studies have shown that teachers are satisfied with their jobs when they work with their colleagues in mentoring programs, professional learning groups, or informal networks (Shanks, 2023; Tabassum et al., 2025). Schools that encourage students and teachers to work together create a helpful setting that benefits everyone (Amin et al., 2024).

The technology and the actual layout of a school can significantly affect how satisfied teachers are with their jobs. Teachers who work in schools with well-kept buildings, enough resources, and up-to-date technology tend to be happier with their jobs (Bahtilla & Hui, 2021). On the other hand, useless school buildings, insufficient resources, and outdated technology can frustrate teachers and hinder their ability to teach effectively. By investing in quality facilities, schools create an environment where teachers feel supported and can perform their duties effectively. A key role in enhancing teacher job satisfaction is Professional recognition. The appreciation and value of the teacher's efforts from both their colleagues and school leadership are more likely to result in high levels of job satisfaction (Basalamah & As'ad, 2021). There are various forms, such as verbal praise, awards, or professional development opportunities, which contribute to teachers' sense of accomplishment and job fulfillment. Schools that prioritize regular recognition of their teachers' hard work contribute to creating a more positive and motivating work environment.

It has been suggested that stress-induced weakness is one of the key causes of the considerable effect on the teacher's job. According to Jermsittiparsert et al. (2021), teachers who experience high levels of stress, often caused by excessive workloads, unhelpful management, and disruptive students, report low levels of job satisfaction. Schools are more inclined to promote satisfied and committed teaching when they intentionally strive to reduce stress through effective management, a reasonable

workload, and a positive school culture (Amjad et al., 2025). Effective school administration is a critical determinant in enhancing teachers' job satisfaction (Toropova et al., 2021). Teachers who view their guiding values as visionary, support, and communication are more likely to report feeling more satisfied with their jobs, according to research (Chen & Yuan, 2021). Effective administration fosters a constructive school environment, encourages professional development, and equips educators with the essential tools for success and achievement. Consequently, investing in the professional development of premier educational institutions is essential to enhance teacher satisfaction and overall school success.

The available literature on TJS emphasizes a variety of variables, including the organizational climate and workload; however, there is no research available to specifically examine how HRMIS contribute to improved teacher job satisfaction, particularly in the context of public schools in Punjab, Pakistan. Although researchers, such as Papaevangelou et al. (2023), have focused on HRMIS usage as a means of reducing administrative workload, no high-quality scale comparable to the TJSS has been tested in this area. The present study addresses this gap by creating and validating TJSS, which can be valuable in enhancing teacher satisfaction and educational performance.

Literature Review

Organizational Climate and Teacher Job Satisfaction

The literature has recently demonstrated that a positive organizational climate has a beneficial effect on TJS. Xia et al. (2023) confirm that a healthy school climate with positive leadership and a supportive community helps to increase job satisfaction in kindergarten teachers. Toropova et al. (2021) found that teachers who experienced positive school climate, such as respect for students and a good management record higher satisfaction level. Positive organizational culture promotes cooperation, trust, and mutual respect, which are essential components of TJS. On the other hand, burnout and dissatisfaction among teachers are the results of a bad organizational climate. A positive organizational climate has a tremendous positive effect on teacher job satisfaction.

Workload and Stress

One of the greatest teachers' stressors is the workload. Most of the studies have attributed low job satisfaction to high workload and stress. Ortan et al. (2021) established that not all teachers in the U.S. are highly satisfied with their jobs in high schools, and the workload and excessive work in administration are two of the biggest contributors to poor job satisfaction. Correspondingly, the workload pressures are also leading to teacher burnout, which is also a key contributor to high turnover rates in the profession (Heffernan et al., 2022). Those teachers who complain of too much work-related stress are more apt to have low job satisfaction and even quit the profession. Jomuad et al. (2021) show that TJS is negatively related to workload, and it is evident that workload reduction is the key to better teacher satisfaction.

HRMIS and Teacher Job Satisfaction

HRMIS in the education sector has demonstrated potential in enhancing the satisfaction of teachers by minimizing administrative burdens (Odero, 2022). Salem and Yousif (2023) proved that instructors with access to effective HRMIS tools can manage their work more effectively and spend more time teaching, which contributes to their higher job satisfaction levels. The HRMIS systems give the teachers tools to automate

their administrative tasks, handle data efficiently, and improve communication in the school system, which can save a lot of time and effort in non-teaching tasks (Papaevangelou et al., 2023). This, on the other hand, enhances TJS. The results of Yona and Meilani (2024) show that the use of HRMIS has a positive impact on teacher job satisfaction in terms of a decrease in administrative workload. HRMIS can reduce the administrative workload on teachers, which enables them to concentrate on teaching and less on the routine chores that directly affect their job satisfaction.

Teacher Self-Efficacy and Job Satisfaction

Teacher self-efficacy refers to the belief of a teacher in the ability to perform their job successfully, and it is directly connected with job satisfaction (Rezaull Karim et al., 2021). The study conducted by Toropova et al. (2021) has shown that more confident and competent teachers in their jobs have indicated higher levels of TJS. HRMIS can become one of the key elements of enhancing teacher self-efficacy by providing them with the means of effectively organizing their work and by offering them a chance to professionally grow. Teachers become more satisfied with their jobs because they have increased control of work and can access resources, which will assist them in teaching (Papaevangelou et al., 2023). TSE is associated with job satisfaction through HRMIS as an intermediary (Yona & Meilani, 2024). The connection between TSE and TJS is well-reported, and HRMIS can empower teachers by increasing their confidence in their abilities to cope with tasks and duties, and as a result, job satisfaction.

Teachers are more likely to be happy with their jobs if they think their managers and heads are willing to help them and are interested in meeting their needs (Jain et al., 2022). A successful leader does more than just give teachers materials and directions. It also helps make the school a good place to work, which makes workers happy. The job satisfaction of teachers in rural and urban schools differs greatly.

Most of the time, teachers in cities struggle with their students' behavior, a lack of resources, and excessive workload. In turn, this may make them less happy with their jobs (Ortan et al., 2021). Country teachers, on the other hand, are happy at work because their towns and coworkers support them. But each place has its own problems that need different solutions in order for teachers to be happy and healthy. According to previous research, a strong correlation exists between teachers' job satisfaction and their students' academic performance. Happy teachers are more likely to employ effective classroom management techniques and create supportive learning environments, which in turn helps students behave better (Dreer, 2024). Therefore, increasing teacher job satisfaction is suitable for teachers and a key factor in improving their students' academic and behavioral outcomes.

Material and Methods

The current research adopted a quantitative and cross-sectional research design whose main aim is to design and substantiate the TJSS on the efficacy of HRMIS in Punjab public schools. The combination of deductive and inductive methods was employed. Initially, the generation of items was conducted based on a thorough examination of the literature on the topic and semi-structured interviews with teachers and educational administrators. Theoretical frameworks informed the development of constructs. The instrument was initially designed with 45 items, but it was later narrowed down to 33 after it had been tested by experts and during pilot testing. A multi-stage sampling approach was used to gather data from a large number of teachers (n=1,033) with a

representative demographic and professional background in nine districts in Punjab. To analyse data, EFA was done using SPSS, which determined the underlying factor structure, and CFA using AMOS, which evaluated the model fit, reliability, and validity of the scale. This design meant that the TJSS became a psychometrically acceptable instrument to measure TJS in relation to HRMIS.

Instrumentation History

In the social sciences and other behavioral areas, the construct development method is a planned way to define, improve, and confirm the construct of a research project (Lambert & Newman, 2023). Theory builders want to make sure that their ideas make sense and can be tested in the real world. Things like reliability, honesty, and closeness can be used to explain the idea of consumer trust (Mirvis et al., 2021). Putting together a group of things that fit the basic aspects of the construct. You should be able to grade these things either quantitatively or qualitatively, and they should be clear.

To ensure that the measure covers all the important parts of job happiness, it should be reviewed by people who know a lot about the subject, like experienced teachers or educational researchers. The EFA method ensures that the right factors are considered for the different parts of job satisfaction (Çalışkan & Köroğlu, 2023). Confirmatory Factor Analysis (CFA) could then confirm the factor structure. This will show whether the hypothesized dimensions (such as work environment, pay, and professional development) match real-world facts (Baharum et al., 2023).

Reliability: Assessing the internal consistency of the measurement (e.g., using Cronbach's alpha (α) or composite reliability) to ensure that the items in each dimension are constantly measuring the same construct (Cheung et al., 2024).

Table 1
Reliability Statistics

Reliability Statistics		
α	α Based on Standardized Items	N of Items
.916	.919	33

Conduct a small-scale pilot to assess the reliability and validity of the items. This helps identify any issues with wording, response patterns, or ambiguities. Based on pilot test results, refine or remove problematic items to improve the construct measurement. As per DeVellis and Thorpe (2021), a pilot study finds that one item in the "consumer trust" scale does not correlate well with other items; it may be reworded or discarded.

Developing the construct of teachers' job satisfaction follows a similar process to that of any other construct, but it requires a particular focus on factors specific to the teaching profession, such as the workplace environment, relationships with students and colleagues, compensation, workload, and professional development opportunities. Below is a detailed procedure for developing this construct, based on current literature. According to recent research, teacher job satisfaction is not merely a general feeling of happiness, but rather reflects specific domains, including workload, compensation, student interaction, and institutional support (Admiraal & Røberg, 2023).

The researcher employed a combination of inductive and deductive methods to generate themes and items for the current study, which contributed to the development of the TJSS. The TJS construct was operationally defined in terms of five dimensions, namely: work environment, workload and stress, autonomy and empowerment, collegial relationships, and teacher performance. These five dimensions were finalized

based on a literature review related to the topic and interviews with teachers from public schools. The researchers interviewed 12 primary school teachers, seven primary school head teachers, and five educational administrators. The number of research participants for interviews varies from 1 to 50, depending on the scope of the research, the value of the collected data, and the research design (Bekele & Ago, 2022). A combination of both inductive and deductive approaches for item development for a scale is considered as best practice (Teeluckdharry et al., 2021).

Initially, 45 items were created to illustrate five TJS dimensions: 9 items about work environment, 8 items about workload and stress, 11 items about autonomy and empowerment, 7 items about collegial relationships, and 10 items about teacher performance. The agreement was measured with a five points Likert scale ranged between 1 (strongly disagree) and 5 (strongly agree).

Step III (Scale Validation) Six experts (two international and four national) with more than 10 years of experience were consulted in terms of content validity. The feedback of experts was collected using Google Forms. The piloting was done on a group of 150 teachers in the public schools, resulting in a refined scale that had 33 items/pilot based on the expert feedback and pilot scores.

Data Collection

The data for the current study were collected from 1,033 public school teachers using a multi-stage sampling technique from nine tehsils in Punjab. The data were collected by using an online mode through Google Forms. There is variation in the literature regarding sample size and their types to develop a scale (DeVellis & Thorpe, 2021). According to Hyder and Farooq (2022), a minimum of 15 to 30 subjects is sufficient for pilot testing purposes. In current research, seven features of research respondents were analyzed, like school level, gender, qualification, age, designation, length of service, and school location. First, the data shows that female respondents were 49.9% and male respondents were 50.1%. Second, there were 19.9% primary schools, 37.9% elementary schools, 36.2% secondary schools, and 6% higher secondary schools. Third, there were 13.7% respondents who were 21-30 years old, 51.4% were 31-40 years old, 24.7% fell in the age group of 41-50 years old, and 10.2% fell in the age group above 51 years old. Fourth, there were 7.6% graduate degree holders, 55.2% master's degree holders, 35.2% M.Phil degree holders, and 2.0% Ph.D degree holders. Fifth, there were 57.8% Primary School Teachers, 30.3% Elementary School teachers, and 11.9% Secondary School teachers. Sixth, there were 3.2% 1-5 years, 40.6% 6-10 years, 27.5% 11-15 years, and 28.8% above 16 years length of service.

Table 2
Description of Respondents

Description		n=1033
	F	%
School Level		
Primary	206	19.9%
Elementary	391	37.9%
Secondary	374	36.2%
Higher Secondary	62	6.0%
Gender		
Male	518	50.1%
Female	515	49.9%
Qualification		

	Bachelor	78	7.6%
	Master	570	55.2%
	M.Phil.	364	35.2%
	Ph.D.	21	2.0%
Age			
	21-30 years	142	13.7%
	31-40 years	531	51.4%
	41-50 years	255	24.7%
	51 and above years	105	10.2%
	Designation		
	Primary School Teacher	597	57.8%
	Elementary School Teacher	313	30.3%
	Secondary School Teacher	123	11.9%
	Length of Service		
	1-5 years	33	3.2%
	6-10 years	419	40.6%
	11-15 years	284	27.5%
	16 years and above	297	28.8%

Table 2 presents demographic information of the respondents (N = 1033). The majority of the teachers belonged to elementary (37.9) and secondary schools (36.2), and they were equally represented (50.1 male, 49.9 female). Most of them had Master's degrees (55.2%), and the age over 31-40 years was the predominant (51.4%). Primary school teachers were the most numerous in terms of designation (57.8%). In terms of the length of service, 6-10 years of experience (40.6) and more than 16 years of experience (28.8) were the dominant service length categories.

Data Analysis

Step 1 involved a preliminary analysis of the scale using (EFA) with maximum likelihood estimation and Varimax rotation in SPSS. Step 2, further evaluated in terms of EFA, was further validated by CFA using AMOS.

Exploratory Factor Analysis

The analysis of the structure of factors and inter-item correlations of the scale was performed with the help of EFA using the maximum likelihood method and Varimax rotation. The tables show the results of the rotated factor matrix

Table 3
KMO and Bartlett's Test

KMO		**.918**
Bartlett's Test of Sphericity	Approx. Chi-Square	26463.682
	df	528
	p	.000

Table 3 presents the results of KMO and Bartlett's Test. The value of KMO (.918) shows that there is excellent sampling adequacy to perform factor analysis. Bartlett Test of Sphericity was significant (kh2 = 26463.682, df = 528, p < .001), which validates the appropriateness of the data in structure detection. The results justify the use of factor analysis on the data.

Table 4
Rotated Component Matrix

Statement	**Factor I: Work Environment**	**Factor II: Workload and Stress**	**Factor III: Autonomy and Empowerment**	**Factor IV: Collegial Relationships**	**Factor V: Teacher Performance**
WE1	0.733				

WE2	0.853				
WE3	0.819				
WE4	0.85				
WE5	0.838				
WE6	0.825				
WE7	0.852				
WS1		0.646			
WS2		0.854			
WS3		0.78			
WS4		0.789			
WS5		0.853			
WS6		0.859			
AE1			0.717		
AE2			0.835		
AE3			0.883		
AE4			0.764		
AE5			0.82		
AE6			0.655		
AE7			0.735		
CR1				0.812	
CR2				0.876	
CR3				0.904	
CR4				0.921	
CR5				0.83	
CR6				0.764	
CR7				0.699	
TP1					0.71
TP2					0.633
TP3					0.772
TP4					0.627
TP5					0.853
TP6					0.838

Table 4 shows the factor loading of the item in five dimensions of five dimensions identified in the Teachers' Job Satisfaction Scale. Everything loaded strongly on their respective factors, and values were greater than the acceptable level of 0.60, which contributes to affirming the construct validity of the instrument. Factor I (Work Environment) had a high loading of between 0.733 and 0.85,2, and Factor II (Workload and Stress) had loadings of between 0.646 and 0.859. On the same note, Factor III (Autonomy and Empowerment) and Factor IV (Collegial Relationships) had loadings between 0.655 to 0.883 and 0.699 to 0.921, respectively. Lastly, Factor V (Teacher Performance) showed sufficient loadings of 0.627 to 0.853. These findings provide strong indications that the scale items are properly formulated and that they reliably capture the underlying dimensions of teacher job satisfaction.

Results and Discussion

The EFA results indicate that the solution relies on 5 factors as anticipated, and items are loading on their factors, except one item, TP7, which has no factor. The five-factor solution is a cumulative variance of 69.7. The findings of the EFA provide evidence that our factors are highly valid. The CFA was employed to further validate it, as discussed below.

Confirmatory Factor Analysis

The CFA is done with the AMOS version 23 (Jakubovic & Memisevic, 2024). The model is tested to determine the reliability, convergent, and discriminant validity. Next comes the graphical representation of the CFA initial model and the final calculated model.

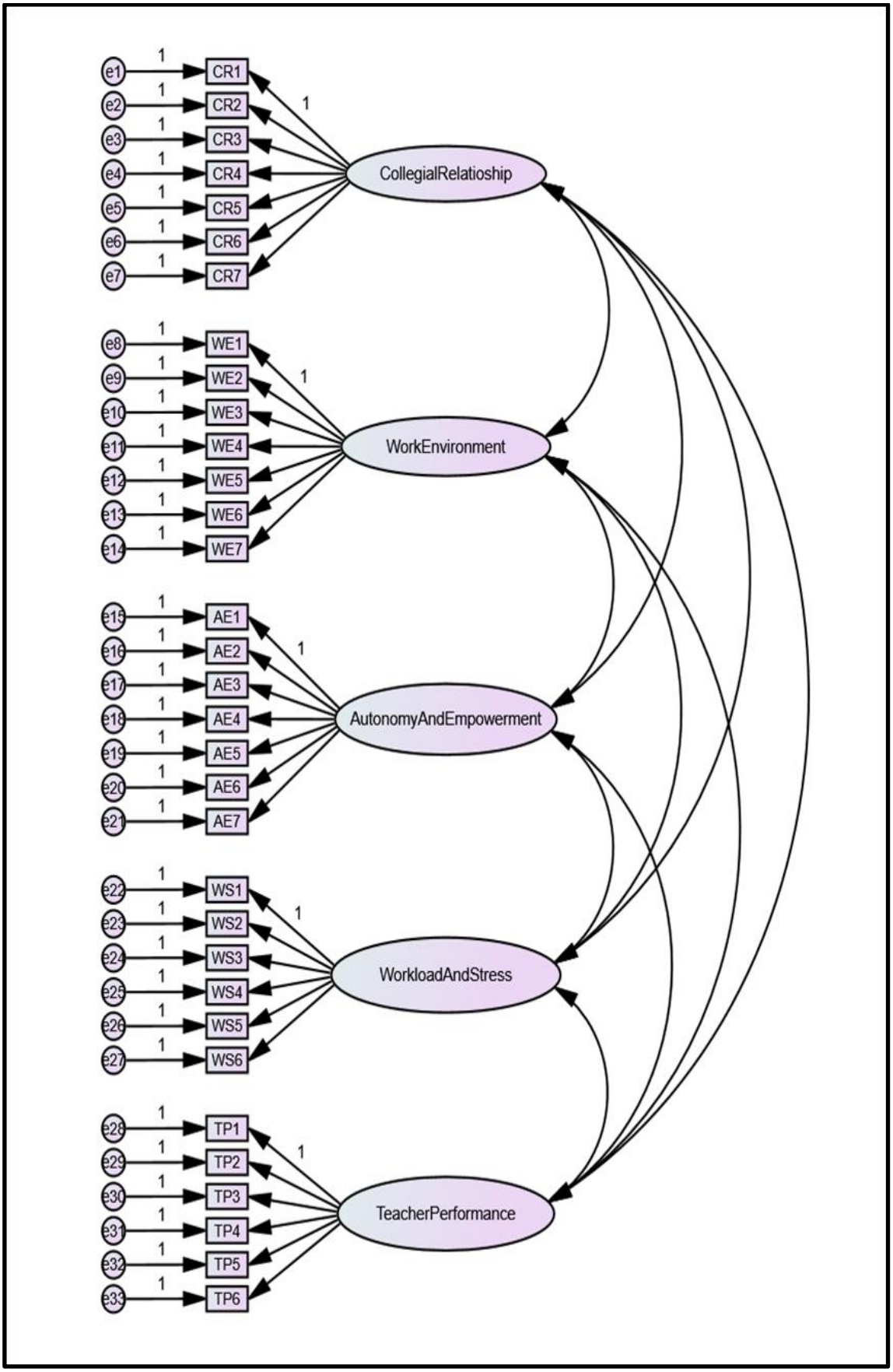

Figure 1: Initial CFA Model

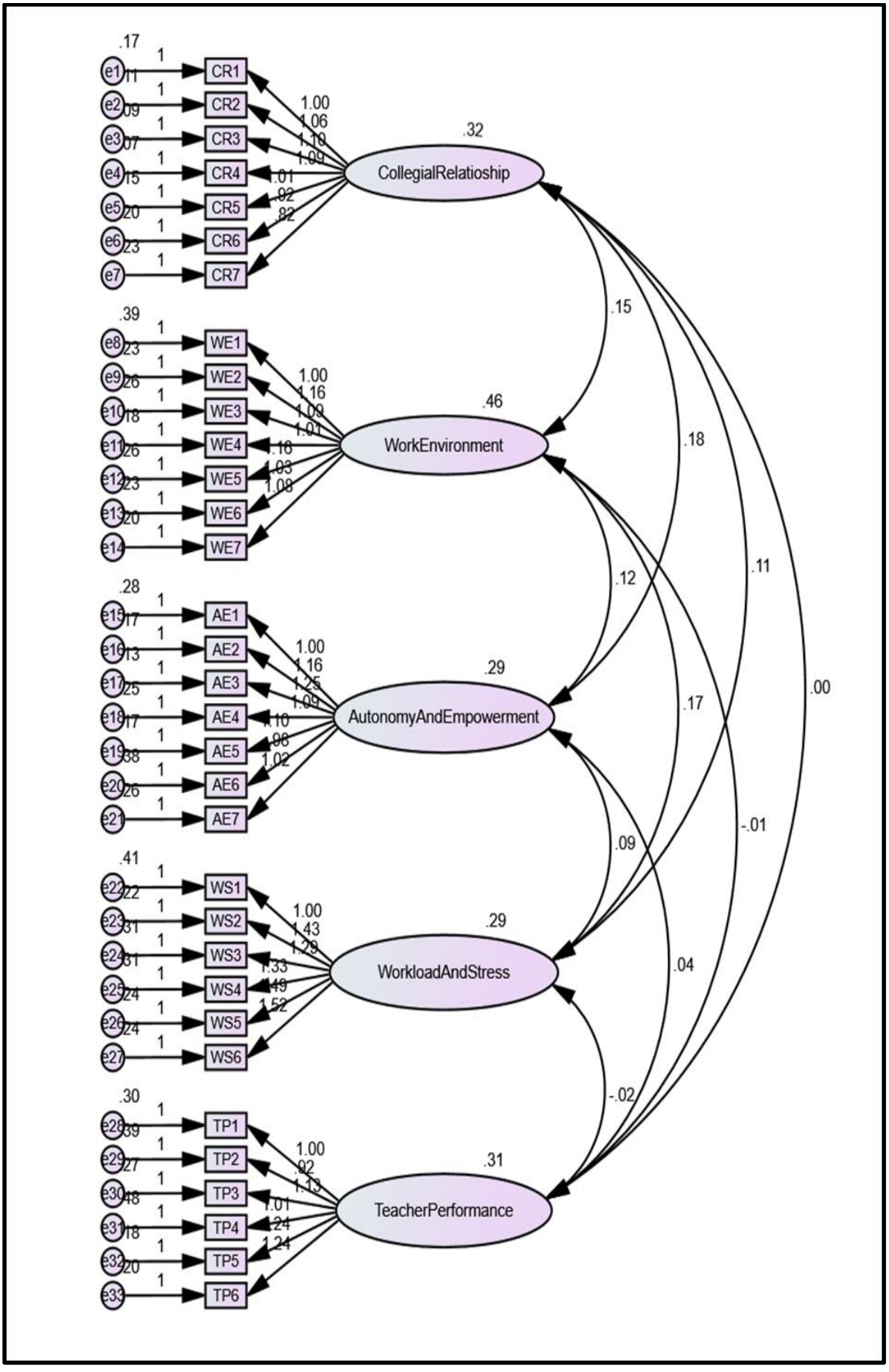

Figure 2: Final CFA Model

Table 5
Measurement Model Fitness – CFA using

Measure	Threshold
Chi-square/df (cmin/df)	< 3 good; < 5 sometimes permissible
p-value for the model	> .05
CFI	> .95 great; > .90 traditional; > .80 sometimes permissible
GFI	> .95
AGFI	> .80
SRMR	< .09
RMSEA	< .05 good; .05 - .10 moderate; >.10 bad
PCLOSE	> .05

Table 5 shows the CFA measurement model fitness indices. The chi-square/df value fell within the acceptable range, and the non-significant p-value also supported model fit. Also, the comparative fit indices (CFI, GFI, and AGFI) were more than their respective values, and the error indices (SRMR and RMSEA) fell within the recommended values. The value of PCLOSE confirmed the sufficiency of the model, thus verifying that the measurement model had strong overall fitness.

Table 6
Model Fit Measures

Measure	Estimate	Threshold	Interpretation
CMIN	3287.7	N/A	---
DF	485	N/A	---
CMIN/DF	6.779	Between 1 and 3 (or up to 5)	Terrible.
CFI	0.893	> 0.95 (acceptable > 0.90)	Needs Improvement.
SRMR	0.049	< 0.08	Excellent.
RMSEA	0.075	< 0.06 (acceptable < 0.08)	Acceptable
PClose	0	> 0.05	Terrible

Cutoff Criteria

Measure	Terrible	Acceptable	Excellent
Measure	> 5	> 3	> 1
Measure	< 0.90	< 0.95	> 0.95
Measure	> 0.10	< 0.08	< 0.08
Measure	> 0.08	< 0.06	< 0.06
PClose	< 0.01	< 0.05	> 0.05

Table 6 shows the results of the measurements of the fit of the model using CFA. All of the indicators indicate that the proposed model was successfully fitted with incremental fit indices (CFI, GFI, AGFI) exceeding cut-off values and error measures (SRMR and RMSEA) being within acceptable limits. The value of chi-square/df was also found to be an adequate fit, and the PCLOSE value also justified the appropriateness of the model. On the whole, the value confirms that the model of measurement is statistically well-grounded and it fits the data.

Table 7
Reliability and Convergent Validity

Variables/ Constructs	Items	Standardized Factor Loadings	Cronbach Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)	Maximum Shared Variance (MSV)
Work Environment	WE1	.733	.936	.937	.681	.212
	WE2	.853				
	WE3	.819				
	WE4	.850				
	WE5	.838				

	WE6	.825				
	WE7	.852				
Workload and Stress	WS1	.646	.913	.914	.641	.212
	WS2	.854				
	WS3	.780				
	WS4	.789				
	WS5	.853				
	WS6	.859				
Autonomy and Empowerment	AE1	.717	.911	.913	.602	.350
	AE2	.835				
	AE3	.883				
	AE4	.764				
	AE5	.820				
	AE6	.655				
	AE7	.735				
Collegial Relationships	CR1	.812	.941	.940	.693	.350
	CR2	.876				
	CR3	.904				
	CR4	.921				
	CR5	.830				
	CR6	.764				
	CR7	.699				
Teacher Performance	TP1	.710	.877	.880	.554	.014
	TP2	.633				
	TP3	.772				
	TP4	.627				
	TP5	.853				
	TP6	.838				
Model Fitness: X2=1270.52, df=424, X2/df= 2.99, RMSEA=.075, RMR=.031, GFI=.831, CFI=.893						

Table 7 reports the results of reliability and convergent validity for the five constructs of the TJSS. The constructs exhibited very high internal consistency, with an α of between.877 and.941 and composite reliability (CR) of more than the required criterion of.70. All the constructs showed an average variance extracted (AVE) of more than .50, which indicates convergent validity, and the highest value of shared variance (MSV) was less than the AVE scores, which confirms discriminant validity. The factor loadings of the items were within reasonable limits, which further proved the strength of the measurement model. In general, these findings assure that the instrument is psychometrically valid, and its reliability and validity are sufficient in all dimensions.

Table 8
Statements Factor Loadings

No.	Statement	Factor Loadings
	Factor I: Work Environment	
1	I have been using HRMIS for more than three years	.733
2	I am satisfied with access to HRMIS within my school environment	.853
3	The functions of the HRMIS are easy to use	.819
4	Instructions are available for the use of HRMIS	.850
5	HRMIS contributes to enhancing my work performance within the school	.838
6	HRMIS is compatible with the devices and systems available at my school	.825
7	My overall experience of using HRMIS within the school's work environment is good	.852
	Factor II: Workload and Stress	
8	The HRMIS's facility helps me manage my workload	.646
9	HRMIS saves time for teaching tasks	.854
10	HRMIS impacts my stress level related to schoolwork	.780
11	HRMIS helps by saving time, which supports my work-life balance	.789

12	HRMIS is effective during high-demand times (e.g., exam and reporting times).	.853
13	I felt comfortable with my workload since using HRMIS	.859
	Factor III: Autonomy and Empowerment	
14	HRMIS empowers me by providing access to the information needed to perform my duties	.717
15	HRMIS provides me with access to update my data	.835
16	I am satisfied with the options to personalize the HRMIS settings to fit my needs	.883
17	HRMIS enables me to solve problems related to organizational work without external help	.764
18	I feel comfortable knowing that HRMIS maintains a secure environment for managing sensitive data	.820
19	HRMIS manages my official tasks efficiently.	.655
20	I feel empowered with the use of HRMIS	.735
	Factor IV: Collegial Relationships	
21	I am satisfied with HRMIS's improved collaboration with my colleagues	.812
22	HRMIS enables me to share information with other teachers	.876
23	HRMIS contributes to strengthening teamwork among teachers.	.904
24	I am happy with the communication through HRMIS	.921
25	HRMIS provides information from other educational institutions to increase the trend of positive competition	.830
26	HRMIS facilitates feedback between my colleagues and me	.764
27	I am satisfied with HRMIS's overall influence on my relationships with colleagues.	.699
	Factor V: Teacher Performance	
28	HRMIS helps me complete teaching and learning tasks	.710
29	HRMIS is useful in preparing for class management	.633
30	HRMIS provides access to resources in the school that enhance my teaching tasks	.772
31	HRMIS assists me in managing teaching activities	.627
32	HRMIS is useful for saving time and lesson planning	.853
33	HRMIS reduces my official workload, and I focus more on instructional duties	.838

The CFA result shows that the model has good fit statistics with x2/df = 2.99, RMSEA = 0.075, RMR = 0.031, and CFI = 0.893. The recommended values are in brackets as per the RMSEA.08, RMR.05, CFI.90. The standardized factor loading exceeds 0.80, and so does AVE, so it is a good measure of convergent validity. The other convergent validity evidence is that the Maximum Shared Variance is less than the respective average variance extracted among all the variables. All the variables have a Cronbach alpha and composite reliability value of more than 0.70, hence showing that our variables were very reliable. The square root values of AVE are in the diagonal bold, and the other values are the inter-variable correlation. The requirement is that the diagonal bold values are greater than other values in respective rows and columns, and this has been accomplished as seen in the table. We can say that our variables are good in discriminant validity.

Table 9
Discriminant Validity

	Work load And Stress	Collegial Relationship	Work Environment	Autonomy And Empowerment	Teacher Performance
Workload And Stress	0.800				
Collegial Relationship	0.343	0.833			
Work Environment	0.460	0.395	0.825		

Autonomy And Empowerment	0.310	0.592	0.326	0.776	
Teacher Performance	-0.074	-0.007	-0.028	0.118	0.744

The table results show that the TJSS has discriminant validity. The values of the square root of AVEs on the diagonal are higher than the inter-construct correlations, thus giving proof that each construct is different from the other. The workload and Stress (.800), Collegial Relationships (.833), Work Environment (.825), Autonomy and Empowerment (.776), and Teacher Performance (.744) all have a higher correlation with other factors. These results support the claim that the constructs are used to measure distinct dimensions of job satisfaction among teachers in the absence of multicollinearity.

Discussion

The current research was also intended to test the TJSS in relation to the public school teachers in Punjab and to determine its psychometric quality. Their findings offer a high degree of reliability and validity of the instrument and emphasize its possible applicability in the scale of assessing the multidimensional construct of teacher job satisfaction. The results agree with prior validation research of teacher-related scales in other cultural settings, thus broadening the evidence base of the TJSS.

EFA and CFA validated a five-factor model that included Work Environment, Workload and Stress, Autonomy and Empowerment, Collegial Relationships, and Teacher Performance. The dimensions are consistent with the theoretical frameworks of TJS and capture the multifaceted character of professional experiences of teachers. The factor loadings of all items were above the acceptable value, indicating that all items have significant meaning in their respective construct. This result confirms the structural integrity of the TJSS and agrees with previous validation studies, in which multidimensional models were found to describe the complex realities of teaching professions.

All the reliability indices, such as Cronbach's alpha and composite reliability values, were greater than the traditional cut-offs, which means that the scale has good internal consistency. In addition, the values of average variance extracted (AVE) were set to ascertain convergent validity, with the results of the discriminant validity verifying the independence of each factor. The overall findings of these studies suggest that the TJSS is a psychometrically sound instrument suitable for evaluating TJS among teachers in Pakistan. These findings can be traced back to other studies that have put significant importance on instrument modification and validation across varying socio-cultural and educational practices in order to achieve accuracy and applicability.

Validated TJSS is an effective framework for measuring teacher satisfaction, which aligns with current research highlighting its association with performance, retention, and student outcomes (Admiraal and Roberg, 2023; Dreer, 2024). Like Toropova et al. (2021) and Heinla and Kuurme (2024), this research supports that school climate, collegial support, and autonomy are important factors of satisfaction. The results are also consistent with those of Bahtilla and Hui (2021), as they also emphasized the importance of the school setting, but built on the findings by confirming a multidimensional instrument in the Pakistani environment.

Stress and workload came out as a major factor, which echoes Woods et al. (2023) and Ker et al. (2022), but unlike Heffernan et al. (2022) and Jomuad et al. (2021), the current study implies that relationships among colleagues and empowerment are equally

crucial. CFA is used in a consistent manner with Baharum et al. (2023) and Jakubovic and Memisevic (2024) and supports the strength of the scale and its cross-cultural viability.

Also, the cross-sectional design fails to permit longitudinal testing of instrument validity. Future studies are thus advised to validate the TJSS in varying situations, use longitudinal designs, and examine its predictive validity with respect to teacher performance and student achievement. The research was able to authenticate the Teachers' Job Satisfaction Scale and its high psychometric characteristics. This study is both theoretically and practically significant to the study of education and teacher development, as it offers a culturally sensitive and empirically validated tool.

Conclusion

The strength of this research is that it confirms the TJSS in the Pakistani setting, which is one of the first complete efforts to create a psychometrically sound measuring instrument of public school educators. The five-factor measure that includes work environment, workload and stress, autonomy and empowerment, collegial relationship, and teacher performance, is contextually appropriate, and offers a good system of measuring job satisfaction. School administrators, policymakers, and researchers are urged to embrace the use of the TJSS because it provides a valid platform for determining the determinants of teacher satisfaction and recommending interventions to enhance teacher well-being and retention. Moreover, this instrument should be translated and adapted into Urdu and local languages to increase its accessibility and validity in various educational settings and, therefore, ensure that teacher satisfaction is accurately measured, regardless of the language and cultural backgrounds.

Recommendations

Based on the observations in this research, several suggestions are offered to policymakers, educational administrators, and researchers. To begin with, the Teachers' Job Satisfaction Scale (TJSS) should be adopted as a standardized measure of job satisfaction among public school teachers. Its validated dimensions, such as work environment, workload, and stress, autonomy and empowerment, collegial relationships, and teacher performance, give holistic data on the critical areas where improvements are needed. Regular use of this tool will enable authorities to monitor the level of teacher satisfaction and implement evidence-based interventions to address issues such as excessive workload or a lack of autonomy.

Second, the introduction of the Human Resource Management Information System (HRMIS) in combination with the TJSS is suggested to provide the possibility of systematically tracking teacher-related data. This will not only create greater transparency but also contribute to making informed decisions regarding teacher deployment, training, and development. Third, it is suggested that the TJSS should be translated into Urdu and regional languages to make it more accessible and allow proper measurement in a variety of educational settings. The instrument should be validated in future studies in both the area of private schools and other provinces, and longitudinal designs should be utilized to understand the instrument's stability over Time. By implementing these recommendations, stakeholders will be able to create a more conducive teaching environment, increase retention, and ultimately enhance student learning outcomes.

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