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Psychometric Validation and Factorial Structure Analysis of the Urdu Version of the Delaware School Climate Survey-Student (DSCS-S)

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Abstract

Background: A positive school climate plays a central role in promoting adolescents' psychological well-being, social adjustment, and academic success. Reliable and culturally sensitive assessment tools are essential for evaluating school climate within diverse populations, particularly in contexts where cultural norms may shape students' perceptions of their educational environment. Although the DSCS-S has demonstrated strong psychometric properties across various countries, an Urdu-validated version has not been available for use among Pakistani adolescents. Establishing such a tool is crucial for improving school climate assessment and informing evidence-based interventions in local educational settings. The present study aimed to (a) translate and culturally adapt the DSCS-S into Urdu, (b) evaluate its cross-language validation, (c) examine its reliability, and (d) confirm the factor structure proposed by the original authors within a Pakistani adolescent population.

Method: A cross-sectional study was conducted using purposive sampling with Pakistani adolescents. The DSCS-S was translated into Urdu following a standardized five-phase Back-Translation procedure, including forward translation, expert reconciliation, selection of the preliminary Urdu version, back translation, and final verification of the back-translated version. Cross-language validation was performed with 64 adolescents to assess equivalence between the Urdu and English versions. Reliability analyses included internal consistency (Cronbach's alpha) and test–retest reliability over a 15-day interval. The factorial structure of the Urdu DSCS-S was evaluated using confirmatory factor analysis (CFA) in a larger sample of 910 adolescents, testing the five-factor model encompassing Teacher–Student Relations, Student–Student Relations, Fairness of Rules, School Safety, and Liking of School.

Results: The Urdu DSCS-S demonstrated high internal consistency ($\alpha = .91$), comparable to the English version ($\alpha = .90$). Test–retest reliability revealed strong temporal stability between the two forms ($r = .97$). CFA supported the adequacy of the original five-factor model, indicating that the Urdu version maintains strong construct validity and an excellent model fit within the Pakistani cultural context.

Conclusions: The Urdu version of the DSCS-S is a psychometrically robust, culturally appropriate instrument for assessing school climate among Pakistani adolescents. Its use can support educators, school psychologists, and researchers in identifying school climate strengths and weaknesses and in designing targeted interventions to foster inclusive, supportive, and developmentally enriching educational environments.

Keywords: School climate, adolescents, psychometric validation, reliability, confirmatory factor analysis, Urdu adaptation.

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Background

School plays a fundamental role in shaping adolescents' developmental trajectories (Dimitrova et al., 2020). As students spend nearly 15,000 hours in school settings (Aldridge & Blackstock, 2024), these environments become central contexts through which they acquire the skills and competencies necessary for academic achievement, social adjustment, and emotional well-being (Eccles & Roeser, 2003; Lombardi et al., 2019). Over the past century, research has increasingly emphasized the influence of cultural and contextual factors within schools on adolescent development (Eccles & Roeser, 2003). Among these factors, school climate has emerged as a key malleable construct that can be systematically strengthened to improve students' experiences and outcomes (Aldridge & Blackstock, 2024).

School climate refers to the quality of school life, encompassing shared values, beliefs, norms, and attitudes that shape the relationships among students, teachers, and administrative staff (Mitchell et al., 2010). It reflects both the social dynamics and the organizational structure of a school and is known to vary considerably across institutions (El Zaatari & Ibrahim, 2021). A positive school climate is associated with safer learning environments, reduced absenteeism and dropout rates, and fewer behavioral problems among students (Ihekoronye, 2020; Nishimura et al., 2020). Recognizing its importance, policies such as the U.S. "Every Student Succeeds Act" (ESSA) require schools to assess non-academic indicators, including school climate, to evaluate the relationship between the educational environment and student outcomes. Systematic assessment of school climate is therefore critical for monitoring institutional functioning, guiding improvement efforts, and strengthening accountability (Maxwell et al., 2017; Wong et al., 2021).

Assessment of school climate is most informative when grounded in students' subjective perceptions, as their experiential reality tends to predict psychosocial and academic functioning more strongly than objective indicators (Maxwell et al., 2017; Wong et al., 2021). The DSCS-S is theoretically grounded in two major frameworks: Authoritative Discipline Theory and Stockard and Mayberry's Organizational Framework. Authoritative Discipline Theory posits that effective discipline involves both social support (warmth, responsiveness, and care) and structure (clear, fair rules and behavioral expectations) (Gregory & Cornell, 2009; Gregory et al., 2010; Baumrind, 1996). Stockard and Mayberry's Framework similarly emphasizes dimensions of social action and social order, highlighting that school climate is best understood through daily interactions characterized by care, understanding, and mutual respect among teachers, staff, and students (Bear et al., 2016). These theoretical foundations position the DSCS-S as a robust measure of students' personal perceptions of the school's social and organizational environment.

Although several school climate instruments exist including the Georgia Brief School Climate Inventory, Meriden School Climate Survey, Authoritative School Climate Survey, and the Inclusive School Climate Scale many exhibit limitations such as inadequate psychometric evidence, restricted age ranges, non–self-report formats, or overly lengthy item sets. The DSCS-S, by contrast, is widely used internationally due to its clarity, moderate length, comprehensive subscales, and strong psychometric support across diverse cultural contexts including Brazil, China, Hong Kong, India, Iran, Portugal, and the United States (Bear et al., 2011; Chen, 2019). Its applicability across ages 10–19 and extensive use over the past decade further underscore its methodological robustness.

In Pakistan, research on school climate has primarily focused on teachers' perceptions (Anwar & Anis-ul-Haque, 2014; Hassan & Awan, 2018; Rafiq et al., 2013), qualitative explorations (Akram & Rana, 2013), or broader aspects of the physical and learning environment (Ali et al., 2014; Nisar & Mahmood, 2017). However, no study has validated the DSCS-S for Urdu-speaking adolescents. Given that Urdu is the national language and many students especially in government schools encounter difficulties comprehending English-language scales (Munawar et al., 2021), the absence of a culturally adapted and psychometrically validated Urdu version represents a critical gap.

Establishing a validated Urdu DSCS-S will provide a culturally relevant tool capable of capturing adolescents' perceptions of interpersonal relationships, school policies, and system-level functioning. Such a tool can serve diagnostic and developmental purposes, guiding school improvement efforts and fostering safe, supportive, and equitable educational environments.

Therefore, the present study was designed with two major objectives. The first objective was to translate the DSCS-S into Urdu and to evaluate its cross-language validity to ensure that the translated version accurately reflects the meaning and conceptual structure of the original scale. The second objective was to rigorously assess the psychometric properties of the Urdu version among school-going adolescents. This included examining its internal consistency, test–retest reliability, item–total correlations, and confirming its factorial validity to determine whether the original factor structure is supported within the Pakistani cultural context.

Method

Research Design

The present study employed a cross-sectional research design and was conducted in two phases: (a) a pilot study focusing on the Urdu translation and cross-language validation of the DSCS-S, and (b) the main study involving psychometric evaluation and factorial validation. Participants were recruited through a non-probability convenience sampling method. Data were collected during school hours, with teachers present to ensure compliance and maintain classroom order.The pilot study involved translation of the instrument using the standardized back-translation procedure and assessment of test–retest reliability and cross-language equivalence. The main study examined item–total correlations and evaluated the factorial structure of the Urdu DSCS-S through confirmatory factor analysis (CFA).

Participants

Pilot Study

The pilot phase comprised 64 adolescents (33 males, 31 females) aged 13–17 years (M = 14.86, SD = 0.97) enrolled in Grades 9 and 10. These participants were academically high achievers and proficient in both English and Urdu, ensuring accurate cross-language comparison. The sample size aligns with established recommendations for preliminary scale validation, which suggest 5–10 participants per item (Choudhry et al., 2018; Shuja et al., 2020). Adolescents were included only if they were physically and psychologically healthy, present during data collection, and provided informed assent. Participants with diagnosed psychiatric or chronic medical conditions, recent major trauma or surgery (within the past six months), disabilities affecting comprehension, or who were absent during data collection were excluded to minimize confounding factors.

Main Study

The main study recruited a larger sample of 910 school-going adolescents (454 males, 456 females), aged 10–19 years (M = 13.45, SD = 1.63), to allow for robust psychometric evaluation. The sample exceeded the minimum recommendations for confirmatory factor analysis, which suggest at least 10 participants per estimated parameter or a total sample size of **300** for reliable model estimation (Rahi, 2017). Eligibility criteria mirrored the pilot study: participants were required to be physically and psychologically healthy, present during data collection, and provide voluntary assent. Students with psychiatric or chronic medical conditions, recent trauma or surgery, cognitive or physical impairments, or absenteeism were excluded to ensure internal validity and accurate assessment of the translated scale.

Instrument

Delaware School Climate Survey Student (DSCS-S)

The DSCS-S is a 23-item self-report measure assessing students' perceptions of school climate, which consists of 23 items across five subscales: Teacher–Student Relations (8 items), Student–Student Relations (4 items), Liking of School (4 items), Fairness of Rules (4 items), and School Safety (3 items). Items are rated on a 4-point Likert scale ranging from *Strongly Disagree* to *Strongly Agree*. Previous research has demonstrated good internal consistency for the DSCS-S, with Cronbach's alpha coefficients ranging from 0.70 to 0.88, indicating suitability for students across elementary, middle, and high school levels (Bear et al., 2011). For example, Nezami et al. (2019) reported a Cronbach's alpha of 0.92 among 500 high school girls, while Xie et al. (2016) reported 0.80 in a sample of 2,552 students. The most recent study indicated an alpha of 0.85 (Zhang & He, 2025). Sample items include: *"Teachers care about their students"*, *"Teachers let you know when you are doing a good job"*, and *"This school feels like a prison"*. The present study confirmed that the DSCS-S, in its Urdu translation, demonstrates appropriate reliability and validity for assessing school climate among Pakistani adolescents.

Urdu Translation and Cross-Language Validation of the DSCS-S

The translation and cross-language validation of the Delaware School Climate Survey–Student (DSCS-S) were conducted using the standard back-translation methodology (Anderson & Brislin, 1976; Hambleton, 1994), which ensures linguistic and conceptual equivalence across languages. The process involved five sequential steps: (1) forward translation, (2) expert committee review of forward translations, (3) backward translation, (4) expert committee review of backward translations, and (5) cross-language validation. This rigorous procedure was implemented to produce a theoretically sound and culturally adapted Urdu version of the DSCS-S, guided by the recommendations of subject matter experts (Anderson & Brislin, 1976).

Step 1: Forward Translation

The original English version of the DSCS-S was independently translated into Urdu by five bilingual experts, all of whom were native Urdu speakers and fluent in English. Each translator held a minimum of a master's degree in fields including Psychology, Urdu, Physiotherapy, and English. Translators were instructed to maintain conceptual and semantic equivalence with the original instrument while ensuring clarity and cultural appropriateness (Hambleton & Patsula, 1999; Shuja et al., 2020a). This step produced five independent Urdu translations**.**

Step 2: Expert Committee Review of Forward Translations

The five forward translations were consolidated into a single document and reviewed by an independent committee of five subject matter experts (SMEs). The SMEs evaluated the translations for contextual relevance, grammatical accuracy, clarity, and conceptual fidelity. Where discrepancies or ambiguities were identified, suggestions for alternative wording or rephrasing were considered. Consensus was reached on a single forward translation that best reflected the original scale, which was then prepared for backward translation (Anderson & Brislin, 1976; Shuja et al., 2020b).

Step 3: Backward Translation

To verify the accuracy of the forward translation, the finalized Urdu version was independently translated back into English by five new bilingual experts who had no prior exposure to the original DSCS-S and were not involved in the previous translation steps. This ensured an unbiased assessment of the Urdu version's semantic equivalence with the original English instrument.

Step 4: Expert Committee Review of Backward Translations

The same committee of SMEs critically evaluated the five back-translations against the original English version. Items were retained for the final Urdu version based on consensus agreement, ensuring conceptual, semantic, and contextual fidelity to the original instrument.

Step 5: Cross-Language Validation

For cross-language validation, both the finalized Urdu version and the original English version were administered to a pilot sample of 64 adolescents (50% male, 50% female). The assessment was repeated after a 15-day interval to evaluate test–retest reliability and ensure the psychometric stability of the Urdu version. The cross-language validation aimed to confirm that the Urdu translation was empirically equivalent to the English version, both structurally and conceptually. This process ensured that the scale accurately reflected the intended constructs and provided valid and reliable measurement for the target population (Boateng et al., 2018; Gul & Aqeel, 2024).

Procedure

The main study was conducted following a hierarchical and ethically rigorous protocol. Ethical approval was obtained from the Ethical Review Committee of Fatima Jinnah Women University (Reference No. FJWU/EC/2021/33). Prior to data collection, formal permission was obtained from the original author of the DSCS-S to translate the instrument into Urdu. Subsequently, approval for conducting the study in selected schools was obtained from the Directorate of Public Schools. Participating school principals were informed about the study objectives and procedures, including the role of teachers as facilitators. Principals and teachers were provided with detailed information sheets and consent forms**,** outlining the study purpose, significance, confidentiality assurances, and the right to withdraw at any stage. Similarly, adolescents were briefed on the study objectives, significance, and their rights, including the right to withdraw without penalty, and provided written assent. Upon obtaining the necessary approvals and consents, the questionnaires, comprising the demographic sheet and Urdu version of the DSCS-S, were administered to participants in a group setting during school hours. Participants were given clear instructions, and any questions or concerns were addressed prior to administration. Completion of the questionnaire took approximately 10–15 minutes, after which the researcher collected the responses. Throughout data collection, the principle of beneficence was strictly observed. Precautions were taken to minimize potential emotional distress, anxiety, or discomfort, and confidentiality was rigorously maintained by assigning unique identification codes to each participant, ensuring anonymity and privacy of responses.

Data Analysis

Data analysis was conducted in two stages. In the first stage, descriptive statistics including mean, standard deviation, and Cronbach's alpha reliability coefficients were calculated for both the English and Urdu versions of the DSCS-S. Additionally, Pearson correlation coefficients were computed to assess the cross-language reliability using SPSS Version 23 (Dunkley et al., 2006).In the second stage, the item-total correlations and factorial structure of the Urdu version were examined using Confirmatory Factor Analysis (CFA) implemented through AMOS 22. The CFA assessed the latent structure and goodness-of-fit of the scale. Model fit was evaluated using multiple indices: chi-square (χ^2), degrees of freedom (df), root mean square error of approximation (RMSEA < 0.08), incremental fit index (IFI), normed fit index (NFI), comparative fit index (CFI), and Tucker–Lewis index (TLI > 0.90). These indices were selected based on their established reliability and sensitivity in psychometric research (Field, 2009; Schreiber et al., 2006).The combination of descriptive statistics, reliability testing, and CFA ensured that the Urdu version of DSCS-S was psychometrically robust, culturally adapted, and conceptually equivalent to the original English instrument.

Results

Pilot Study

Table 1 presents the internal consistency and cross-language reliability of the DSCS-S. The Urdu version demonstrated excellent internal consistency, with a Cronbach's alpha of 0.91. Test–retest reliability was assessed over a 15-day interval in a subsample of 32 adolescents, yielding a strong correlation ($r = 0.97$, $p < .001$), indicating high temporal stability. Pearson product-moment correlation analysis further confirmed the robust association between the Urdu and English versions of the DSCS-S ($r = 0.97$, $p < .001$), supporting the scale's reliability and cross-language equivalence. These findings suggest that the Urdu DSCS-S exhibits satisfactory psychometric properties suitable for further validation in a larger adolescent sample.

Main Study

Table 2 demonstrates that the DSCS-S and its subscales exhibit strong internal consistency, with Cronbach's alpha coefficients ranging from .77 to .93, indicating that the Urdu version of the scale is psychometrically robust and reliable for assessing perceptions of school climate among adolescents.

In Table 3,the item total correlation analysis of the Urdu DSCS-S indicated that the majority of the 23 items exhibited moderate to strong positive correlations with the total scale score ($r > 0.20$), reflecting high internal consistency and preliminary reliability of the instrument (Piedmont, 2014; Abubakar et al., 2020). Among the items, TSQ4 (Teacher–Student Relation) demonstrated the highest item–total correlation ($r = 0.75$), whereas LS1 (Liking of School) showed the lowest yet acceptable correlation ($r = 0.32$), supporting the overall psychometric adequacy of the scale.

In Table 4, the confirmatory factor analysis (CFA) for the Urdu DSCS-S demonstrated strong factorial validity among Pakistani adolescents. The default model (Model 1) exhibited acceptable fit indices ($\chi^2/df = 1086.520/220$; NFI = 0.91; IFI = 0.93; TLI = 0.92; CFI = 0.93; RMSEA = 0.06, 90% CI = [.06, .07]). Model modification indices suggested a substantial reduction in χ^2 could be achieved by allowing the residuals of items 20 and 23 to covary. Incorporating this covariance yielded Model 2, which improved the fit indices ($\chi^2/df = 896.714/219$; NFI = 0.93; IFI = 0.94; TLI = 0.93; CFI = 0.94; RMSEA = 0.05, 90% CI = [.05, .06]; $\Delta\chi^2 = 189.806$, $\Delta df = 1$).

Results

Pilot Study

Table 1

Cross-language Reliability and Test-Retest Stability of the DSCS-S (N = 64).

Measure	Test (Urdu)		Retest (English)		r	p	α
	M	SD	M	SD			
DSCS-S	73.13	10.73	72.91	10.27	.97	.001	. .90

Note. r = Pearson product-moment correlation coefficient between Urdu and English versions of DSCS-S; α = Cronbach's alpha reliability for Urdu/English versions. Test-retest interval = 15 days. High r and α values indicate strong cross-language equivalence and internal consistency.

Main Study

Table 2

Descriptive Statistics and Internal Consistency of DSCS-S and Its Subscales (N = 910).

Subscale	*N*	*Mean*	*SD*	*Cronbach's α*
School climate	23	74.15	14.35	.93
Teacher–student relationship	8	25.90	5.95	.90
Student–student relationship	4	12.17	3.25	.85
Fairness of rules	4	12.60	3.10	.77
School safety	3	10.09	2.37	.83
Liking of school	4	13.37	3.03	.78

Note. SD = standard deviation, α = Cronbach's alpha reliability.

Table 3

Item–Total Correlations of the Urdu DSCS-S (N = 910).

Item	Item–Total Correlation
TSQ1	0.61
TSQ2	0.66
TSQ3	0.63
TSQ4	0.75
TSQ5	0.70
TSQ6	0.70
TSQ7	0.71
TSQ8	0.61
SSR1	0.64
SSR2	0.45
SSR3	0.64
SSR4	0.60
FR1	0.69
FR2	0.39
FR3	0.70
FR4	0.65
SS1	0.44
SS2	0.61
SS3	0.59
LS1	0.32
LS2	0.68
LS3	0.70
LS4	0.42

Note. TSQ = Teacher–Student Questionnaire items; SSR = Student–Student Relationship items; FR = Fairness of Rules items; SS = School Safety items; LS = Liking of School items.

Table 4

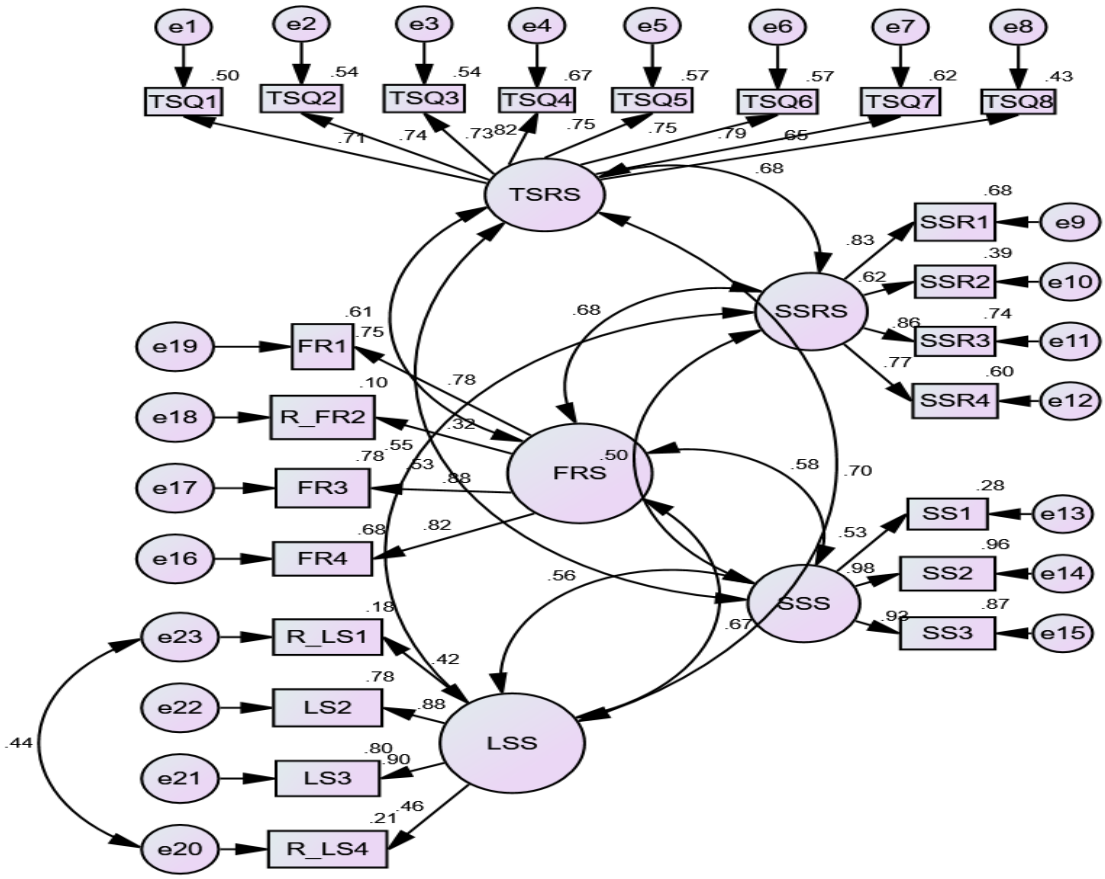
Model-Fit Indices for the Urdu DSCS-S among Adolescents (N = 910).

Model	χ^2 (df)	NFI	IFI	TLI	CFI	RMSEA	90% CI RMSEA	$\Delta\chi^2$ (Δdf)
Model 1	1086.520 (220)	0.91	0.93	0.92	0.93	0.06	[.06, .07]	
Model 2	896.714 (219)	0.93	0.94	0.93	0.94	0.05	[.05, .06]	189.806 (1)

Note. Model 1 = default CFA model of the Delaware School Climate Survey–Student (DSCS-S); Model 2 = Model 1 after adding error covariance between items e20 and e23. χ^2 = chi-square; df = degrees of freedom; RMSEA = root mean square error of approximation; IFI = incremental fit index; NFI = normed fit index; CFI = comparative fit index; TLI = Tucker–Lewis index.

Figure 1

Confirmatory Factor Analysis (CFA) Model of the Urdu Delaware School Climate Survey Student (DSCS-S)



This adjustment reflects the potential conceptual overlap between items within a single factor and is supported in the literature, provided covariances are theoretically justified (Brown, 2015; Hooper et al., 2008; Cudeck et al., 2001). Overall, the results indicate that the Urdu DSCS-S demonstrates excellent factorial validity and is psychometrically robust for assessing school climate perceptions among adolescents in Pakistan.

In figure 1, the CFA model illustrates the factorial structure of the Urdu DSCS-S among adolescents. Latent factors are represented by circles, observed items by rectangles, and measurement errors by small circles (e1–e23). Factor loadings are displayed along paths between latent factors and their corresponding items. Residual covariances are shown for items R_LS1 & LS4 and R_FR2 & FR2, as suggested by modification indices to improve model fit. All loadings are significant ($p < .001$). The latent factors include: Teacher–Student Relations (TSRS), Student–Student Relations (SSRS), Fairness of Rules (FRS), School Safety (SSS), and Liking of School (LSS). This model demonstrates the high factorial validity and structural integrity of the Urdu DSCS-S in a Pakistani adolescent sample.

Discussion

School climate is a multidimensional construct that significantly influences adolescents' academic, social, and psychological development. Positive school environments characterized by supportive teacher–student interactions, peer relationships, perceived fairness, and safety foster greater student engagement, wellbeing, and motivation for learning (Podiya et al., 2025; Gonzalvez et al., 2023). Given that students spend a substantial portion of their daily lives in school settings, reliable assessment of school climate is critical for identifying areas requiring intervention and for informing evidence-based educational policies (Miyejav et al., 2024).

The present study provides the first rigorous evaluation of the Urdu-translated Delaware School Climate Survey Student (DSCS-S) among Pakistani adolescents, aiming to establish its factorial validity, reliability, and cross-cultural applicability. Confirmatory Factor Analysis (CFA) supported the five-factor structure of the scale, comprising Teacher Student Relations (TSRS), Student–Student Relations (SSRS), Liking of School (LSS), Fairness of Rules (FRS), and School Safety (SSS). All latent variables demonstrated significant factor loadings ($p < .001$), confirming that each item reliably reflected its respective construct. The inclusion of residual covariances between select items, as indicated by modification indices, improved model fit and underscores the nuanced relationships among items within the latent constructs. These results align with prior CFA findings in diverse cultural contexts, including American, Chinese, Iranian, Portuguese, Indian, and Mongolian adolescent samples (Bear et al., 2011; Li et al., 2021; Singh & Kumar, 2024; Miyejav et al., 2024).

Internal consistency analyses revealed that both the total scale and its subscales exhibit strong reliability, with Cronbach's alpha coefficients comparable to international adaptations of the DSCS-S (Bear et al., 2011; Nezami et al., 2019; Xie et al., 2016). Test–retest reliability over a 15-day interval confirmed temporal stability, indicating that the Urdu DSCS-S consistently captures adolescents' perceptions of school climate over time. Collectively, these findings suggest that the Urdu DSCS-S is a psychometrically robust instrument capable of assessing multiple dimensions of school climate among Pakistani adolescents.

Importantly, the findings provide evidence for cross-cultural applicability of the DSCS-S. The scale demonstrates not only conceptual equivalence but also structural integrity in a South Asian context, supporting its use in comparative studies and cross-national research on school climate. The high internal consistency across subscales indicates that the items coherently measure distinct but related aspects of school climate, reflecting the multifaceted nature of the construct. Furthermore, the scale's brevity, clarity, and ease of administration make it a feasible tool for large-scale educational assessments, particularly in resource-limited school settings where specialized personnel, such as school psychologists, may be scarce

Novel Contribution

This study is the first to translate, adapt, and validate the DSCS-S in Urdu for Pakistani adolescents, providing rigorous evidence of its factorial validity, reliability, and applicability in a South Asian educational context. By establishing a culturally sensitive and psychometrically robust tool, this research enables schools to systematically assess and monitor school climate, facilitating data-driven interventions to enhance students' learning, wellbeing, and socio-emotional development. The study thus bridges a critical gap in school climate assessment research in Pakistan and adds valuable cross-cultural evidence to the international literature.

Limitations and Future Directions

Despite its significant contributions, the present study has certain limitations that should be considered when interpreting the findings. First, the use of a non-random sampling strategy may limit the generalizability of the results, as the sample may not fully represent the diversity of school types, cultural sub contexts, and socio-demographic characteristics across Pakistan. Second, the reliance on self-report measures may introduce potential response biases, including social desirability effects or subjective interpretations of the items, which could affect the accuracy of reported perceptions of school climate. To address these limitations, future research should adopt multi-informant approaches that include perspectives from teachers, parents, and school administrators, thereby providing a more comprehensive understanding of the school environment. Additionally, conducting convergent and discriminant validity analyses with other established school climate instruments would strengthen the psychometric evidence for the Urdu DSCS-S. Longitudinal studies are also recommended to examine the stability and predictive utility of school climate over time, including its impact on academic achievement, socio-emotional development, and overall wellbeing of students. Furthermore, intervention-based research using DSCS-S data could evaluate the effectiveness of school climate enhancement programs in diverse educational contexts, ultimately guiding evidence-based strategies for creating supportive and inclusive learning environments.

Conclusion

The findings of the present study demonstrate that the Urdu version of the DSCS-S is a psychometrically robust, reliable, and culturally valid instrument for assessing multiple dimensions of school climate among Pakistani adolescents. The scale effectively captures key constructs, including Teacher–Student Relations, Student–Student Relations, Liking of School, Fairness of Rules, and School Safety, providing a comprehensive framework for evaluating students' perceptions of their educational environment. Its strong internal consistency, factorial validity, and temporal stability underscore its suitability for rigorous research and practical applications in diverse school contexts. The availability of a culturally adapted and empirically validated tool enables educators, school psychologists, and policymakers to systematically monitor school climate and identify areas requiring targeted interventions. Such data-driven insights can inform the design and implementation of evidence-based strategies to foster supportive, inclusive, and psychologically safe learning environments, ultimately enhancing student engagement, academic achievement, socio-emotional development, and overall wellbeing. Moreover, the Urdu DSCS-S is cost-effective, easy to administer, and applicable across both cross-sectional and longitudinal research designs, allowing for repeated assessments to track changes in school climate over time. By bridging a critical gap in school climate assessment within the South Asian context, this study contributes significantly to both national and international literature, providing a valuable foundation for future research and intervention programs aimed at improving educational outcomes and promoting positive developmental trajectories among adolescents.

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Ethical Consideration

The study was approved by Department of Behavioral Sciences, Fatima Jinnah Women University, Rawalpindi, Pakistan. Consent Form was taken before taking data and participants were asked to take voluntary participation.

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Availability of data and materials

The data sets used and analyzed during the current study are available from the corresponding author on reasonable request.

Authors' contributions/Author details

This article was adapted from Dr. Tahira Jabeen's Ph.D. dissertation work.

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