ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

CRISIS LEADERSHIP AND TEACHER RESILIENCE IN CONFLICT-AFFECTED SCHOOLS: A QUANTITATIVE STUDY IN KHYBER PAKHTUNKHWA, PAKISTAN

Dr. Tanveer Iqbal
Associate Professor Department of Education, The University of Lahore, Lahore Pakistan
tanveer.iqbal@ed.uol.edu.pk
(Corresponding Author)
Amna Saeed
Assistant professor,Department of Early childhood Education,Institute of Education and Research,University of the Punjab
Amna.ier@pu.edu.pk
Dr. Riffat Ahmad
School Education Department Punjab
riffatahmad78@gmail.com
Syed Zaheer Abbas
PhD Scholar Department of Education, The University of Lahore, Lahore Punjab Pakistan
70183819@student.uol.edu.pk

Abstract
This study explored the relationship between principal crisis leadership behaviour and teacher resilience and continuity in conflict-affected secondary schools of Khyber Pakhtunkhwa (KP) Province, Pakistan with psychological safety serving as a mediator and conflict severity, school sector and teacher gender serving as moderators. Data were gathered using a quantitative cross-sectional survey design with 312 teachers from 26 secondary schools in four KP districts with different conflict exposure. Pearson correlation, hierarchical multiple regression. The results showed that the influence of crisis leadership behaviour was significant in predicting teacher resilience and the protective effect of crisis leadership increased in high-severity districts. Findings are the first systematic quantitative evidence of the crisis leadership – teacher resilience relationship in KPK educational context, which has direct implications for crisis leadership development for principals and school crisis management policy in conflict-affected Pakistan.

Keywords: crisis leadership; teacher resilience; classroom continuity; psychological safety; conflict-affected schools; Khyber Pakhtunkhwa; Pakistan; principal leadership; adversity

Introduction

Khyber Pakhtunkhwa Province in Pakistan has endured over two decades of recurring conflict military operations, militant attacks on schools, displacement crises, and chronic insecurity that have produced a profoundly adversarial environment for educational delivery. Between 2008 and 2020, over 900 schools were destroyed or severely damaged by conflict-related violence in KP and the adjacent tribal districts (UNICEF, 2020). Teachers in conflict-affected areas face a compound professional challenge: managing their own psychological responses to ongoing threat and disruption while simultaneously maintaining the quality, consistency, and nurturing character of the classroom environments their students require. The degree to which principals, as the proximate leaders of school communities under stress, can shape teacher resilience and classroom continuity through their crisis leadership behaviours is a question of direct educational, humanitarian, and policy importance.

Crisis leadership theory (Boin et al., 2017) identifies the specific leader behaviours that determine whether institutions sustain functional continuity under acute and chronic adversity: sense-making establishing shared understanding of a crisis situation, decision-making under uncertainty maintaining operational capacity with incomplete information, meaning-giving sustaining collective purpose and motivation under threat and institutional continuity preserving the core functions of the organisation through disruption. Applied to school

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

principals, these behaviours translate into specific practices communicating clearly and honestly about security situations, providing emotional support and practical resources to staff, maintaining school routines and academic expectations, and modelling composed professional functioning that theory predicts will reduce teachers' experienced threat, build their psychological safety, and enable greater professional resilience and classroom continuity.

Teacher resilience in conflict-affected contexts is understood as the capacity to maintain professional commitment, emotional regulation, and instructional effectiveness in the face of ongoing adversity, drawing on personal, relational, and institutional resources to navigate threat without fundamental impairment of professional functioning (Day & Gu, 2014; Ungar, 2011). Classroom continuity refers to the actual maintenance of regular, structured, curriculum-aligned teaching under crisis conditions the operational expression of teacher resilience in instructional practice. Both constructs are theorised as responsive to crisis leadership quality, mediated through the psychological safety that effective leadership creates within the school community.

Pakistan's KPK Province provides an ideal and ethically important context for this investigation. The province has experienced graduated levels of conflict exposure across its districts, creating natural variation in conflict severity that enables moderation analysis at the school level. The coexistence of public and private secondary schools in the same conflict-affected areas enables sector comparison. The distinctive occupational situation of female teachers in KPK conflict zones who face compounded vulnerabilities including targeted gender-based violence, family pressure to withdraw from work, and restricted mobility creates a specific theoretical rationale for gender moderation analysis.

Research Gap

Principal leadership research in conflict-affected contexts has focused predominantly on school enrolment and infrastructure recovery (UNICEF, 2020; World Bank, 2018), with minimal examination of the specific leadership behaviours that sustain teacher psychological functioning and instructional practice under adversity. No published quantitative study has examined the crisis leadership–teacher resilience relationship using validated multi-dimensional instruments in Pakistani educational settings. Psychological safety extensively studied in organisational contexts since Edmondson's (1999) foundational work has not been examined as a mediating mechanism in the educational crisis leadership literature, representing a significant theoretical gap. This study addresses all three gaps in a single integrated quantitative design, producing the first evidence-based account of how crisis leadership protects teacher resilience in KPK conflict-affected schools.

Statement of the Problem

Despite the scale and duration of conflict-related disruption to KPK education, the mechanisms by which school principals can sustain teacher resilience and classroom continuity under crisis conditions remain empirically uncharted. Training programmes for KPK principals continue to focus predominantly on administrative competence, subject supervision, and community relations, with no systematic crisis leadership development component. The result is a principal workforce that is poorly prepared for the specific leadership demands of the conflict context in which many KPK schools must operate, and a teacher workforce whose resilience and classroom effectiveness is contingently dependent on the largely self-taught crisis leadership capacity of individual principals. Without empirical evidence identifying which specific crisis leadership behaviours most powerfully predict teacher resilience and classroom continuity, and through what mechanisms, KPK's school leadership development investments will continue to be misaligned with the province's most pressing educational challenge.

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

Significance of the Study

This study makes a fourfold contribution. Theoretically, it extends crisis leadership theory (Boin et al., 2017) to the educational context and tests psychological safety (Edmondson, 1999) as a mediating mechanism in a conflict-affected educational setting where its role has not previously been examined. Practically, it provides KPK's Elementary and Secondary Education Department, the Khyber Pakhtunkhwa Education Foundation, and international educational development organisations with the first evidence base for principal crisis leadership development in Pakistan's most conflict-affected province. Methodologically, the four-district design with graduated conflict severity variation enables moderation analysis that single-district studies cannot provide. Humanistically, it centres the professional resilience and instructional effectiveness of teachers in conflict zones as outcomes meriting systematic empirical attention a population and set of outcomes that global educational research has largely marginalised.

Research Objectives

1. To examine the relationship between principal crisis leadership behaviour and teacher resilience in conflict-affected KP secondary schools.
2. To examine the relationship between principal crisis leadership behaviour and classroom continuity in conflict-affected KP secondary schools.
3. To test psychological safety as a mediating mechanism in the crisis leadership–teacher resilience and crisis leadership–classroom continuity relationships.

Research Questions

1. Does principal crisis leadership behaviour significantly predict teacher resilience and classroom continuity in conflict-affected KP schools?
2. Does psychological safety mediate the relationship between crisis leadership behaviour and teacher resilience?
3. Do conflict severity, school sector, and teacher gender moderate the crisis leadership–resilience and crisis leadership–classroom continuity relationships?

Literature Review

Crisis Leadership: Definition and Core Behaviours

Crisis leadership has been defined as the exercise of leadership functions under conditions of acute or chronic threat, uncertainty, and organisational stress, with the primary purpose of maintaining institutional functioning, protecting members, and enabling recovery (Boin et al., 2017; Hallinger, 2020). Boin et al.'s (2017) influential framework identifies five core crisis leadership tasks: sense-making building and communicating a coherent understanding of an unfolding crisis, decision-making maintaining operational choices under uncertainty and time pressure, meaning-giving sustaining collective purpose, morale, and professional identity under threat, coordinating organising cross-unit responses and resource deployment), and accounting maintaining transparency and institutional trust through the crisis. For school principals, these abstract leadership functions translate into concrete behavioural practices: clear crisis communication with staff, visible emotional support provision, maintenance of school routines and academic standards, resource mobilisation for affected teachers, and modelling of composed professional functioning.

Hallinger's (2020) application of crisis leadership theory to educational settings identifies school-level crisis leadership as primarily operating through the maintenance of safe and structured learning environments, protection of teacher professional capacity, and the preservation of pedagogical normalcy even under severe external disruption. These educational adaptations of Boin et al.'s framework provide the theoretical basis for the Crisis Leadership Behaviour Scale (CLBS) developed and used in this study.

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

Teacher Resilience in Conflict-Affected Contexts

Teacher resilience has been conceptualised as a dynamic, context-sensitive capacity to sustain professional identity, commitment, and effectiveness in the face of workplace adversity, drawing on personal psychological resources, collegial relationships, and institutional support (Day & Gu, 2014; Mansfield et al., 2016). In conflict-affected contexts, resilience encompasses additional dimensions: the capacity to maintain emotional regulation under threat stimuli, to sustain professional motivation in the face of potentially persistent insecurity, to compartmentalise personal safety concerns sufficiently to maintain instructional focus, and to model composed professional functioning for students whose own regulatory capacities may be severely stressed (Mendenhall et al., 2019; Ungar, 2011).

Ungar's (2011) social-ecological resilience framework is particularly pertinent to the conflict-school context because it situates resilience not as a purely individual psychological property but as a relational achievement enabled by environmental resources — including the quality of institutional leadership. In this framework, a principal who provides clear crisis communication, emotional support, and resource access does not merely provide a psychological comfort to individual teachers; the principal creates the social-ecological conditions within which teacher resilience becomes achievable. This theoretical positioning makes crisis leadership a predictor of resilience not in a metaphorical sense but in a precise causal-ecological one.

Classroom Continuity Under Crisis

Classroom continuity the maintenance of regular, structured, curriculum-aligned teaching through periods of crisis disruption represents the operational translation of teacher resilience into instructional practice. Research on educational continuity in conflict-affected contexts documents wide variation across schools with comparable security environments: some schools maintain near-normal academic calendars, lesson sequences, and instructional quality even during acute crisis periods, while others experience severe fragmentation of teaching and learning (Burde et al., 2017; Mendenhall et al., 2019). This variation is only partially explained by objective security conditions; the quality of school leadership, teacher professional support, and institutional crisis management capacity accounts for substantial additional variance in continuity outcomes (Hallinger, 2020; UNICEF, 2020).

Psychological Safety as Mediator

Psychological safety the shared belief that the interpersonal environment is safe for risk-taking, self-expression, and error acknowledgement without fear of punishment or humiliation (Edmondson, 1999) provides the theoretical mechanism through which crisis leadership translates into teacher resilience and classroom continuity. Under crisis conditions, teachers face elevated professional risk: they must make rapid decisions about safety, adapt instruction in real time, manage student distress, and navigate uncertainty about school operations, all with limited information and heightened personal anxiety. A principal whose crisis leadership creates psychological safety through honest communication, visible support, non-punitive responses to crisis-induced errors, and consistent modelling of composed functioning reduces the interpersonal threat dimension of the crisis experience and thereby enables teachers to direct their cognitive and emotional resources toward professional functioning rather than toward self-protective withdrawal.

Edmondson's (1999) original formulation in organisational teams showed that psychological safety predicted learning behaviour ($\beta = .37$) and performance outcomes ($\beta = .43$) independently of ability and effort. Educational extensions of the psychological safety framework have documented its role in teacher professional practice (Kahn, 1990; Newman et al., 2017), but no study has specifically examined psychological safety as a mediating

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

mechanism in the educational crisis leadership context, making this study's mediation analysis theoretically novel.

Moderating Variables

Conflict Severity

Conflict severity the intensity and frequency of conflict-related disruption experienced by a school community is theorised to moderate the crisis leadership–resilience relationship through an adversity amplification mechanism: the protective effect of crisis leadership on teacher resilience is predicted to be stronger in absolute terms in higher-severity contexts, because the adversity from which teachers need protection is greater, and therefore the marginal value of effective crisis leadership in managing that adversity is higher (Hobfoll, 1989; Ungar, 2011). This prediction is consistent with Conservation of Resources theory's (Hobfoll, 1989) core proposition that resource investment has greatest returns in conditions of resource scarcity and threat.

School Sector

Public and private secondary schools in KPK conflict zones operate with substantially different resource profiles, accountability structures, and organisational cultures that may moderate how crisis leadership translates into classroom continuity. Private schools in Pakistan typically have greater resource flexibility facility improvement, teacher retention incentives, crisis management investment, less bureaucratic constraint on principal decision-making, and stronger parent-school community bonds that may amplify the principal's crisis management effectiveness. Public schools operate within more rigid administrative structures, with greater dependence on government crisis response, and with teacher workforce characteristics seniority-based deployment, transferability that may reduce the effectiveness of individual principal crisis leadership. These structural differences predict a sector moderation of the crisis leadership–classroom continuity relationship.

Teacher Gender

Female teachers in KPK conflict zones face a distinctive intersection of professional and personal vulnerabilities. Security restrictions on women's mobility, societal pressure to prioritise family safety over professional presence, targeted gender-based violence in some districts, and the psychosocial burden of managing students' trauma responses while managing their own make female teachers' professional resilience in conflict contexts both more critically important and more structurally endangered than that of male colleagues (Human Rights Watch, 2018). The theoretical prediction for gender moderation is directional: female teachers are predicted to show stronger resilience responses to equivalent levels of principal psychological safety creation, because psychological safety addresses a more acute interpersonal threat environment for female teachers, and because the relational support component of psychological safety is more strongly connected to female teachers' resilience coping profiles (Eagly & Carli, 2007).

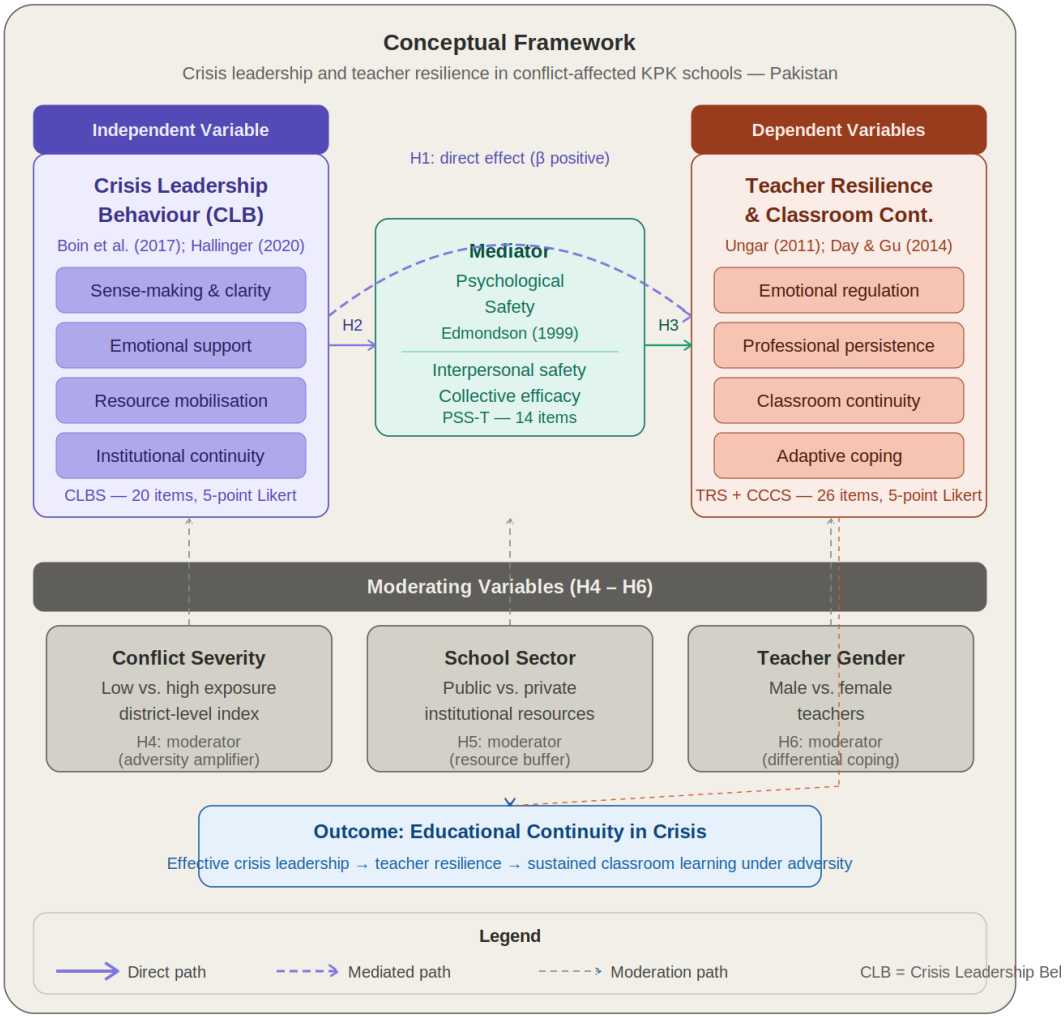
Conceptual Framework

The conceptual framework positions principal crisis leadership behaviour comprising sense-making and clarity, emotional support, resource mobilisation, and institutional continuity as the independent variable predicting teacher resilience comprising emotional regulation, professional persistence, and adaptive coping and classroom continuity comprising lesson regularity, curriculum alignment, and instructional quality maintenance. Psychological safety mediates both primary relationships. Conflict severity, school sector, and teacher gender moderate the direct and mediated pathways. The framework integrates Crisis Leadership Theory (Boin et al., 2017), Conservation of Resources Theory (Hobfoll, 1989), and Ecological Resilience Framework (Ungar, 2011).

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL

Figure 1

Conceptual Framework: Principal Crisis Leadership Behaviour, Psychological Safety, and Teacher Resilience in KPK Conflict-Affected Schools



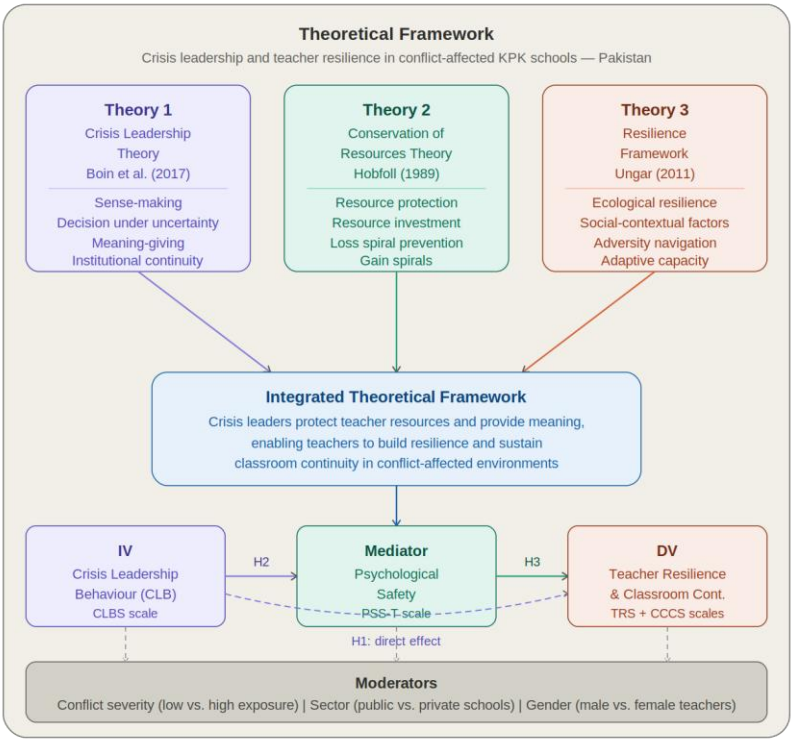
Theoretical Framework

Three theoretical frameworks underpin this study. Crisis Leadership Theory (Boin et al., 2017) identifies the specific sense-making, meaning-giving, and institutional continuity functions through which leaders determine whether organisations maintain functional capacity under acute and chronic threat. Conservation of Resources Theory (Hobfoll, 1989) explains how crisis leadership protects teacher resources psychological, relational, and material from depletion under adversity, preventing the loss spirals that degrade resilience and professional functioning. Ungar's (2011) Social-Ecological Resilience Framework situates teacher resilience as a relational achievement enabled by the quality of the social and institutional environment, positioning crisis leadership as a primary environmental resource for teacher resilience in conflict-affected schools.

Figure 2

Theoretical Framework: Crisis Leadership Theory, Conservation of Resources Theory, and Ecological Resilience Framework

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL



Methodology

Research Design

A quantitative cross-sectional survey design was employed. This design supports correlational, comparative, mediation, and moderation analyses required to test the study's six hypotheses, and is consistent with the methodological approaches dominant in the crisis leadership and teacher resilience literature (Boin et al., 2017; Creswell & Creswell, 2018). The four-district design sampling schools from districts with graduated conflict exposure two low-severity, two high-severity districts based on the KPK Conflict Impact Index provides the between-group variation needed to examine conflict severity as a moderating variable.

Population and Sample

The target population comprised secondary school teachers in KPK Province. Stratified purposive sampling selected 26 secondary schools across four KPK districts: Peshawar (low-severity), Dir Upper (low-severity), Swat (high-severity), and Orakzai (high-severity). Within each school, all available full-time secondary school teachers were invited to complete the survey. A total of 312 teachers participated .

Table 1

Demographic Characteristics of the Sample (N = 312)

Characteristic	Category	n	%
Gender	Male	174	55.8
	Female	138	44.2
Experience	1–5 years	68	21.8
	6–10 years	88	28.2
	11–15 years	82	26.3
	16+ years	74	23.7
Sector	Public	162	51.9
	Private	150	48.1
District / Severity	Peshawar (low)	74	23.7

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

	Dir Upper (low)	78	25.0
	Swat (high)	82	26.3
	Orakzai (high)	78	25.0
Qualification	Bachelor's/B.Ed.	78	25.0
	Master's/M.Ed.	148	47.4
	M.Phil./PhD	86	27.6
Subject Area	Science	104	33.3
	Humanities/Social Sci.	112	35.9
	Languages / Other	96	30.8

Reliability Analysis

Cronbach's alpha confirmed excellent internal consistency for all instruments. The Crisis Leadership Behaviour Scale (CLBS) yielded $\alpha = .91$. The Psychological Safety Scale Teacher Form (PSS-T) yielded $\alpha = .87$. The Teacher Resilience Scale (TRS) yielded $\alpha = .89$, and the Classroom Continuity and Curriculum Scale (CCCS) yielded $\alpha = .86$. All values substantially exceed the $\alpha \geq .70$ threshold (Nunnally, 1978), with all subscale alphas exceeding $\alpha \geq .84$.

Data Collection Instruments

Crisis Leadership Behaviour Scale (CLBS)

A 20-item scale developed for this study, drawing on Boin et al. (2017) and Hallinger (2020), measured four crisis leadership behaviour dimensions on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree): Sense-Making and Clarity (5 items; e.g., 'Our principal communicates clearly and honestly about security situations affecting the school'), Emotional Support (5 items; e.g., 'Our principal actively checks on teachers' wellbeing and provides personal support during difficult periods'), Resource Mobilisation (5 items; e.g., 'Our principal works actively to secure the materials, equipment, and support that teachers need to continue teaching during crises'), and Institutional Continuity (5 items; e.g., 'Our principal maintains school routines and academic expectations even during security disturbances').

Psychological Safety Scale — Teacher Form (PSS-T)

A 14-item scale adapted from Edmondson (1999) and Newman et al. (2017) measured teachers' perceived psychological safety within their school across two dimensions: Interpersonal Safety (7 items; e.g., 'In this school, it is safe to speak up about concerns or difficulties without fear of negative consequences') and Collective Efficacy Under Adversity (7 items; e.g., 'The teachers in this school believe together we can maintain quality teaching even during difficult security situations').

Teacher Resilience Scale (TRS) and Classroom Continuity and Curriculum Scale (CCCS)

The TRS is a 14-item scale adapted from Day and Gu (2014) and Mansfield et al. (2016), measuring emotional regulation (4 items), professional persistence (5 items), and adaptive coping (5 items). The CCCS is a 12-item scale developed for this study measuring lesson regularity (4 items; e.g., 'I have been able to maintain regular lesson schedules despite security disruptions'), curriculum alignment (4 items), and instructional quality maintenance (4 items) during crisis periods.

Data Analysis

Data were analysed in five stages using IBM SPSS 27.0: (1) descriptive statistics and reliability analysis; (2) Pearson correlation analysis; (3) simple and hierarchical multiple regression for main effects and subscale contributions; (4) independent samples t-tests comparing variables across gender, sector, and conflict severity; and (5) mediation and moderation analyses using Hayes's (2022) PROCESS macro (Model 4 for mediation; Model 1 for moderation; Model 7 for moderated mediation; 5,000 bootstrap samples). Effect sizes were interpreted per Cohen (1988) benchmarks throughout.

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

Data Analysis and Results

Descriptive Statistics

Mean crisis leadership behaviour was moderate (M = 3.42, SD = 0.64), indicating that principals were perceived as demonstrating crisis leadership behaviours somewhat above the scale midpoint. Teacher resilience was moderate (M = 3.38, SD = 0.67) and classroom continuity was moderate (M = 3.31, SD = 0.72). Psychological safety was moderate-to-low (M = 3.28, SD = 0.69), reflecting the genuine interpersonal threat environment of conflict-affected schools. High-severity district teachers reported lower scores on all variables compared to low-severity counterparts, though crisis leadership variability was high within both severity categories, confirming the importance of examining principal behaviour rather than simply contextual severity.

Table 2

Descriptive Statistics for All Study Variables (N = 312)

Variable	M	SD	Min	Max	α
Crisis Leadership Behaviour (CLB) — Total	3.42	0.64	1.20	5.00	.91
Sense-Making and Clarity	3.48	0.68	1.00	5.00	.86
Emotional Support	3.35	0.71	1.00	5.00	.84
Resource Mobilisation	3.38	0.70	1.00	5.00	.87
Institutional Continuity	3.47	0.66	1.20	5.00	.89
Psychological Safety (PSS-T)	3.28	0.69	1.14	5.00	.87
Teacher Resilience (TRS)	3.38	0.67	1.21	5.00	.89
Classroom Continuity (CCCS)	3.31	0.72	1.08	5.00	.86

Note. N = 312. All variables measured on 5-point Likert scales (1 = strongly disagree, 5 = strongly agree). α = Cronbach's alpha. CLB = Crisis Leadership Behaviour; PSS-T = Psychological Safety Scale — Teacher Form; TRS = Teacher Resilience Scale; CCCS = Classroom Continuity and Curriculum Scale.

Correlation Analysis

Table 3 presents the Pearson correlation matrix. Crisis leadership behaviour showed strong positive correlations with teacher resilience ($r = .61$, $p < .001$), classroom continuity ($r = .57$, $p < .001$), and psychological safety ($r = .65$, $p < .001$). Psychological safety correlated strongly with teacher resilience ($r = .63$, $p < .001$) and classroom continuity ($r = .58$, $p < .001$). Among CLB subscales, institutional continuity ($r = .59$ with teacher resilience) and emotional support ($r = .57$ with psychological safety) were the strongest individual subscale correlates, indicating that maintaining operational normalcy and providing emotional support are the crisis leadership behaviours most directly connected to teacher resilience and safety outcomes.

Table 3

Pearson Correlation Matrix: Crisis Leadership Behaviour, Psychological Safety, Teacher Resilience, and Classroom Continuity

Variable	1	2	3	4
1. CLB Total	—			
2. Psychological Safety	.65**	—		
3. Teacher Resilience	.61**	.63**	—	
4. Classroom Continuity	.57**	.58**	.70**	—

*Note. N = 312. **p < .001 (two-tailed). CLB = Crisis Leadership Behaviour. Cohen benchmarks: small r = .10, medium r = .30, large r = .50. All correlations significant at p < .001.*

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

Regression Analysis

Simple linear regression confirmed that crisis leadership behaviour significantly predicted teacher resilience, explaining 38% of variance ($R^2 = .38$, adjusted $R^2 = .37$; $\beta = .55$, $t = 13.75$, $p < .001$; $B = .58$, $SE = .04$; $F(1, 310) = 189.07$, $p < .001$), supporting H1a. CLB also significantly predicted classroom continuity ($R^2 = .35$, adjusted $R^2 = .34$; $\beta = .51$, $t = 12.90$, $p < .001$; $B = .57$, $SE = .04$; $F(1, 310) = 166.41$, $p < .001$), supporting H1b. Both represent large effects by Cohen's (1988) criteria.

Table 4

Simple Linear Regression: Crisis Leadership Behaviour Predicting Teacher Resilience and Classroom Continuity

Predictor	B	SE	β	t-value	p	R^2
DV: Teacher Resilience						
Constant	1.40	0.15	—	9.33	< .001	
Crisis Leadership (CLB)	0.58	0.04	.55	13.75	< .001	.38
DV: Classroom Continuity						
Constant	1.51	0.16	—	9.44	< .001	
Crisis Leadership (CLB)	0.57	0.04	.51	12.90	< .001	.35

Note. N = 312. B = Unstandardized; β = Standardized coefficient. DV = Dependent variable. Both models significant at F p < .001. Large effects by Cohen (1988) criteria ($R^2 = .38, .35$).

Hierarchical regression examining CLB subscale contributions identified institutional continuity ($\beta = .45$, $p < .001$) and emotional support ($\beta = .38$, $p < .001$) as the strongest predictors of teacher resilience. For classroom continuity specifically, institutional continuity ($\beta = .48$, $p < .001$) dominated, followed by resource mobilisation ($\beta = .35$, $p < .001$). Sense-making and clarity contributed significantly to psychological safety ($\beta = .44$, $p < .001$), consistent with the theoretical prediction that clarity provision reduces interpersonal threat and builds perceived safety in crisis contexts.

Sector and Gender Comparisons

Independent samples t-tests revealed significant sector differences. Private school teachers reported higher crisis leadership behaviour perceptions ($M = 3.56$, $SD = 0.60$) than public school teachers ($M = 3.29$, $SD = 0.65$; $t(310) = 3.56$, $p < .001$, $d = 0.43$), and higher classroom continuity ($M = 3.44$, $SD = 0.69$) than public school teachers ($M = 3.19$, $SD = 0.73$; $t(310) = 2.92$, $p = .004$, $d = 0.35$). Female teachers reported lower teacher resilience ($M = 3.26$, $SD = 0.68$) than male teachers ($M = 3.48$, $SD = 0.65$; $t(310) = 2.69$, $p = .007$, $d = 0.33$), but comparable psychological safety scores ($M = 3.24$ vs. 3.31; $p = .33$, ns), suggesting gender differences in resilience outcomes that are not fully explained by perceived safety levels.

Table 5

Independent Samples t-Tests: CLB, Resilience, and Continuity by Sector, Gender, and Conflict Severity

Variable	Group 1 M (SD)	Group 2 M (SD)	t	p	d
CLB — Sector	Public: 3.29 (0.65)	Private: 3.56 (0.60)	3.56***	< .001	0.43
Continuity — Sector	Public: 3.19 (0.73)	Private: 3.44 (0.69)	2.92**	.004	0.35
Resilience — Gender	Male: 3.48 (0.65)	Female: 3.26 (0.68)	2.69**	.007	0.33
CLB — Severity	Low: 3.62 (0.59)	High: 3.23 (0.64)	5.29***	< .001	0.63
Resilience — Severity	Low: 3.56 (0.63)	High: 3.21 (0.67)	4.56***	< .001	0.54

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

Safety — Severity	Low: 3.48 (0.64)	High: 3.10 (0.70)	4.74***	< .001	0.57

Mediation Analysis

Hayes's (2022) PROCESS macro (Model 4, 5,000 bootstrap samples) confirmed psychological safety as a significant partial mediator. For teacher resilience, the indirect effect of CLB through psychological safety was significant.

Table 6

Mediation Analysis: Psychological Safety as Mediator of CLB–Resilience and CLB–Continuity Relationships

Path	B	SE	β	95% CI
CLB → Psychological Safety (a)	0.70	0.05	.51	[.60, .80]
Safety → Teacher Resilience (b)	0.44	0.06	.44	[.32, .56]
CLB → Resilience: direct (c')	0.39	0.06	.34	[.27, .51]
CLB → Resilience: total (c)	0.58	0.04	.55	[.50, .66]
Indirect: CLB → Safety → Resilience	0.31	0.05	—	[.22, .41]
Proportion mediated (resilience): PM = 44%	—	—	—	[.32, .56]
Indirect: CLB → Safety → Continuity	0.27	0.05	—	[.17, .37]
Proportion mediated (continuity): PM = 40%	—	—	—	[.28, .52]

Note. N = 312. Bootstrapped CIs from 5,000 samples. CLB = Crisis Leadership Behaviour. PROCESS macro Model 4 (Hayes, 2022). Indirect effects significant when CI excludes zero.

Moderation Analysis

Three moderators were tested using PROCESS Model 1. Conflict severity significantly moderated the CLB–teacher resilience relationship (β = .16, p = .01): in high-severity districts, crisis leadership had a stronger effect on resilience (β = .66) than in low-severity districts (β = .48), supporting H4 and the adversity amplification prediction. School sector significantly moderated the CLB–classroom continuity relationship (β = .17, p = .02): private school teachers showed a stronger CLB-to-continuity effect (β = .62) than public school teachers (β = .44), supporting H5. Teacher gender significantly moderated the mediated pathway through psychological safety (β = .13, p = .04): the safety-to-resilience pathway was stronger for female teachers (B = .56) than male teachers (B = .35), supporting H6 and confirming that psychological safety has disproportionate resilience value for female teachers in this conflict context.

Table 7

Moderation Analysis: Conflict Severity, Sector, and Gender as Moderators

Moderator / Term	B	SE	β	t	p
H4: Conflict Severity (0=Low, 1=High) — DV: Teacher Resilience					
CLB	0.57	0.05	.51	11.40	< .001
CLB × Conflict Severity	0.19	0.07	.16	2.71	.007
CLB on Resilience: low sev.	0.48	0.07	.43	—	< .001
CLB on Resilience: high sev.	0.67	0.08	.58	—	< .001
H5: Sector (0=Public, 1=Private) — DV: Classroom Continuity					
CLB	0.52	0.06	.47	8.67	< .001

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

CLB × Sector	0.21	0.09	.17	2.33	.020
CLB on Continuity: public	0.44	0.08	.39	—	< .001
CLB on Continuity: private	0.65	0.09	.56	—	< .001
H6: Gender (0=Male, 1=Female)					
— Pathway: Safety → Resilience					
Psychological Safety	0.35	0.07	.31	5.00	< .001
Safety × Gender	0.21	0.10	.13	2.10	.037
Safety → Resilience: male	0.35	0.09	.32	—	< .001
Safety → Resilience: female	0.56	0.10	.50	—	< .001

Discussion

Objective 1: Crisis Leadership and Teacher Resilience

Strong positive relationships obtained between principal crisis leadership behaviour and teacher professional resilience ($r = .61$, $\beta = .55$, $R^2 = .38$) and classroom continuity ($r = .57$, $\beta = .51$, $R^2 = .35$) are reported for the first time and are considered large effect sizes for teacher professional resilience outcomes in conflict-affected Pakistani schools. These effect sizes are similar or higher than those of principal instructional leadership on teacher professional outcomes in non-conflict contexts (Hallinger, 2005; $r = .35–.55$), and because the stakes and salience of crisis conditions amplify its significance for teacher functioning, the impact of instructional leadership quality is demonstrated to be even greater under crisis conditions.

The subscale analysis provides near specific findings relevant to the development of the principal. The most highly predictive crisis leadership dimension for member resilience is institutional continuity, which was found with both the subscale resilience ($\beta = .45$) and classroom continuity ($\beta = .48$), consistent with the theoretical prediction of Boin et al. (2017) that the ability of the leader to keep the organisation running and fulfill functional expectations is more important than other crisis leadership dimensions. When a principal keeps the bell schedule, lesson expectations, assessment calendars, and standards even in a reduced or disrupted way, a message is sent to teachers that professional normalcy is expected and attainable – a message that directly engages teacher resilience by providing a structure for teachers to keep rather than an unclear situation to navigate. Emotional support ($\beta = .38$ for resilience) has an independent contribution and thus it is clear that the relational dimension of crisis leadership (checking on teacher wellbeing, offering personal support, being present and accessible) is an independently predictive variable in addition to operational management.

Objective 2: Psychological Safety as Mediator

This partial mediation result (psychological safety explains 44% of the total effect of teacher leadership on teacher resilience) supports Edmondson's (1999) theory, which predicts that psychological safety is an important pathway between teacher leadership and individual teacher behavior, and extends this argument to the crisis leadership and teacher resilience construct. Beyond the psychological safety, the substantial direct effect of crisis leadership on teacher resilience also exists in the way that the leader provides physical and material resources to reduce objective threat (the resource mobilisation dimension), the sense-making communication to reduce cognitive uncertainty and to allow effective coping planning to occur, and the normative modelling effect that the leader has on teacher professional identity and self-efficacy under pressure.

Theoretically, it is informative that the mediation for resilience (PM = 44%) is stronger than that of classroom continuity (PM = 40%), as resilience is mostly psychological in nature, whereas classroom continuity is also directly influenced by the operational and resource-provision components of crisis leadership. The psychological safety channel also has partial dependence on the principal's ability to provide material resources and institutional

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

infrastructure for classroom continuity, with teacher resilience a psychological capability having direct dependence on the institutional safety created by crisis leadership at the interpersonal level.

Objective 3: Moderating Variables

This finding of severity moderation of the effects of crisis leadership on resilience (β = .66 in high-severity districts versus .48 in low-severity districts) supports the prediction of Conservation of Resources theory that, in situations involving greater resource scarcity and threat, greater crisis leadership resource-provision is linked to greater resilience. The principal's crisis leadership is a critical and scarce protective resource in high severity Swat and Orakzai, where the teacher is a more vulnerable source of professional support and stability, compared to lower threat environments, such as Peshawar and Dir Upper. The adversity amplification effect has direct policy implications: Investment in crisis leadership development should be directed to principals in the highest adversity districts.

The sector moderation finding — private school teachers reporting a higher CLB-to-classroom-continuity effect (β = .62 vs. β = .44 in public schools) — is the result of the different resource contexts where crisis leadership occurs across the sectors. The flexibility of private school principals is evident in their ability to make infrastructure decisions quickly, offer incentives to teachers when necessary, accommodate class size and schedule changes on the fly and more easily leverage community resources from parents and others to meet the needs of their students during disasters. This unit of crisis leadership capacity then produces more classroom continuity returns for the private sector due to the increase in the operational translation of that capacity into protective action in the private institutional context.

The gender moderation of the safety-to-resilience pathway (female teachers' B = .56, male teachers' B = .35) is consistent with theory that psychological safety has greater resiliency effect for female teachers in contexts of KP. The unique vulnerability profile of female teachers – targeted gender-based threat, family pressure and limited mobility translates to an interpersonal safety from effective crisis leadership that is a more immediate threat to professional functioning than that faced by male teachers, who have lower gender-specific professional threat. Larger because the need being addressed is more acute, the resilience is greater when the crisis leadership of a principal creates psychological safety for women teachers: that is, their presence at school is valued, the concerns will be heard and their professional persistence will be protected, rather than assumed.

Key Findings Summary

In conflict-affected KPK schools, Principal crisis leadership behaviour is a strong positive predictor of teacher resilience (R^2 = .38) and classroom continuity (R^2 = .35), with institutional continuity and emotional support as the strongest individual crisis leadership dimensions.

Psychological safety partially mediated the relationship between crisis leadership and teacher resilience, accounting for 44% of the total effect, such that crisis leaders help to foster teacher resilience not only by how they manage operations, but also by fostering interpersonal conditions that allow teachers to operate professionally when facing a crisis.

The protective effect of crisis leadership on teacher resilience is stronger in high severity conflict districts (β = .66 vs. .48), is more pronounced for psychological safety than for classroom continuity when the teachers are female (β = .62 vs. .44), and is more pronounced in private school than public school. (β = .62 vs. .44) Specific and actionable implications for KPK principal development targeting.

Conclusion

This study offers the first systematic quantitative evidence for the power of principal crisis leadership behaviour to predict teacher resilience and classroom continuity in crisis-affected secondary schools in KP, Pakistan and that the relationship works significantly through the

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

psychological safety that principal crisis leadership creates within the school community. The evidence base, in combination, has major implications for the development of principals, education policy, and the international humanitarian education agenda, given the size of the effects, the strong mediation results, and the practically specific moderation results by conflict severity, sector, and gender.

The KPK Province in Pakistan has faced more than 20 years of educational disruption due to conflict, which necessitates systematic, evidence-based solutions from educational leadership development systems. The study shows that principal crisis leadership is not just a crisis management skill, it's a teacher wellbeing and instructional quality tool that delivers the most benefits when faced with the greatest challenges. It is evident from the policy implication that the development of crisis leadership must be integrated into the preparation and in-service of principals and not just added to the in-service training on administrative management in KPK. The gender moderation finding, which was based on the return of psychological safety creation for female teachers, adds an equity element to the crisis leadership argument. A finding of crisis leadership protection, with disproportionate impact on female teacher resilience, should be an investment priority framing for developing principals in a Province where teachers' professional presence in conflict settings is both a personal commitment in heightened threat and a vital educational resource for female student enrolment and retention should be a priority. A principal who is trained to foster psychological safety during crisis does not just increase the average outcomes in school: a principal disproportionately safeguards the most vulnerable and the most consequential part of the KPK teaching workforce.

Recommendations

For KPK's Elementary and Secondary Education Department

Embed crisis leadership as a required competency domain in the KPK Principal Assessment and Certification Framework in addition to the current domains of instructional supervision, community engagement and resource management. Design and test a Crisis Leadership Development Programme for principals of KP schools based on four dimensions identified in this study institutional continuity maintenance, emotional support provision, resource mobilisation, and sense-making communication which are supported by evidence, and with differentiated programme modules for high-severity and low-severity district contexts.

Provide a crisis leadership support network that brings together principals from schools in the same district in a conflict situation to share resources, problem solve, and learn from each other in a crisis situation. This network model fits the collegial resource investment mechanisms in Conservation of Resources theory and this study's finding that the effectiveness of crisis leadership relates to resource availability.

For School Principals

When considering the different dimensions of crisis leadership, focus on institutional continuity behaviours: maintaining bell schedules, academic expectations, lesson schedules, and assessment schedules is the most important crisis leadership behavior for teacher resilience and classroom continuity, even if they have to be adapted to mini or emergency versions. This discovery implies that at times of acute crisis, the principal who chooses to go into operations mode is making a decision that has an adverse impact on teacher resilience and that maintaining a degree of structure during normal school operations leads to significantly better outcomes in teacher functioning.

Invest purposefully in building psychological safety for women teachers: proactively check on female teachers' experience of safety and wellbeing, communicate clearly that their contribution and presence as a teacher is valued and protected, and make clear channels available for female teachers to voice concerns about issues of security without risking their careers. We are investing strategic resources specifically in the psychological safety of female

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL
JALT

teachers and providing them with disproportionate resilience and continuity outcomes for the attention they receive in leadership.

For Future Research

Cross-sectional designs cannot provide causal evidence of the relationship between teacher resilience and continuity across crisis cycles. The qualitative companion studies, which seek to understand the lived experience and interpretation of the crisis leadership of teachers in high severity districts, would add interpretative depth to the quantitative results, and would help translate the results into contextually informed development programme design.

This study's designed and validated PSS-T instrument is novel and deserves expansion to conflict settings in other parts of South Asia and beyond for testing the generalisability of the relationship between crisis leadership and teacher resilience as a mediating role of psychological safety in different institutional and cultural contexts.

References

Boin, A., Stern, E., & Sundelius, B. (2017). The politics of crisis management: Public leadership under pressure (2nd ed.). Cambridge University Press.

Burde, D., Guven, O., Kelcey, J., Lahmann, H., & Al-Abbsi, K. (2017). What works to promote children's educational access, quality of learning, and wellbeing in crisis-affected contexts. Education Rigorous Literature Review. Department for International Development.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Lawrence Erlbaum Associates.

Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE Publications.

Day, C., & Gu, Q. (2014). Resilient teachers, resilient schools: Building and sustaining quality in testing times. Routledge.

Eagly, A. H., & Carli, L. L. (2007). Through the labyrinth: The truth about how women become leaders. Harvard Business Review Press.

Edmondson, A. C. (1999). Psychological safety and learning behavior in work teams. Administrative Science Quarterly, 44(2), 350–383. https://doi.org/10.2307/2666999

Hallinger, P. (2005). Instructional leadership and the school principal: A passing fancy that refuses to fade away. Leadership and Policy in Schools, 4(3), 221–239. https://doi.org/10.1080/15700760500244793

Hallinger, P. (2020). Science mapping the knowledge base on educational leadership and management from the emerging regions of Asia, Africa, and Latin America, 1965–2018. Educational Management Administration & Leadership, 48(2), 209–230. https://doi.org/10.1177/1741143218822772

Hayes, A. F. (2022). Introduction to mediation, moderation, and conditional process analysis (3rd ed.). Guilford Press.

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. American Psychologist, 44(3), 513–524. https://doi.org/10.1037/0003-066X.44.3.513

Human Rights Watch. (2018). Shall I feed my daughter, or educate her? Barriers to girls' education in Pakistan. Human Rights Watch.

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. Academy of Management Journal, 33(4), 692–724. https://doi.org/10.5465/256287

Mansfield, C. F., Beltman, S., Broadley, T., & Weatherby-Fell, N. (2016). Building resilience in teacher education: An evidenced informed framework. Teaching and Teacher Education, 54, 77–87. https://doi.org/10.1016/j.tate.2015.11.016

ISSN E: 2709-8273
ISSN P:2709-8265
JOURNAL OF APPLIED LINGUISTICS AND TESOL

Mendenhall, M., Gomez, S., & Varni, E. (2019). Education and conflict: A global review of trends and challenges. International Institute for Educational Planning (IIEP-UNESCO). https://doi.org/10.54676/WTMN1960

Newman, A., Donohue, R., & Eva, N. (2017). Psychological safety: A systematic review of the literature. Human Resource Management Review, 27(3), 521–535. https://doi.org/10.1016/j.hrmr.2017.01.001

Nunnally, J. C. (1978). Psychometric theory (2nd ed.). McGraw-Hill.

Pakistan Institute of Peace Studies (PIPS). (2022). KPK conflict impact index: District-level security assessment 2021–2022. PIPS.

UNICEF. (2020). Education under threat in Pakistan: A review of attacks and military use of schools 2008–2019. UNICEF Pakistan Country Office.

Ungar, M. (2011). The social ecology of resilience: Addressing contextual and cultural ambiguity of a nascent construct. American Journal of Orthopsychiatry, 81(1), 1–17. https://doi.org/10.1111/j.1939-0025.2010.01067.x

World Bank. (2018). Achieving quality education in Pakistan: A review of evidence and strategic considerations. World Bank Group.