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Original Article

Emotional Resilience Among Filipino Public School Leaders: Development of Culturally Integrated Scale

Michael J. Froilan*, *Gaudencio C. Aljibe, Jr.

Author Information:

Schools Division Office of Northern Samar, Catarman, Northern Samar, Philippines

Correspondence:
michael.froilan@deped.gov.ph

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Abstract. Public school leaders in the Philippines operate under compounding occupational, relational, and institutional demands that existing resilience measures—developed primarily in Western, well-resourced educational systems—are ill-equipped to capture with adequate construct validity. This study developed and validated the Emotional Resilience Scale for Filipino Public School Leaders (ERS-FPSL) within an etic–emic integration framework that positions Filipino indigenous constructs as structural dimensions of resilience rather than cultural supplements. A census sample of 569 public school leaders from the Division of Northern Samar was randomly allocated to independent exploratory (n = 310) and confirmatory (n = 259) subsamples. Exploratory factor analysis with parallel analysis retention yielded a five-factor solution accounting for 66.80% of total variance: Coping Flexibility, Emotion Regulation Capacity, Emotional Recovery, Social Support, and Organizational Support, with 26 items retained for confirmatory testing. A hierarchical confirmatory factor analysis tested a three-level model in which five first-order subscales converged onto a second-order Internal Emotional Processes factor, which, together with Social Support and Organizational Support, defined the third-order Emotional Resilience construct. The model demonstrated excellent fit (CFI = .999, TLI = .998, RMSEA = .051 [.043, .059], SRMR = .047), with all standardized loadings significant (β = .781–.979), McDonald's ω = .865–.946, and Average Variance Extracted = .787–.914. These findings validate a culturally integrated, hierarchically organized model of resilience with direct implications for leadership development and human resource policy within Philippine public education.

Keywords: *Educational leadership; Emotional resilience; Filipino psychology; Scale development; Structural Equation Modeling.*

School leadership is a highly demanding vocation that exacts significant emotional costs on those who practice it. Internationally, principals and school heads navigate institutional accountability pressures, resource constraints, relational conflicts, and community expectations in ways that systematically strain their psychological functioning. Meta-analytic evidence confirms that adaptive emotion regulation strategies are positively associated with educator well-being and sustained professional functioning (Wang et al., 2023), while deficits in recovery, flexibility, and support resources accelerate exhaustion and burnout (Klusmann et al., 2023; Virtanen et al., 2020). Despite this evidence, prevailing instruments used to measure leadership resilience predominantly derive from Western, individualist psychological traditions (Berkovich & Eyal, 2015; Marsh et al., 2023). These tools operationalize resilience through universalized constructs—emotion regulation, cognitive

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reappraisal, psychological flexibility, recovery, and contextual support—that were developed and validated in well-resourced, individualist settings, and risk-producing instruments that achieve statistical adequacy while remaining interpretively shallow when applied in non-Western contexts (Pe-Pua & Protacio-Marcelino, 2000).

In the Philippines, this measurement gap carries particular weight. Filipino public school heads occupy a structurally demanding intermediary position between Department of Education (DepEd) policy mandates and local community expectations, carrying emotional responsibilities that are simultaneously administrative, relational, and moral (Selmer & De Leon, 2001). Philippine cultural psychology situates emotional functioning within a relational-moral framework organized by loób—the inner moral-emotional core integrating emotion, cognition, and volition (Mercado, 1994; Reyes, 2015a)—and kapwa—shared relational identity that renders support a moral obligation rather than a discretionary resource (Pe-Pua & Protacio-Marcelino, 2000). These constructs are not merely metaphorical glosses on universal processes; they constitute the interpretive architecture within which resilience is experienced and enacted by Filipino leaders. Instruments designed without this relational-moral framework achieve statistical adequacy while remaining interpretively thin: they confirm structure without capturing the cultural meanings through which resilience is lived.

Research on etic–emic integration in cross-cultural psychology provides a principled response to this problem. An etic framework provides internationally validated regulatory constructs—emotion regulation capacity (Wang et al., 2023; Eyal et al., 2024), cognitive reappraisal (Schornick & Braun, 2025), emotional recovery (Aulén et al., 2022; Virtanen et al., 2020), coping and psychological flexibility (Kato, 2012; Paliliunas et al., 2022), social support (Klusmann et al., 2023; Maas et al., 2022), and organizational support (Berkovich & Eyal, 2015; Marsh et al., 2023)—while an emic framework situates these constructs within Filipino psychological meanings that shape how they are experienced in Philippine public school contexts. This integration approach is consistent with cross-cultural psychology's argument that cultural constructs constitute the interpretive architecture within which universal psychological processes operate, rather than being mere contextual flavoring (Pe-Pua & Protacio-Marcelino, 2000; Worthington & Whittaker, 2006). Within Filipino psychology, loób-grounded composure (Mercado, 1994), bayanihan-based collegial solidarity (Reyes, 2015a), malasakit-based institutional responsiveness (Selmer & De Leon, 2001), and kapwa-grounded relational support (Pe-Pua & Protacio-Marcelino, 2000) do not merely restate etic mechanisms; they restructure how those mechanisms operate, who they involve, and what they mean to the leaders who enact them. No etic–emic integrated instrument has been developed and psychometrically validated for Filipino public school leaders, constituting the primary gap the present study addresses.

The present study therefore developed and validated the Emotional Resilience Scale for Filipino Public School Leaders (ERS-FPSL) through a sequential exploratory-confirmatory design. It examined whether a hierarchical measurement model integrating five intrapersonal regulatory domains with social and organizational support dimensions—theorized simultaneously through etic regulatory science and emic Filipino psychology—could be psychometrically substantiated in a sample of Northern Samar public school heads. The study asks: Does the proposed etic–emic integrated model of emotional resilience demonstrate factorial validity, internal consistency, and construct validity sufficient to support its use as a culturally grounded measurement framework in Philippine educational leadership research? The significance of the inquiry extends beyond instrument development: a validated, culturally grounded resilience measure enables evidence-based leadership development programming, informs human resource policy within DepEd, and contributes to the broader project of building psychometrically rigorous indigenous-integrated assessment tools in non-Western educational contexts.

Methodology

Research Design

This study employed a quantitative, cross-sectional scale development and validation design to develop and psychometrically evaluate the ERS-FPSL. A cross-sectional design is appropriate for initial scale development because it supports systematic examination of latent structure, reliability, and construct validity across a diverse sample at a single time point, consistent with contemporary psychological measurement standards (Anderson & Gerbing, 1988; Brown, 2015). Scale development research specifically requires a cross-sectional approach at the instrument-construction stage, as predictive validity and longitudinal stability studies appropriately follow only after construct and measurement validity have been established (Worthington & Whittaker, 2006). The research followed a two-phase measurement validation framework: Phase 1 employed exploratory factor analysis (EFA) on an independent subsample to identify the underlying factor structure, and Phase 2 performed confirmatory factor analysis (CFA) via structural equation modeling on a separate independent subsample to test structural

stability. Conducting exploratory and confirmatory procedures on independent samples minimizes capitalization on chance and strengthens the credibility of the derived factor structure (Anderson & Gerbing, 1988; Worthington & Whittaker, 2006).

Participants and Sampling Technique

Participants were 569 public school leaders—Head Teachers, Principals, and other formally designated teaching leaders—drawn from public elementary and secondary schools in the Division of Northern Samar, Philippines. Inclusion criteria required that participants hold a formal school leadership designation listed in the Schools Division Office (SDO) directory at the time of data collection, be actively assigned to a school within the division, and consent to participate voluntarily. Officers-in-Charge (OICs) without advanced leadership degrees (master's or doctoral) or with fewer than two years of leadership experience were excluded, as the study's construct of emotional resilience pertains to formally credentialed school heads with sustained institutional accountability. The total eligible population identified in the SDO directory was 610 school heads. Census sampling was employed, with instruments distributed to all eligible school heads across the division's districts, coordinated through district supervisors. Of the 610 eligible school heads, 569 returned completed instruments, yielding a response rate of approximately 93.28%. Incomplete responses, defined as instruments with more than 10% missing items, were excluded prior to analysis.

To minimize capitalization on chance in the scale development process, the full dataset was randomly split into two independent subsamples using a 50%–50% cross-validation strategy (Anderson & Gerbing, 1988; Worthington & Whittaker, 2006). Random assignment was performed in R using a fixed seed to ensure replicability, with no stratification by demographic variable. Demographic proportions were verified post-split and closely parallel across subsamples (reported in Table 2), confirming the adequacy of simple random assignment. The first subsample (n = 310) was used exclusively for EFA, and the second (n = 259) was reserved for CFA and hierarchical measurement model testing.

Research Instrument

The ERS-FPSL is a researcher-developed instrument designed through a dual-sourcing procedure in which each item was simultaneously anchored in an empirically validated etic construct and a specific emic Filipino psychological concept. Item development followed established psychometric procedures for scale construction (DeVellis & Thorpe, 2022; Worthington & Whittaker, 2006). An initial 38-item pool was generated across seven theoretically derived domains: Emotion Regulation Capacity (6 items), Cognitive Reappraisal (5 items), Emotional Recovery (5 items), Coping Flexibility (6 items), Psychological Flexibility (4 items), Social Support (6 items), and Organizational Support (6 items). Items were phrased in the first person using a five-point Likert-type response format (1 = Strongly Disagree to 5 = Strongly Agree), targeting leadership-specific behavioral situations relevant to Filipino public school heads. Content validity was established through expert review by five faculty members with expertise in educational psychology, Filipino psychology, and psychometric measurement. Item clarity and face validity were assessed through a pilot administration with 30 public school heads outside the main study sample, resulting in minor linguistic revisions prior to the main data collection. Cronbach's α in the pilot sample ranged from .81 to .93 across subscales, providing sufficient preliminary reliability evidence. Table 1 presents the full item pool with etic construct assignments and emic Filipino concept anchors.

Data Gathering Procedure

Data were collected over a 10-week period from October to December 2025 following a sequential five-step process. First, the research team coordinated with all district supervisors across the Division of Northern Samar, briefing them on the study's purpose, the instrument, and distribution and collection protocols. Second, survey instruments were distributed to all school heads formally listed in the SDO directory, administered either in printed form during scheduled district-level coordination meetings or through a structured online platform (Google Forms) for schools with reliable internet connectivity; both modalities used identical item wording and response formats. Third, completed printed forms were sealed by respondents and collected directly by district supervisors, while online responses were received through a password-protected link distributed via official communication channels. Fourth, upon receipt, all instruments were screened for completeness; incomplete responses (more than 10% missing items) were excluded, yielding a final sample of 569. Fifth, all completed instruments were assigned coded identifiers, and the dataset was randomly split in R using a fixed seed into EFA (n = 310) and CFA (n = 259) subsamples.

Data Analysis Procedure

Data analysis followed a sequential procedure organized across three stages: preliminary data screening, exploratory structural analysis, and confirmatory measurement modeling.

Preliminary Screening

Prior to analysis, all cases were examined for missing data patterns, out-of-range values, and distributional properties. Item-level descriptive statistics were computed, and multivariate normality was assessed through inspection of skewness and kurtosis indices. Factorability of the EFA subsample correlation matrix was evaluated using the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity (Hair et al., 2019).

Exploratory Factor Analysis

EFA was conducted on the first subsample (n = 310) using minimum residual (minres) extraction—a least-squares method that minimizes the residual correlation matrix and is less sensitive to violations of multivariate normality than principal axis factoring (Brown, 2015; Worthington & Whittaker, 2006)—with direct oblimin rotation, reflecting the theoretical expectation that resilience dimensions are empirically interrelated (Brown, 2015). Factor retention was determined by parallel analysis (Horn, 1965), in which observed eigenvalues are compared against eigenvalues derived from simulated random datasets; factors are retained when observed eigenvalues exceed their simulated counterparts. The Kaiser criterion (eigenvalues > 1) was computed as a supplementary reference only, given its well-documented tendency to overextract factors in large item pools (Worthington & Whittaker, 2006). Items were evaluated for retention against three conjunctive criteria: primary factor loading ≥ .50 on the theoretically assigned factor, no cross-loading ≥ .40 on any non-assigned factor, and theoretically consistent factor placement. Subscales yielding fewer than three retained items were dissolved, with empirical basis and theoretical implications documented in the Results section. All EFA procedures were conducted in JAMOVI (version 2.5).

Confirmatory Factor Analysis

CFA was performed on the independent second subsample (n = 259) using robust diagonally weighted least squares (DWLS) estimation with polychoric correlations, which is appropriate for ordered categorical (Likert-type) indicators and robust under violations of multivariate normality (Kline, 2023). DWLS was selected over maximum likelihood estimation because the present data are ordinal and the normality assumption required for ML is unlikely to be satisfied in practice (Kline, 2023). The hypothesized hierarchical model specified three first-order regulatory subscales loading onto a second-order Internal Emotional Processes (IEP) factor, which, together with Social Support and Organizational Support, defined the third-order Emotional Resilience construct. Model fit was evaluated using the Root Mean Square Error of Approximation (RMSEA), Tucker–Lewis Index (TLI), Comparative Fit Index (CFI), and Standardized Root Mean Square Residual (SRMR), interpreted against established benchmarks (Browne & Cudeck, 1993; Hu & Bentler, 1999). Convergent validity was assessed through standardized factor loadings and Average Variance Extracted (AVE); discriminant validity was examined using the Fornell–Larcker criterion (Fornell & Larcker, 1981). Internal consistency was evaluated using model-based omega (ω), ordinal alpha, and Cronbach's α (Gadermann et al., 2012; Kline, 2023). All CFA procedures were conducted in Jamovi (version 2.7.17) using the lavaan (version 0.6-17) and semTools (version 0.5-6) packages (Rosseel, 2012; Jorgensen et al., 2022).

Ethical Considerations

This study was conducted in accordance with established ethical standards for educational and psychological research involving human participants. Written approval was obtained from the Schools Division Office of Northern Samar prior to data collection. Informed consent was obtained from all participants; participation was entirely voluntary, and non-participation carried no professional consequences. No personally identifiable information was collected; respondents were assigned coded identifiers at the point of data entry, and all data were stored in password-protected files on an encrypted device. Raw data will be securely disposed of five years after study completion. Items were framed in professional, non-clinical language, and participants were informed of their right to skip any item they found uncomfortable.

Results and Discussion

Demographic and Professional Characteristics

Table 1 presents the demographic and professional characteristics of both subsamples. The EFA (n = 310) and CFA (n = 259) subsamples showed closely parallel distributions across all ten variables, confirming the comparability

of the two groups and the adequacy of the simple random split strategy. Both subsamples were predominantly female (EFA: 56.1%; CFA: 51.0%), reflecting the gender composition of the public school leadership workforce in Northern Samar. Age distributions were concentrated in the mid- to late-career range, with more than three-quarters of respondents in each subsample aged 40 years and above (EFA: 77.1%; CFA: 75.6%). Head Teachers constituted the largest group in both subsamples (EFA: 54.8%; CFA: 55.6%), and the large majority were assigned to elementary schools, small school settings, and rural or barangay locations—a profile closely aligned with the decentralized, resource-constrained educational conditions of Northern Samar that informed the leadership-specific item contexts embedded in the ERS-FPSL. The demographic parallelism across subsamples supports the credibility of the cross-validation strategy.

Table 1. *Demographic and professional characteristics of the EFA and CFA samples*

Variable	Category	EFA Sample (n = 310)	CFA Sample (n = 259)
Sex	Female	174 (56.1%)	132 (51.0%)
	Male	136 (43.9%)	127 (49.0%)
Gender Identity	Woman	172 (55.5%)	131 (50.6%)
	Man	122 (39.4%)	117 (45.2%)
	Gender diverse/Prefer not to say	16 (5.1%)	11 (4.2%)
Sexual Orientation	Heterosexual	263 (84.8%)	216 (83.4%)
	Homosexual	35 (11.3%)	30 (11.6%)
	Other orientations	12 (3.9%)	13 (5.0%)
Age	25–39 years	71 (22.9%)	63 (24.3%)
	40–49 years	115 (37.1%)	83 (32.0%)
	50–64 years	124 (40.0%)	113 (43.6%)
Civil Status	Married	224 (72.3%)	188 (72.6%)
	Single	67 (21.6%)	57 (22.0%)
	Other	19 (6.1%)	14 (5.4%)
Gender Roles	Triple role (I, II, III)	191 (61.6%)	162 (62.5%)
	Dual role	67 (21.6%)	55 (21.3%)
	Single role	52 (16.8%)	42 (16.2%)
Highest Educational Attainment	Graduate units	150 (48.4%)	128 (49.4%)
	Master's/Doctorate degree	158 (51.6%)	131 (50.6%)
Position	Head Teacher	170 (54.8%)	144 (55.6%)
	Principal	96 (31.0%)	83 (32.0%)
	Other teaching leaders	44 (14.2%)	32 (12.4%)
Curriculum Level	Elementary	251 (81.0%)	208 (80.3%)
	Secondary	59 (19.0%)	51 (19.7%)
Length of Service	≤ 10 years	28 (9.0%)	28 (10.9%)
	11–24 years	164 (52.9%)	141 (54.4%)
	≥ 25 years	118 (38.1%)	90 (34.7%)
Years as School Head	≤ 10 years	198 (63.9%)	163 (62.9%)
	≥ 11 years	112 (36.1%)	96 (37.1%)
School Size	Small	248 (80.0%)	209 (80.7%)
	Medium	32 (10.3%)	29 (11.2%)
	Large/Very large	30 (9.7%)	21 (8.1%)
School Location	Rural	277 (89.4%)	234 (90.3%)
	Urban	33 (10.6%)	25 (9.7%)

Note. The two subsamples were produced by simple random assignment using a fixed seed in Jamovi. Demographic proportions are reported to verify cross-validation adequacy.

Item Development and Theoretical Rationale

Table 2 presents the initial 38 items developed based on etic–emic constructs. The five regulatory subscales of the Internal Emotional Processes domain — emotion regulation capacity, cognitive reappraisal, emotional recovery,

coping flexibility, and psychological flexibility — are not simply Filipino-context translations of established Western measures. Each subscale's items are anchored in leadership situations that carry culturally specific emotional weight, activating the constructs they measure as Filipino school heads actually experience them. Emotion regulation capacity items (Wang et al., 2023; Eyal et al., 2024) invoke *hiya* as moral self-restraint under institutional scrutiny (Reyes, 2016) and *loób*-grounded inner fortitude during crises (Bulatao, 1992), rather than generic stress tolerance. Cognitive reappraisal items (Schornick & Braun, 2025; Eyal et al., 2024) are anchored in *pagpapabuti ng pagkatao* (Reyes, 2015a), *diskarte* (Rungduin, 2014), and constructive *hiya* paired with reflective *loób* (Lynch, 1962; Mercado, 1994; Reyes, 2016). Emotional recovery items (Aulén et al., 2022; Virtanen et al., 2020) draw on *pagbabalik-gaan ng loób* and *tatag ng loób* (Rungduin, 2014) as culturally specific restoration processes, and on *pagpapakatao sa tungkulin* (Reyes, 2015a) as the moral grounding for sustained role performance. Coping and psychological flexibility items (Kato, 2012; Paliliunas et al., 2022) are anchored in *lakas ng loób* and *tatag ng loób* as action-oriented inner strength and moral-affective courage (Mercado, 1994; Rungduin, 2014), and in *bahala na* as adaptive willingness to act under uncertainty (Reyes, 2016).

The Social Support and Organizational Support domains reflect a parallel theoretical decision. Including these domains as defining components of the overall resilience construct — rather than treating them as moderators — encodes the emic argument that Filipino resilience is constitutively relational and institutional. Social support items (Klusmann et al., 2023; Maas et al., 2022) reference collegial solidarity through *kapwa* and peer *bayanihan* (Reyes, 2015a), *pakikipagkapwa-loób* (Pe-Pua & Protacio-Marcelino, 2000), communal solidarity among teaching staff (Guilaran et al., 2025), and the restoration of *gaan ng loób* through professional network support (Rungduin, 2014). Organizational support items (Berkovich & Eyal, 2015; Marsh et al., 2023) reference institutional *malasakit* enacted through SDO-level responsiveness (Reyes, 2015a), relational supervisory authority (Selmer & De Leon, 2001), bureaucratic clarity as structural containment (Selmer & De Leon, 2001), institutional *kapwa* as systemic belonging (Reyes, 2015a), and *paglinang ng loób* as the moral purpose of professional development (Tablan, 2019). On this account, *kapwa*-based solidarity and *malasakit*-based responsiveness are constituents of resilience, not supports for it, and their structural inclusion renders this claim empirically testable.

Several interpretive limits should nonetheless be acknowledged. First, the emic–etic pairings employed here represent theoretical judgments; alternative Filipino constructs — *damayan*, *dangal*, or *pakikiisa* — could plausibly have anchored some items, and the present mappings, while grounded in the most consistently cited sources in Filipino psychological scholarship (Mercado, 1994; Pe-Pua & Protacio-Marcelino, 2000; Reyes, 2015a, 2016; Rungduin, 2014), are not the only defensible choices. Second, the leadership situations embedded in items — audit visits, community complaints, urgent directives, crisis response — reflect the DepEd governance structure specifically, which limits the instrument's transferability beyond the public elementary and secondary division context without additional validation evidence. Third, the pilot study confirmed item clarity and preliminary internal consistency but did not employ cognitive interview methodology to verify that respondents interpreted emic-referenced behavioral descriptions in the culturally specific ways intended; this is recommended as a priority for subsequent validation phases.

Table 2. *Initial items developed based on Etic–Emic constructs*

Item	Focus	Etic Construct	Emic Filipino Concept(s)
I am able to regulate my emotions when dealing with urgent directives or reports from higher offices.	Regulate emotions — urgent directives	ERC (Wang et al., 2023; Eyal et al., 2024)	Hierarchy-sensitive regulation; disciplined loób (Selmer & De Leon, 2001; Mercado, 1994)
I can calm myself when administrative deadlines and reporting requirements overlap.	Calm during overlapping deadlines	ERC	Inner balance (loób) under pressure (Mercado, 1994)
I manage my emotions effectively during meetings involving complaints from parents or stakeholders.	Manage emotions — complaint meetings	ERC	Pakikiramdam in relational contexts (Rungduin, 2014)
I remain emotionally composed when handling disciplinary cases of teachers or learners.	Composed during disciplinary cases	ERC	Makataong pamumuno; pakikipagkapwa (Pe-Pua & Protacio-Marcelino, 2000)
I control my emotional reactions when facing pressure from audits, monitoring, or validation activities.	Control reactions — audits/monitoring	ERC	Regulatory hiya; moral restraint (Reyes, 2016)
I am able to maintain emotional balance during crises such as	Balance during crises	ERC	Crisis steadiness rooted in loób (Bulatao, 1992)

disasters, emergencies, or school disruptions.			
I view leadership challenges as opportunities to improve my skills as a school head.	Leadership challenges as growth	CR (Schornick & Braun, 2025; Eyal et al., 2024)	Virtue-based growth; pagpapabuti ng pagkatao (Reyes, 2015a)
When problems arise in school operations, I focus on possible solutions rather than emotional stress.	Solution-focused under problems	CR	Pragmatic diskarte (Rungduin, 2014)
I reframe negative feedback or criticism as constructive input for improvement.	Reframe criticism constructively	CR	Constructive hiya; reflective loób (Lynch, 1962; Reyes, 2016)
I change how I think about setbacks to remain emotionally stable.	Cognitive reframing of setbacks	CR	Pagbabagong-isip grounded in moral reflection (Mercado, 1994)
I see unexpected school issues as part of the realities of public school leadership.	Accept unexpected issues	CR	Reality-based appraisal (Reyes, 2015a)
Stressful situations at work do not affect my emotional functioning for long periods.	Limited emotional impact of stress	ERc (Aulén et al., 2022; Virtanen et al., 2020)	Tatag ng loób; restoration of gaan ng loób (Rungduin, 2014)
I quickly regain emotional strength after handling conflicts or complaints.	Quick emotional recovery	ERc	Relational repair; pakikipagkapwa restoration (Reyes, 2016)
I am able to refocus on my duties after emotionally draining experiences.	Refocus after emotional strain	ERc	Pagbabalik-gaan ng loób (Rungduin, 2014)
I remain emotionally steady even after repeated pressures from work.	Steady under repeated pressure	ERc	Moral steadiness within loób (Bulatao, 1992)
I continue performing my responsibilities effectively despite emotional exhaustion.	Function despite exhaustion	ERc	Enduring pagpapakatao sa tungkulin (Reyes, 2015a)
I adjust my coping strategies depending on the type of challenge I face in school leadership.	Adjust coping strategies	CF (Kato, 2012)	Adaptive diskarte; situational pakikiramdam (Rungduin, 2014)
I use different ways of coping when dealing with administrative, instructional, or community issues.	Use varied coping methods	CF	Context-responsive loób (Mercado, 1994)
I modify how I respond emotionally based on the demands of each situation.	Modify emotional response	CF	Dynamic emotional calibration (Rungduin, 2014)
I can change my coping approach when my usual strategies are not effective.	Change ineffective coping	CF	Reflective self-adjustment (Reyes, 2015b)
I adapt my coping methods when school problems require immediate action.	Adapt coping for urgency	CF	Action-oriented lakas ng loób (Mercado, 1994)
I am able to shift strategies when faced with new or unexpected leadership challenges.	Shift strategies for new challenges	CF	Courageous responsiveness; adaptive bahala na (Reyes, 2016)
I am able to function effectively even when I feel emotionally uncomfortable at work.	Function despite discomfort	PF (Paliliunas et al., 2022)	Lakas ng loób; integrated loób (Mercado, 1994)
I accept difficult emotions as part of my role as a public school head.	Accept difficult emotions	PF	Role-bound endurance; pagpapakatao (Reyes, 2015a)
I am open to experiencing stress while still acting in line with my leadership responsibilities.	Open to stress but responsible	PF	Moral courage grounded in loób (Reyes, 2016)
I can carry out my duties even when situations do not go as planned.	Perform despite setbacks	PF	Pakikiramdam; pragmatic diskarte (Rungduin, 2014)
I receive emotional support from fellow school heads when I face leadership challenges.	Support from fellow school heads	SS (Klusmann et al., 2023; Maas et al., 2022)	Kapwa; peer bayanihan (Reyes, 2015a)
I can share my work-related concerns with trusted colleagues.	Share concerns with colleagues	SS	Pakikipagkapwa-loób (Pe-Pua & Protacio-Marcelino, 2000)
I feel emotionally supported by teachers and staff in my school.	Supported by teachers/staff	SS	Communal solidarity (Guilaran et al., 2025)
I receive encouragement from peers when work becomes emotionally demanding.	Encouragement from peers	SS	Bayanihan as shared emotional labor (Reyes, 2015a)

I can rely on others to help me cope with stressful leadership situations.	Rely on others for coping	SS	Relational coping through kapwa (Pe-Pua & Protacio-Marcelino, 2000)
I feel less emotionally burdened when I receive support from my professional network.	Network reduces emotional burden	SS	Restoration of gaan ng loób (Rungduin, 2014)
The Schools Division Office provides support that helps me manage work-related stress.	SDO stress support	OS (Berkovich & Eyal, 2015; Marsh et al., 2023)	Institutional malasakit (Reyes, 2015a)
Guidance from supervisors helps reduce the emotional demands of my work.	Supervisor guidance support	OS	Relational authority with empathy (Selmer & De Leon, 2001)
Clear DepEd policies and procedures help me cope with emotionally challenging situations.	Policy clarity support	OS	Structural containment; bureaucratic clarity (Selmer & De Leon, 2001)
I feel supported by the Department of Education when handling difficult school management issues.	DepEd institutional support	OS	Institutional kapwa; systemic belonging (Reyes, 2015a)
Administrative support from higher offices helps me remain emotionally stable.	Higher office admin support	OS	Governance-based emotional security (Selmer & De Leon, 2001)
Access to training and professional development strengthens my emotional resilience.	Training strengthens resilience	OS	Paglinang ng loób; virtue cultivation (Tablan, 2019)

Note. ERC = Emotion Regulation Capacity; CR = Cognitive Reappraisal; ERc = Emotional Recovery; CF = Coping Flexibility; PF = Psychological Flexibility; SS = Social Support; OS = Organizational Support.

Exploratory Factor Analysis

Assumption Checks

Table 3 presents the assumption check statistics for the EFA subsample. Bartlett's Test of Sphericity was statistically significant, $\chi^2(703) = 10{,}798.804$, $p < .001$, indicating that the inter-item correlation matrix departed significantly from an identity matrix and that sufficient shared variance was present to support common factor extraction (Hair et al., 2019). The KMO measure of sampling adequacy yielded an overall value of .97, classified as marvelous (Kaiser, 1974), with item-level values ranging from .94 to .98—all exceeding the .50 retention threshold (Worthington & Whittaker, 2006). These results confirm that the correlation structure and sample size were highly appropriate for exploratory factor analysis.

Table 3. *Summary of assumption checks for EFA (n = 310)*

Test	Statistic	df	p	Interpretation
Bartlett's Test of Sphericity	10,798.804	703	< *.001*	Correlation matrix is factorable
KMO (Overall)	.966	—	—	Marvelous sampling adequacy
KMO (Item-Level Range)	.935–.979	—	—	All items suitable for factor analysis

Note. KMO values ≥ .50 indicate suitability for factor analysis. Bartlett's p < .001 confirms matrix factorability (Hair et al., 2019).

Factor Retention

Table 4 presents initial eigenvalues, factor statistics, and inter-factor correlations. Factor retention was determined by parallel analysis (Horn, 1965), the currently recommended criterion, because it systematically guards against the overextraction bias of the Kaiser criterion (Worthington & Whittaker, 2006). The scree plot (Figure 1) provides visual confirmation of this decision: a sharp elbow is evident after Factor 1, which yielded the dominant eigenvalue of 20.115, followed by a secondary, more gradual inflection between Factors 2 and 3, after which the data eigenvalue line converges with and tracks the simulated parallel analysis eigenvalue curve. This convergence pattern, where the data line descends to and overlaps with the simulation-derived threshold, marks the boundary beyond which additional factors represent noise rather than systematic variance. Five observed eigenvalues — 20.115, 1.825, 1.153, 0.821, and 0.628 — exceeded their corresponding simulated counterparts, confirming that five factors account for meaningful non-chance variance. Notably, Factors 4 and 5 carry eigenvalues below the conventional Kaiser threshold of 1.0, yet the scree plot trajectory and parallel analysis both indicate that their data eigenvalues remain above the simulation line at those factor positions, warranting their retention. The Kaiser criterion retained only three factors; because parallel analysis is the methodologically superior criterion and is further corroborated by the scree plot inflection pattern, the five-factor solution was retained. The five-factor solution accounted for 66.80% of total variance, exceeding the 50–60% benchmark recommended for social science constructs (Hair et al., 2019). All inter-factor correlations were positive (range: $r = .340$ to $r = .775$), confirming the

appropriateness of oblique rotation (Brown, 2015).

Table 4. *Initial eigenvalues, factor statistics, and inter-factor correlations for the five-factor solution (n = 310)*

Factor	Initial Eigenvalue	SS Loadings	% Variance	Cum. %	1	2	3	4	5
1. Coping Flexibility	20.115	7.745	20.38	20.38	—	0.775	0.584	0.616	0.524
2. Emotion Regulation Cap.	1.825	5.513	14.51	34.89		—	0.502	0.55	0.528
3. Social Support	1.153	4.683	12.33	47.21			—	0.526	0.34
4. Organizational Support	0.821	4.469	11.76	58.97				—	0.403
5. Emotional Recovery	0.628	2.974	7.83	66.80					—

Note. Extraction: minimum residual. Rotation: direct oblimin. Initial eigenvalues reflect the unrotated solution. SS Loadings reflect the rotated solution. Factors 4 and 5 eigenvalues fall below 1.0 but exceed simulated parallel analysis thresholds and are retained accordingly (Horn, 1965; Worthington & Whittaker, 2006). Inter-factor correlations are based on oblimin rotation.

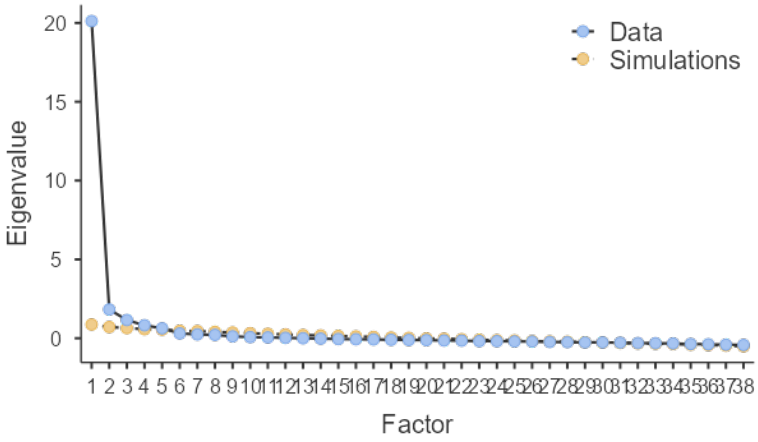

Figure 1. *Scree plot*

Factor Loadings and Item Retention

Table 5 presents the oblimin-rotated pattern matrix. Coping Flexibility (F1) was defined by all six CF items (λ = .745–.795) and three Psychological Flexibility items that cross-loaded at λ = .557–.576; the PF subscale did not emerge as an independent factor. Emotion Regulation Capacity (F2) was defined by all six ERC items (λ = .584–.790), with two Cognitive Reappraisal items producing sub-threshold cross-loadings that failed primary loading criteria. Social Support (F3) and Organizational Support (F4) each exhibited clean, simple structure across all six respective items. Emotional Recovery (F5) was defined by five items (λ = .729–.830). Cognitive Reappraisal and Psychological Flexibility did not emerge as independent factors and were dissolved; 26 items across five subscales were retained for the CFA phase. The five-subscale structure—ERC, ERc, CF, SS, and OS—provides the empirical foundation for the hierarchical CFA model. The failure of Cognitive Reappraisal to emerge as an independent factor is substantively interpretable: among leaders under chronic institutional pressure, reappraisal processes may become sufficiently routinized as to be functionally indistinguishable from their regulatory outcomes (Berkovich & Eyal, 2015; Virtanen et al., 2020), and within the Filipino leadership context, CR items anchored in loób-based opportunity-framing appear to overlap with the regulatory composure captured by ERC—suggesting that cognitive reappraisal may be experienced as an embedded expression of tatag ng loób rather than as a discrete strategy (Rungduin, 2014).

Table 5. *EFA pattern matrix — five-factor parallel analysis solution (n = 310)*

Sub.	Item Description	F1	F2	F3	F4	F5	U
CF	Adjust coping strategies	0.745	—	—	—	—	0.256
CF	Use different coping methods	0.762	—	—	—	—	0.241
CF	Modify emotional response	0.795	—	—	—	—	0.186
CF	Change ineffective coping	0.751	—	—	—	—	0.236

Sub.	Item Description	F1	F2	F3	F4	F5	U
CF	Adapt coping for urgency	0.790	—	—	—	—	0.201
CF	Shift strategies for new challenges	0.768	—	—	—	—	0.215
PF†	Function despite discomfort	0.557	—	—	—	—	—
PF†	Accept difficult emotions	0.567	—	—	—	—	—
PF†	Open to stress but responsible	0.576	—	—	—	—	—
ERC	Manage emotions—urgent directives	—	0.584	—	—	—	0.238
ERC	Calm during overlapping deadlines	—	0.612	—	—	—	0.254
ERC	Manage emotions during complaints	—	0.790	—	—	—	0.212
ERC	Composed during disciplinary cases	—	0.651	—	—	—	0.267
ERC	Control reactions—audits	—	0.703	—	—	—	0.244
ERC	Balance during crises	—	0.724	—	—	—	0.228
SS	Support from fellow school heads	—	—	0.757	—	—	0.360
SS	Share concerns with colleagues	—	—	0.831	—	—	0.221
SS	Supported by teachers/staff	—	—	0.691	—	—	0.340
SS	Encouragement from peers	—	—	0.816	—	—	0.220
SS	Rely on others for coping	—	—	0.704	—	—	0.500
SS	Network reduces burden	—	—	0.752	—	—	0.250
OS	SDO stress support	—	—	—	0.868	—	0.230
OS	Supervisor guidance support	—	—	—	0.573	—	0.420
OS	Policy clarity support	—	—	—	0.652	—	0.410
OS	DepEd institutional support	—	—	—	0.863	—	0.220
OS	Higher office admin support	—	—	—	0.868	—	0.230
OS	Training strengthens resilience	—	—	—	0.600	—	0.370
ERc	Stressful situations—limited impact	—	—	—	—	0.729	0.249
ERc	Quick emotional recovery	—	—	—	—	0.830	0.201
ERc	Refocus after strain	—	—	—	—	0.813	0.214
ERc	Steady under repeated pressure	—	—	—	—	0.768	0.238
ERc	Function despite exhaustion	—	—	—	—	0.744	0.253

Note. ERC = Emotion Regulation Capacity; CR = Cognitive Reappraisal; ERc = Emotional Recovery; CF = Coping Flexibility; PF = Psychological Flexibility; SS = Social Support; OS = Organizational Support. U = uniqueness (1 − communality). Extraction: minimum residual. Rotation: direct oblimin. Loadings < .40 suppressed. Items in italics marked † loaded on a non-assigned factor or below the .50 primary threshold and are excluded from the CFA item pool.

Confirmatory Factor Analysis via SEM

Global Model Fit

Table 6 presents the CFA model fit indices. The hierarchical CFA model demonstrated excellent global fit. The normed chi-square ratio of 1.67 fell within the ≤ 3.00 threshold, indicative of good fit (Kline, 2023). Incremental fit indices were outstanding: CFI = .999 and TLI = .998, both substantially exceeding the .95 acceptability threshold (Hu & Bentler, 1999). RMSEA = .051 (90% CI [.043, .059]) with p-close = .428, indicating that the null hypothesis of close fit was not rejected (Browne & Cudeck, 1993). SRMR = .047 confirmed good residual-level fit (Hu & Bentler, 1999). GFI = .997 and AGFI = .995 were well above the .90 criterion (Schermelleh-Engel et al., 2003), and PNFI = .898 reflected excellent parsimony. Collectively, these indices provide strong evidence that the hypothesized three-tier hierarchical structure accurately represents the observed covariance structure of the 26-item ERS-FPSL among Filipino public school leaders.

Table 6. *CFA Model Fit Indices for the ERS-FPSL Hierarchical Model (n = 259)*

Fit Index	Value	Threshold	Interpretation
χ^2	487.765	—	—
df	293	—	—
p	< .001	—	Expected at this N
χ^2/df	1.665	≤ 3.00	Good

Fit Index	Value	Threshold	Interpretation
CFI	0.999	≥ .95	Excellent
TLI	0.998	≥ .95	Excellent
RMSEA	0.051	≤ .08	Good
RMSEA 90% CI	[.043, .059]	Upper ≤ .08	Good
RMSEA p-close	0.428	> .05	Close fit supported
SRMR	0.047	≤ .08	Good
GFI	0.997	≥ .90	Excellent
AGFI	0.995	≥ .90	Excellent
PNFI	0.898	≥ .50	Excellent

Note. Model estimated using DWLS with robust standard errors and polychoric correlations, appropriate for ordered categorical indicators (Kline, 2023). CFI/TLI ≥ .95 acceptable, ≥ .97 excellent (Hu & Bentler, 1999); RMSEA ≤ .08 acceptable, ≤ .06 good (Browne & Cudeck, 1993); SRMR ≤ .08 acceptable (Hu & Bentler, 1999); GFI/AGFI ≥ .90 acceptable (Schermelleh-Engel et al., 2003). Chi-square significance is expected at this sample size and is not interpreted as standalone evidence of misfit (Kline, 2023).

First-Order Factor Loadings

Table 7 presents standardized first-order factor loadings for all 26 indicators. All loadings were statistically significant ($p < .001$) and exceeded the .50 practical significance threshold (Hair et al., 2019), ranging from $\beta = .781$ (OS2) to $\beta = .979$ (CF5). The Coping Flexibility subscale produced the strongest and most uniform loadings ($\beta = .923–.979$, $M = .955$), indicating exceptional within-subscale coherence consistent with the behavioral specificity of CF items, which target the dual-process mechanism of strategy abandonment and replacement under situational demand (Kato, 2012), and with their cultural resonance as expressions of diskarte—the pragmatic, context-sensitive resourcefulness Filipino school leaders deploy as a habitual leadership orientation (Rungduin, 2014). AVE values exceeded .50 across all subscales (ERC = .787; ERc = .836; CF = .914; SS = .810; OS = .790), and composite reliability substantially exceeded .70, confirming robust convergent validity (Fornell & Larcker, 1981; Hair et al., 2019).

Table 7. *First-Order Factor Loadings — ERS-FPSL Hierarchical CFA Model (n = 259)*

Construct	Item	Item Description	β	95% CI	z	p
Emotion Regulation Capacity	ERC1	Regulate emotions—urgent directives	*0.859*	[.808, .910]	–	–
	ERC2	Calm self when deadlines overlap	*0.850*	[.804, .895]	*29.68*	< *.001*
	ERC3	Manage emotions during complaints	*0.963*	[.923, 1.003]	*27.52*	< *.001*
	ERC4	Composed during disciplinary cases	*0.850*	[.798, .903]	*24.25*	< *.001*
	ERC5	Control reactions during audits	*0.879*	[.839, .920]	*27.24*	< *.001*
	ERC6	Maintain balance during crises	*0.917*	[.876, .959]	*26.94*	< *.001*
Emotional Recovery	ERc1	Stressful situations—limited impact	*0.836*	[.790, .882]	–	–
	ERc2	Quickly regain emotional strength	*0.962*	[.937, .987]	*32.08*	< *.001*
	ERc3	Refocus after emotionally draining events	*0.957*	[.930, .984]	*30.46*	< *.001*
	ERc4	Emotionally steady under repeated pressure	*0.897*	[.857, .937]	*28.66*	< *.001*
Coping Flexibility	CF1	Adjust coping per challenge type	*0.978*	[.961, .995]	–	–
	CF2	Use different coping for varied demands	*0.927*	[.894, .960]	*57.43*	< *.001*
	CF3	Modify emotional response to demands	*0.970*	[.949, .991]	*73.03*	< *.001*
	CF4	Change approach when usual strategies fail	*0.923*	[.894, .953]	*56.59*	< *.001*
	CF5	Adapt coping when immediate action needed	*0.979*	[.960, .998]	*85.48*	< *.001*
	CF6	Shift strategies for unexpected challenges	*0.956*	[.931, .982]	*66.98*	< *.001*
Social Support	SS1	Support from fellow school heads	*0.806*	[.748, .863]	–	–
	SS2	Share concerns with trusted colleagues	*0.898*	[.857, .939]	*24.73*	< *.001*
	SS4	Encouragement from peers in demanding work	*0.938*	[.905, .971]	*26.95*	< *.001*
	SS6	Feel less burdened with network support	*0.951*	[.915, .988]	*23.98*	< *.001*
Organizational Support	OS1	SDO support for work-related stress	*0.785*	[.732, .839]	–	–

Construct	Item	Item Description	β	95% CI	z	p
	OS2	Supervisor guidance reduces demands	*0.781*	[.727, .835]	*29.09*	< *.001*
	OS3	DepEd policies help cope with challenges	*0.966*	[.945, .986]	*28.72*	< *.001*
	OS4	Feel supported by DepEd for management	*0.968*	[.949, .987]	*29.88*	< *.001*
	OS5	Admin support from higher offices	*0.955*	[.933, .976]	*29.57*	< *.001*
	OS6	Training and PD strengthens resilience	*0.857*	[.809, .906]	*26.51*	< *.001*

Note. β = standardized factor loading; CI = confidence interval. Estimation: DWLS with robust standard errors and polychoric correlations. Marker items (first indicator per factor) have z and p not estimated as loadings are fixed to 1.0 for scale identification. All non-marker loadings significant at p < .001. Practical significance threshold: β ≥ .50 (Hair et al., 2019). AVE and composite reliability (CR) per construct: ERC, AVE = .787, CR = .957; ERc, AVE = .836, CR = .953; CF, AVE = .914, CR = .984; SS, AVE = .810, CR = .944; OS, AVE = .790, CR = .957.

Second-Order Factor Loadings

Table 8 presents second-order factor loadings for the Internal Emotional Processes (IEP) factor. All three intrapersonal subscales loaded strongly onto IEP: ERC (β = .942), ERc (β = .940), and CF (β = .960), all significant at p < .001. Residual variances ranged from .079 to .117, indicating that IEP accounted for 88.3–92.1% of the variance in each first-order factor. These magnitudes confirm that ERC, ERc, and CF function as tightly integrated expressions of a common intrapersonal regulatory system—consistent with the conceptualization of IEP as reflecting the unified tatag ng loób of Filipino public school leaders (Mercado, 1994; Rungduin, 2014).

Table 8. *Second-Order Factor Loadings — Internal Emotional Processes (n = 259)*

2nd-Order Factor	1st-Order Factor	β	95% CI	z	p	Residual Var.
Internal Emotional Processes (IEP)	Emotion Regulation Capacity (ERC)	*0.942*	[.914, .969]	–	–	0.113
	Emotional Recovery (ERc)	*0.940*	[.918, .961]	*22.36*	< *.001*	0.117
	Coping Flexibility (CF)	*0.960*	[.936, .983]	*27.32*	< *.001*	0.079

Note. β = standardized loading of each first-order factor onto the Internal Emotional Processes second-order factor. ERC serves as the marker factor. Residual variance = standardized residual variance not accounted for by IEP; values of .079–.117 indicate IEP explains 88.3–92.1% of variance in each intrapersonal subscale. All non-marker loadings significant at p < .001.

Third-Order Factor Loadings

Table 9 presents third-order factor loadings for the Emotional Resilience (ER) construct. ER was strongly defined by IEP (β = .918), Social Support (β = .935), and Organizational Support (β = .857), all significant at p < .001. Social Support produced the highest loading, reflecting the centrality of kapwa-grounded collegial solidarity as a constitutive dimension of resilience rather than merely a contextual buffer (Pe-Pua & Protacio-Marcelino, 2000; Reyes, 2015a). Organizational Support's comparatively lower loading (β = .857) and higher residual variance (.265) indicate that institutional scaffolding retains construct-specific variance consistent with its structurally distinct referent—malasakit-based hierarchical care enacted through DepEd governance (Selmer & De Leon, 2001). The loading hierarchy empirically confirms that emotional resilience among Filipino public school leaders is organized as a multilevel adaptive system: a strong intrapersonal regulatory core anchored in loób (Mercado, 1994; Reyes, 2015a) embedded within relational solidarity grounded in kapwa (Pe-Pua & Protacio-Marcelino, 2000; Guilaran et al., 2025) and institutional care enacted through malasakit (Reyes, 2015a; Selmer & De Leon, 2001).

Table 9. *Third-Order Factor Loadings — Emotional Resilience (N = 259)*

3rd-Order Factor	2nd/1st-Order Factor	β	95% CI	z	p	Residual Var.
Emotional Resilience (ER)	Internal Emotional Processes (IEP)	*0.918*	[.880, .956]	–	–	0.157
	Social Support (SS)	*0.935*	[.899, .970]	*15.07*	< *.001*	0.126
	Organizational Support (OS)	*0.857*	[.813, .902]	*15.00*	< *.001*	0.265

Note. β = standardized loading of each factor onto the Emotional Resilience third-order construct. IEP serves as the marker factor. Residual variance = standardized residual variance not explained by ER; values indicate ER accounts for 73.5% [OS] to 87.4% [SS] of variance in each dimension. All non-marker loadings significant at p < .001.

Figure 2 presents the standardized path diagram of the ERS-FPSL hierarchical confirmatory factor model.

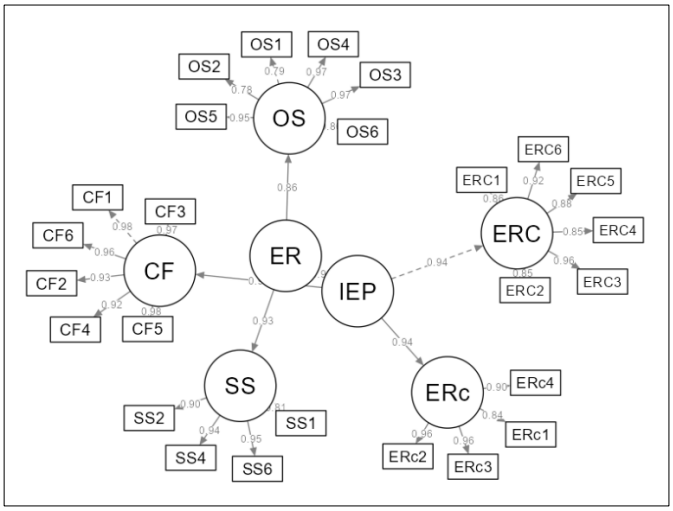

Figure 2. *Structural path diagram*

Discriminant Validity

Table 10 presents the discriminant validity matrix following the Fornell–Larcker criterion (Fornell & Larcker, 1981). Diagonal elements represent the square root of each construct's AVE; off-diagonal elements represent inter-construct correlations. Discriminant validity is supported when diagonal values exceed all corresponding off-diagonal values in the same row and column. All five subscales satisfied this criterion: √AVE values ranged from .887 (ERC) to .956 (CF), all exceeding the highest inter-construct correlation in their respective rows and columns. The highest inter-construct correlation was observed between ERC and ERc (r = .712), which is conceptually coherent—both are intrapersonal regulatory subscales loading onto the same second-order IEP factor—while remaining below the √AVE of either construct. These results confirm that each subscale maintains a distinct empirical identity despite their structural integration within the higher-order model.

Table 10. *Discriminant Validity Matrix — Fornell–Larcker Criterion (n = 259)*

Construct	ERC	ERc	CF	SS	OS	(6)
Emotion Regulation Cap. (ERC)	0.887	—	—	—	—	—
Emotional Recovery (ERc)	0.712	0.914	—	—	—	—
Coping Flexibility (CF)	0.768	0.701	0.956	—	—	—
Social Support (SS)	0.648	0.619	0.665	0.900	—	—
Organizational Support (OS)	0.603	0.558	0.601	0.789	0.889	—

Note. Diagonal elements (bold) = square root of AVE for each construct. Off-diagonal elements = inter-construct correlations. Discriminant validity is supported when each diagonal value exceeds all off-diagonal values in its row and column (Fornell & Larcker, 1981).

Reliability Coefficients and Convergent Validity

Table 11 presents reliability and convergent validity indices for all five first-order subscales. Three reliability coefficients are reported: Cronbach's α as a widely recognized reference, ordinal α as the correction appropriate for ordered categorical indicators (Gadermann et al., 2012), and McDonald's ω as the primary model-based estimate that does not assume tau-equivalence and incorporates differential factor loadings (Kline, 2023). Cronbach's α ranged from .873 (SS) to .944 (CF), all meeting or exceeding the .80 threshold for good internal consistency (Kline, 2023), and are nonetheless conservative lower bounds given the differential loading magnitudes observed across subscales. Ordinal α values (.942–.983) were uniformly higher than Pearson-based Cronbach's α (gap range: .039–.069), confirming the attenuation introduced when Likert-type items are treated as continuous. McDonald's ω ranged from .865 (SS) to .946 (CF), all exceeding .86—well above the .80 threshold. AVE values ranged from .787 (ERC) to .914 (CF), all exceeding the .50 convergent validity criterion (Fornell & Larcker,

1981). Coping Flexibility produced the highest ω (.946) and AVE (.914), consistent with its loading uniformity; Social Support produced the lowest ω (.865), reflecting the slightly wider loading range of its four-item configuration following EFA-phase item reduction. Together, these findings confirm that the ERS-FPSL's subscales are internally consistent, well-defined, and converge adequately on their intended constructs.

Table 11. *Reliability coefficients and convergent validity indices (n = 259)*

Construct	Cronbach's α	Ordinal α	ω	AVE	√AVE
Emotion Regulation Capacity (ERC)	0.893	0.955	*0.896*	*0.787*	*0.887*
Emotional Recovery (ERc)	0.901	0.951	*0.892*	*0.836*	*0.914*
Coping Flexibility (CF)	0.944	0.983	*0.946*	*0.914*	*0.956*
Social Support (SS)	0.873	0.942	*0.865*	*0.810*	*0.900*
Organizational Support (OS)	0.913	0.953	*0.915*	*0.790*	*0.889*

Note. Cronbach's α = Pearson correlation-based coefficient alpha; assumes tau-equivalence and underestimates reliability when factor loadings are non-uniform (Kline, 2023). Ordinal α = polychoric correlation-based alpha, appropriate for ordered categorical indicators (Gadermann et al., 2012). ω = McDonald's omega, computed via compRelSEM() in semTools (Jorgensen et al., 2022); model-based reliability that accounts for differential loadings without tau-equivalence assumption. AVE = Average Variance Extracted, computed as $\Sigma\lambda^2/k$; a convergent validity indicator (Fornell & Larcker, 1981). √AVE = square root of AVE, used in discriminant validity assessment (Table 10). Thresholds: ω ≥ .70 acceptable, ≥ .80 good (Kline, 2023); AVE ≥ .50 (Fornell & Larcker, 1981).

Conclusion

This study developed and validated the Emotional Resilience Scale for Filipino Public School Leaders (ERS-FPSL), a 26-item hierarchical measurement instrument integrating etic regulatory constructs with emic Filipino psychological concepts. The study's central hypothesis was supported: a culturally integrated, hierarchically organized model of emotional resilience—comprising five first-order subscales nested within a second-order Internal Emotional Processes factor and a third-order Emotional Resilience construct—is psychometrically justified in a sample of Filipino public school leaders. Across both the exploratory and confirmatory phases, model fit indices ranged from good to excellent, AVE values exceeded .50 across all subscales, and McDonald's ω ranged from .865 to .946, all demonstrating robust reliability and construct validity.

Three substantive conclusions emerge from these findings. First, the etic–emic integration approach proved empirically productive. By grounding items simultaneously in internationally validated regulatory constructs and Filipino psychological concepts at the item-generation stage, the ERS-FPSL achieved both psychometric rigor and cultural interpretive depth that neither etic-only nor emic-only instruments could provide. Second, the failure of Cognitive Reappraisal and Psychological Flexibility to emerge as independent factors is substantively meaningful—for Filipino school heads under chronic institutional pressure, these regulatory processes appear to be experienced not as discrete strategies but as embedded expressions of the integrated moral-emotional steadiness captured by tatag ng loób (Rungduin, 2014), motivating targeted item revision in future development cycles. Third, the hierarchical loading pattern—with Coping Flexibility exerting the strongest influence on overall resilience, followed by Social Support and Organizational Support—empirically confirms that Filipino resilience is not a private individual reserve but a collectively and institutionally constituted adaptive system.

These findings carry direct implications for leadership development and human resource policy within the Department of Education. The ERS-FPSL provides a validated, culturally grounded assessment tool that can be used to profile school heads' emotional resilience at the division or regional level, identify subscale-specific vulnerabilities for targeted intervention, and evaluate the effectiveness of professional development programs designed to strengthen coping flexibility, recovery capacity, and relational support networks. The finding that institutional malasakit—organizational support—constitutes a distinct and significant tier of the resilience system underscores the policy relevance of governance-level responsiveness, supervisory relationships, and professional development access as structural determinants of leadership resilience rather than merely background conditions.

Several limitations should inform interpretation and application of these findings. The study was bounded to a single division—Northern Samar—and the sample, while census-level within that administrative unit, may not represent the full diversity of Filipino public school leadership contexts. Cross-validation in urban, highly urbanized, and Mindanao-based divisions is a priority. Non-response analysis was not possible as individual-level non-response data were not available; the 8.2% non-response rate introduces a potential bias that cannot be fully characterized. The pilot study confirmed item clarity and preliminary reliability but did not employ cognitive interview methodology to verify that respondents interpreted emic-referenced behavioral descriptions in the

culturally specific ways intended. Future research should pursue multi-division and multi-region replication, structural invariance testing across gender and school level, and longitudinal studies examining the predictive validity of ERS-FPSL scores for leadership sustainability outcomes.

Contributions of Authors

Author 1: conceptualization, data gathering, data analysis
Author 2: data analysis, data gathering

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Conflict of Interests

The authors declare no conflict of interest. No financial relationships, personal affiliations, or competing interests exist that could have influenced the design, conduct, reporting, or interpretation of this study.

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