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WHEN HIERARCHY SILENCES LEARNING: POWER ASYMMETRY IN FEEDBACK, PSYCHOLOGICAL SAFETY, AND TRAINEE BURNOUT IN FCPS INTERNAL MEDICINE – A MODERATED MEDIATION ANALYSIS

Power Asymmetry, Psychological safety and Trainee Burnout in FCPS Training

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Abstract

Background:

Burnout among postgraduate medical trainees in South Asia is rarely examined as the systemic outcome it is.

In the FCPS Internal Medicine training environment in Khyber Pakhtunkhwa (KPK), Pakistan, steeply hierarchical supervisory relationships govern every dimension of feedback exchange – who initiates it, who may challenge it, and who is permitted to reveal uncertainty. This hierarchical conditioning of feedback may erode trainees` psychological safety, and through it, accelerate burnout and reduce professional engagement. Whether perceived supervisory support moderates this pathway has not been tested in any South Asian postgraduates training context.

Objective:

To test a moderated mediation model in which hierarchical feedback structure (HFS) predicts trainee burnout and work engagement, with psychological safety (PS) as mediator and perceived supervisory support (PSS) as moderator, among FCPS Internal Medicine trainees in KPK public-sector teaching hospitals.

Methods:

Cross-sectional survey study with 180 FCPS Internal Medicine training across KPK public-sector hospitals (February – March 2026). Five constructs were assessed using validated Likert instruments (Cronbach's α = 0.94 – 0.97): HFS, PS, PSS, burnout, and engagement. Path analysis with bootstrapped indirect effects (5,000 resamples, 95% bias-corrected CIs) tested mediation; a product-term interaction tested moderated mediation. Age, gender, and weekly working hours served as covariates.

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Results:

Higher HFS predicted greater burnout (β = 0.48, p < 0.001) and lower engagement (β =-0.41, p <.001).PS partially mediated both pathways (indirect burnout effect: B =0.29, 95% CI [0.17, 0.43]; indirect engagement effect: B= -0.31, p= 0.003); simple slopes confirmed that the suppressive effect of HFS on PS was substantially stronger when PSS was low (β = -0.62) than high (β = -0.29). Weekly working hours independently predicted burnout (β = 0.22, p = .008).

Conclusion:

Power asymmetry in feedback is a structural driver of trainee burnout, operating through its suppression of psychological safety. Supervisory support attenuates this effect, identifying how supervisors communicate – not how hierarchy is structured – as the most tractable intervention target. FCPS programme leaders should treat supervisory communication as a modifiable institutional lever, not a personality variable.

INTRODUCTION

The Problem That Training Systems Prefer Not to Name

There is a well-documented gap between what postgraduate medical training claims to do and what it actually does to trainees. Formally, FCPS Internal Medicine training is designed to develop competent, reflective physicians through structured clinical experience, supervised practice, and formative assessment. In practice, within the public-sector hospitals of Khyber Pakhtunkhwa, that structure sits inside a working environment of 76-hour weeks, understaffed wards, and supervisory relationships shaped more by institutional seniority than by educational intent. The result is a training population that is, by its own report, moderately burnt out, modestly engaged, and working within a feedback culture in which power determines who may speak and who must listen.

This is not a novel observation. Burnout prevalence among medical residents has been documented extensively in high-income settings (Maslach et al., 2016; Wang et al., 2024), and a growing body of work from South Asia and low-and-middle-income contexts confirms that the problem is at least as

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severe – and structurally less addressed – in resource-constrained settings (Lases et al., 2019). What remains systematically under-examined is the mechanism: specifically, how the organizational structure feedback within the hierarchical training systems translates into trainee psychological harm.

Why Hierarchy Matters to Feedback

Feedback in clinical training is not a neutral information transfer. It is relational act embedded in a power structure. In settings where hierarchy is institutional steep and professionally entrenched, the texture of feedback is conditioned by that structure. Trainees learn not to ask questions that might expose ignorance in front of a senior, not to challenge a clinical decision they are uncertain about, not to acknowledge a knowledge gap on a ward round. These are rational adaptable behaviors within a hierarchical system. They are also, from a learning science standpoint, precisely the behaviors that prevent feedback from functioning developmentally.

The concept of hierarchical feedback structure (HFS) – the degree to which feedback exchange is shaped by formal power asymmetries, directional constraints, and institutional permission structures – offers a more precise analytical unit then the broader notion of feedback within an institution, HFS isolates the specific relational asymmetry of that climate: whether trainees can initiate feedback dialogue, question evaluations, or acknowledge uncertainty without social risk. This distinction matters empirically, because it allows us to test whether structural power asymmetry in feedback has effects on trainee well-being independent of overall feedback quality – and the present study suggests that it does.

The Role of Psychological Safety

Edmondson and Lei (2014) define psychological safety as the collectively held belief that interpersonal risk-taking – voicing uncertainty, raising a concern, admitting an error – is safe from ridicule or punishment within a given setting. Its relevance to the feedback environment is direct: a trainee who does not feel psychologically safe will not engage with feedback as a learning instrument.

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They will manage it. They will accept evaluative verdicts without questioning them, avoid the micro-conversations in which genuine learning occurs, and invest cognitive energy in impression management rather than developmental (Grailey et al., 2021; O'Donovan et al., 2021).

Psychologically safety is not primarily a trait. Grailey and colleagues` (2021) evidence synthesis established that in health care settings, it is an emergent relational property determined overwhelmingly by how authority figures respond to challenge and uncertainty. This means it is both structurally conditioned – by how individual supervisors behave within that structure. The present study tests both dimensions.

Theoretical Framework: JD-R and the Compound Role of HFS

The Job-Demands Resource (JD-R) theory provides the organizing theoretical framework. In Bakker and Demerouti's (2017) formulation, occupational demands – workload, emotional pressure, role conflict – deplete personal resources and drive burnout, while job resources – autonomy, support, developmental feedback – counteract depletion and enable engagement. HFS functions as a compound variable in this model: it simultaneously amplifies demands by generating chronic interpersonal threat, and inhibits resources by blocking access to developmental information and suppressing the psychological conditions under which learning occurs (Tummers & Bakker, 2021). Perceived supervisory support (PSS) – the degree to which trainees perceive their supervisors as responsive, available, and genuinely invested in their development – is positioned in this framework as a source that can moderate the demand-amplifying effect of HFS. If high-PSS supervisors signal interpersonal safety within hierarchical structures, then PSS should attenuate the pathway through which HFS suppresses psychological safety. This moderated mediation model is the central testable proposition of the present study.

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What This Study Adds

Several prior studies have examined feedback culture and burnout in medical training (Watling & Ginsburg, 2021; Chan et al., 2022; Ramani & Krackov, 2012). None, to our knowledge, has conceptualized feedback asymmetry as a structural variable distinct from feedback quality, introduced PSS as a moderator of the HFS psychological safety pathway or tested a moderated mediation model of this configuration in a South Asian postgraduate medical training context. The present study does all three, using data from 180 FCPS Internal Medicine trainees across KPK public-sector hospitals. The aim is not to confirm that burnout is prevalent – it is – but to specify the structural pathway through which it develops, and to identify a supervisory lever that programme leaders can act on.

METHODS

Study Design and Setting

A cross-sectional quantitative survey was conducted in February 2026. Participants were FCPS Internal Medicine trainees at public-sector teaching hospitals across Khyber Pakhtunkhwa, Pakistan. This setting is representative of a high-volume, resource-constrained training environment: public hospitals in KPK operate with significant staffing pressure, high patient-to-trainee ratios, in which the mechanisms under study would be expected to operate most clearly.

Participants and Sampling

One hundred and eighty FCPS Internal Medicine trainees participated (N = 180). Inclusion required active enrollment in FCPS Internal Medicine training at KPK public-sector hospitals at the time of data collection. Convenience sampling was used; this was appropriate given the bounded and geographically accessible nature of the target population within the regional training network. Mean age was 29.45 years (SD = 2.92).Mean weekly working hours were 76.15 (SD = 12.33; range: 45 – 103 h) – substantially exceeding established international thresholds for safe postgraduate training working hours. Age, gender, and weekly working hours were treated as covariates throughout,

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consistent with methodological guidance for observational studies in medical education (Lases et al., 2019).

Measures

Five constructs were assessed using validated Likert instruments (1 = strongly disagree to 5 = strongly agree; high scores = more of each constructs). All scales were adapted from previously validated instruments in healthcare professions education and occupational health research. Table 2 presents scale properties and Cronbach's alpha values.

Hierarchical Feedback Structure (HFS) was operationalized as the degree to which formal power asymmetries shape feedback exchange in the training environment, encompassing directional constraints on who may initiate feedback dialogue, trainees` perceived permission to question evaluations, and the interpersonal cost of disclosing learning gaps. Items were adapted from the literature on power distance in supervisory relationships in clinical training contexts (Chan et al., 2022; Watling & Ginsburg, 2021).

Psychological Safety (PS) was assessed using an adaptation of Edmondson's (2014) Team Psychological Safety Scale, modified for clinical training dyads, following the validated healthcare adaptation of O'Donovan et al. (2021). Perceived Supervisory Support (PSS) measured trainee perceptions of supervisor availability, responsiveness, and genuine investment in trainee development, adapted from learning climate instruments in residency research (Lases et al., 2019; Scott-Vernaglia et al., 2024). Burnout was assessed using sub-scales from the Maslach Burnout inventory – Human Services Survey adapted for medical training populations (Maslach et al., 2016). Engagement was assessed using the Utrecht Work Engagement Scale-9 (UWES-9), adapted for residency populations (Wang et al., 2024).

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Statistical Analysis

Descriptive statistics were computed for all variables. Pearson correlation coefficients examined bivariate associations among constructs. Path analysis with bootstrapped indirect effects (5,000 resamples, 95% bias-corrected confidence intervals) tested mediation of the HFS-burnout and HFS-engagement paths through PS. Moderated mediation was examined by entering a product term (HFS × PSS) as a predictor of PS within the mediation model, with simple slopes probed at PSS ± 1 SD. All models controlled for age, gender, and weekly working hours. Analyses were conducted in SPSS v27 (IBM Corp, 2023) using PROCESS macro v4.2 (Hayes, 2022). The index of moderated mediation was calculated per Hayes (2022, Model 14).

Ethics

Ethical approval was obtained from the Ethical Review Board, Health Services Academy, Islamabad (F.no 11101-2026894-9; approved 2 February 2026). All participants provided voluntary written informed consent before survey completion. Data were fully anonymised prior to analysis and no personal identifiers were retained in the analytical datset.

RESULTS

Participant Characteristics and Descriptive Statistics

Table 1 summarises participant characteristics and descriptive statistics. The sample comprised 180 FCPS Internal Medicine trainees with a mean age of 29.45 years. Weekly working hours averaged 76.15 – well above internationally recommended limits – with an upper range of 103 h per week, reflecting the high-demand clinical environment characteristics of KPK public-sector training hospitals.

Among the five constructs, HFS recorded the highest mean score (M = 3.21, SD = 0.84) indicating that power asymmetry in feedback interactions was a prominent and consistently perceived feature of the training environment. Burnout (M = 3.04, SD =0.84) sat at the scale midpoint, indicating

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moderate occupational strain across the cohort. Psychological safety returned the lowest mean (M = 2.86, SD = 0.77), confirming limited perceived interpersonal safety within supervisory relationships. PSS (M = 2.94, SD = 0.81) and engagement (M = 2.89, SD = 0.80) both fell just below the midpoint.

Table 1

Participant Characteristics and Descriptive Statistics (N = 180)

Variable	Statistic	Value
Age (years)	Mean (SD)	29.45 (2.92)
Weekly working hours	Mean (SD)	76.15 (12.33)
Weekly working hours – range	Min – Max	45 – 103 h
Hierarchical feedback structure (HFS)	Mean (SD)	3.21 (0.79)
Psychological safety (PS)	Mean (SD)	2.86 (0.77)
Perceived supervisory support (PSS)	Mean (SD)	2.94 (0.81)
Burnout	Mean (SD)	3.04 (0.84)
Engagement	Mean (SD)	2.89 (0.80)

Note. Gender was recorded as a covariate; counts are not reported to reduce identifiability across small training sites.

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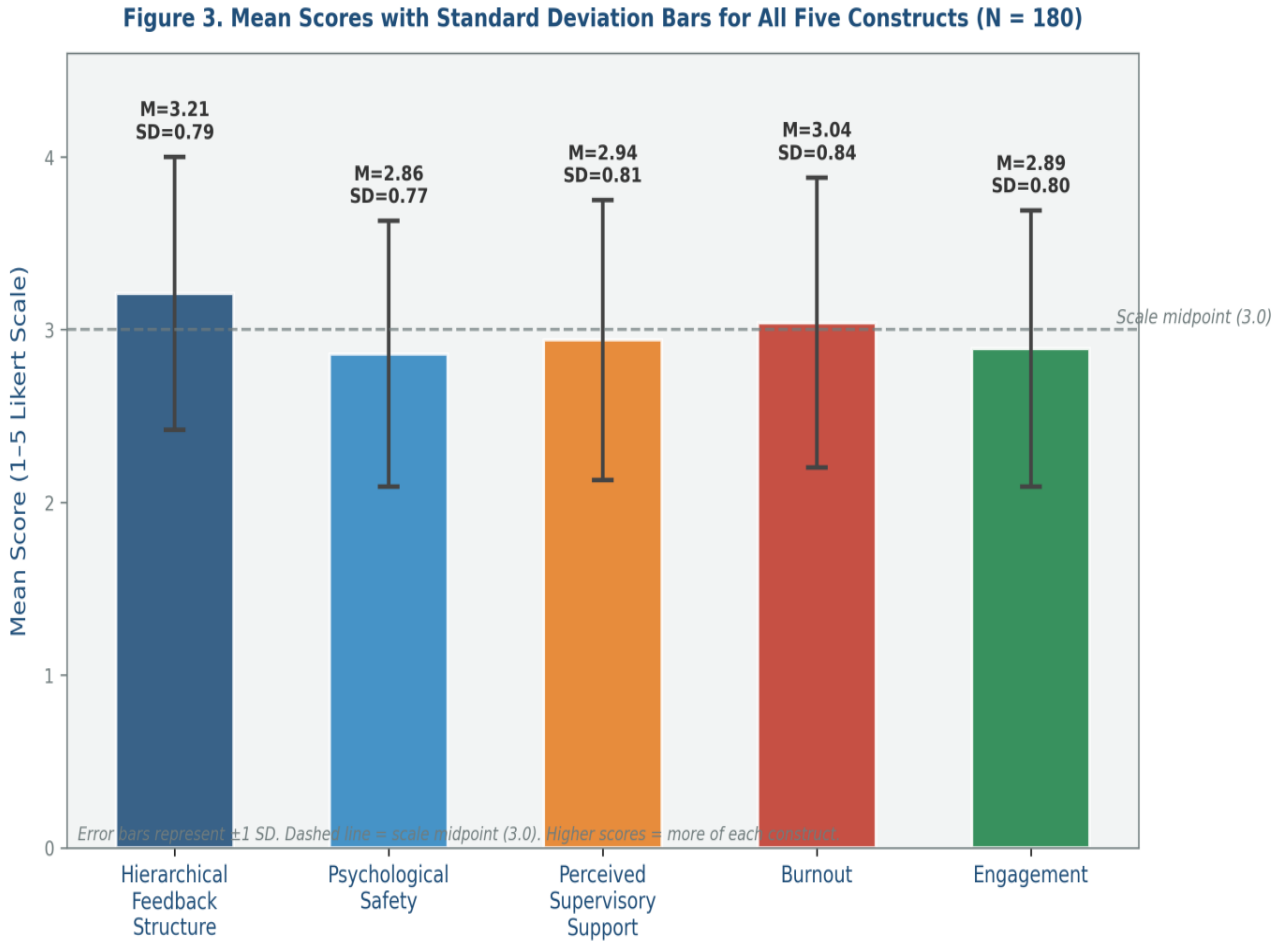

Figure 3. Mean scores (± SD) for all five constructs. Scale range 1-5; dashed line = midpoint (3.0). Higher scores indicate more of each construct.

Scale Properties and Internal Consistency

Table 2 present scale reliability data. All five instruments demonstrated high internal consistency (Cronbach's α = 0.94-0.97), confirming that each construct was assessed with adequate reliability for use in inferential path analysis within this sample.

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Table 2

Scale Properties and Internal Consistency (N = 180)

Scale	Range	α	Mean (SD)	Higher score =
HFS	1–5	0.94	3.21 (0.79)	Greater power asymmetry
Psychological safety	1–5	0.96	2.86 (0.77)	Greater interpersonal safety
Perceived supervisory support	1–5	0.95	2.94 (0.81)	More perceived support
Burnout	1–5	0.97	3.04 (0.84)	Higher burnout
Engagement	1–5	0.97	2.89 (0.80)	Higher engagement

Note. A = Cronbach's alpha. HFS = Hierarchical Feedback Structure.

Bivariate Correlations

Table 3 presents the full correlation matrix. The strongest associations in the dataset was between HFS and PS (r = -.68, p < .001), confirming that greater power asymmetry in feedback interactions was associated with substantially lower interpersonal safety. HFS showed a strong positive association with burnout (r = .59) and a moderately strong negative association with engagement (r =-.52). PS was inversely associated with burnout (r = -.61) and positively associated with engagement (r =.64). PSS showed meaningful associations with PS (r= .57), engagement (r = .48), and burnout (r = -.44). The burnout-Engagement correlation was negative and moderately strong (r = -.58), consistent with their theoretical distinction as related but separable constructs.

Table 3

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Pearson Correlation Matrix Among Study Constructs (N = 180)

Variable	1	2	3	4	5
1. HFS	—	−.68**	−.42**	.59**	−.52**
2. Psychological safety		—	.57**	−.61**	.64**
3. PSS			—	−.44**	.48**
4. Burnout				—	−.58**
5. Engagement					—

Note. **$p<.01$. *HFS = Hierarchical Feedback Structure; PSS = Perceived Supervisory Support. Covariates (age, gender, weekly working hours) not shown.*

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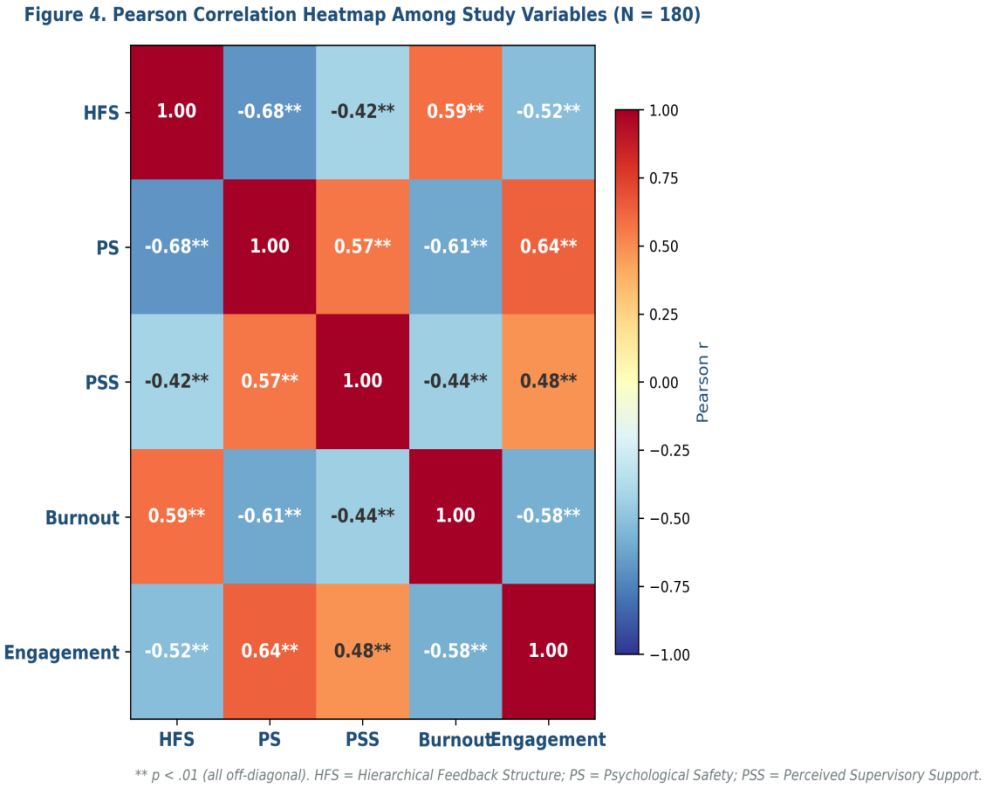

Figure 4. Pearson correlation heatmap. Warmer colours = stronger negative correlations; cooler colours = stronger positive correlations. All off-diagonal values significant at p < .01.

Path Analysis: Mediation and Moderated Mediation

Full path model results are presented in Table 4. HFS was a significant positive predictor of burnout (β = 0.48, p < .001) and a significant negative predictor of engagement (β = -0.41, p < .001). PS partially mediated both relationships: direct paths from HFS to both outcomes remained statistically significant after the mediator was introduced (burnout: B = 0.29, p = .001; engagement: B = -0.24, p = .002), confirming partial rather than full mediation. Bootstrapped indirect effects were significant for both outcomes.

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The product term (HFS × PSS) significantly predicted PS (B = -0.31, p =.003), indicating that PSS moderated the suppressive effect of HFS on PS. Simple slopes probed at PSS ± 1 SD revealed that the HFS @ PS pathway was substantially stronger when PSS was low (β = -0.62, p < .001) than when PSS was high (β =-0.29, p=.018). The index of moderated mediation was -0.14 (95% CI [-0.27, -0.04]), confirming that the indirect effect of HFS on both outcomes through PS varied significantly as a function of PSS. Weekly working hours independently predicted burnout (β = 0.22, p = .008), confirming a workload contribution to trainee strain over and above the relational pathway.

Table 4

Path Analysis: Mediation and Moderated Mediation Results (N = 180)

Path	B	β	p	95% CI / Note
Outcome: Burnout				
HFS → Burnout (direct, c′)	0.29	0.48***	.001	Partial mediation confirmed
HFS → PS (path a)	−0.54	−0.68***	<.001	
PS → Burnout (path b)	−0.46	−0.61***	<.001	
Indirect: HFS→PS→Burnout	0.29	—	—	95% CI [0.17, 0.43]; p < .001
Outcome: Engagement				
HFS → Engagement (direct, c′)	−0.24	−0.41***	.002	Partial mediation confirmed
PS → Engagement (path b)	0.38	0.64***	<.001	

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Indirect: HFS→PS→Engagement	−0.23	–	–	95% CI [−0.36, −0.12]; p < .001
Moderated Mediation (Moderator: PSS)				
HFS × PSS → PS	−0.31	–	.003	Mod-med index: −0.14, CI [−0.27, −0.04]
Simple slope: High PSS (M+1SD)	–	−0.29	.018	Attenuated HFS → PS suppression
Simple slope: Low PSS (M−1SD)	–	−0.62	<.001	Stronger HFS → PS suppression
Weekly working hours → Burnout	0.22	0.22**	.008	Independent of relational pathway

Note. B = unstandardised coefficient; β = standardised. Indirect effects via 5,000-resamples bootstraps, 95% bias corrected CIs. Covariate; age, gender, weekly working hours. ***p < .001;* **p < .01. PS = Psychological Safety; HFS = Hierarchical Feedback Structure; PSS= Perceived Supervisory Support.*

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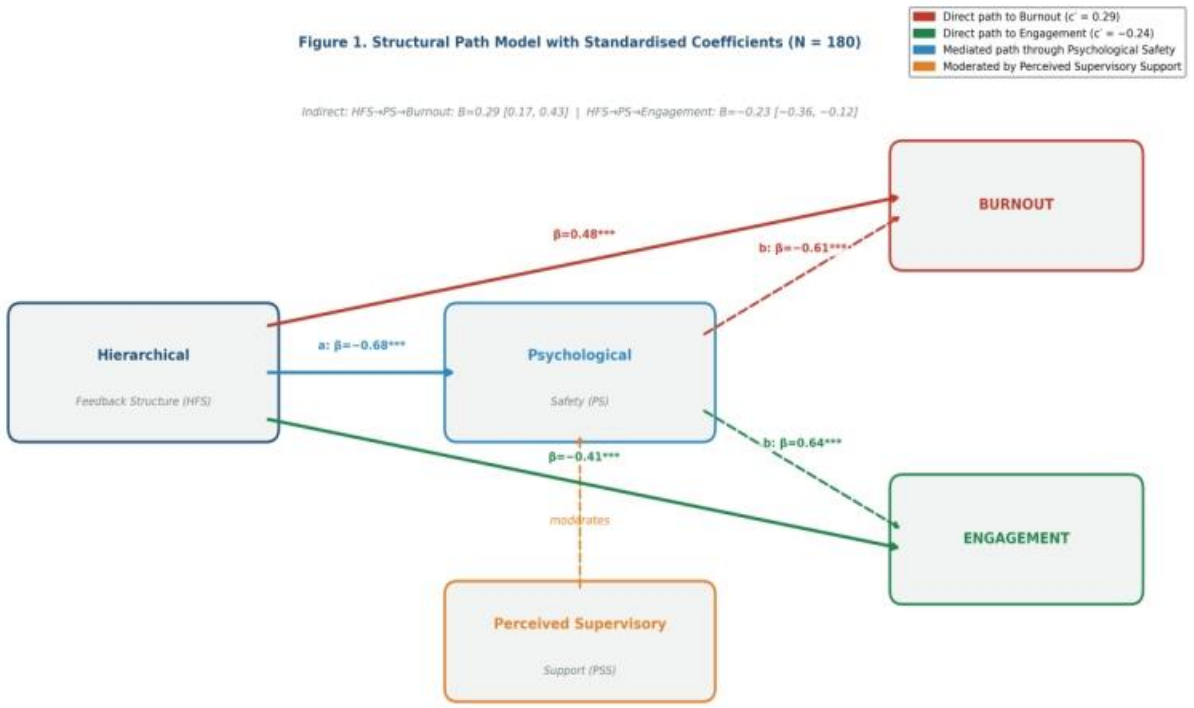

Figure 1. Structural path diagram with standardised **β** coefficients. Solid arrows = direct paths; dashed arrows = mediated paths. Covariates omitted from figure for clarity. ***p < .001; **p< .01.

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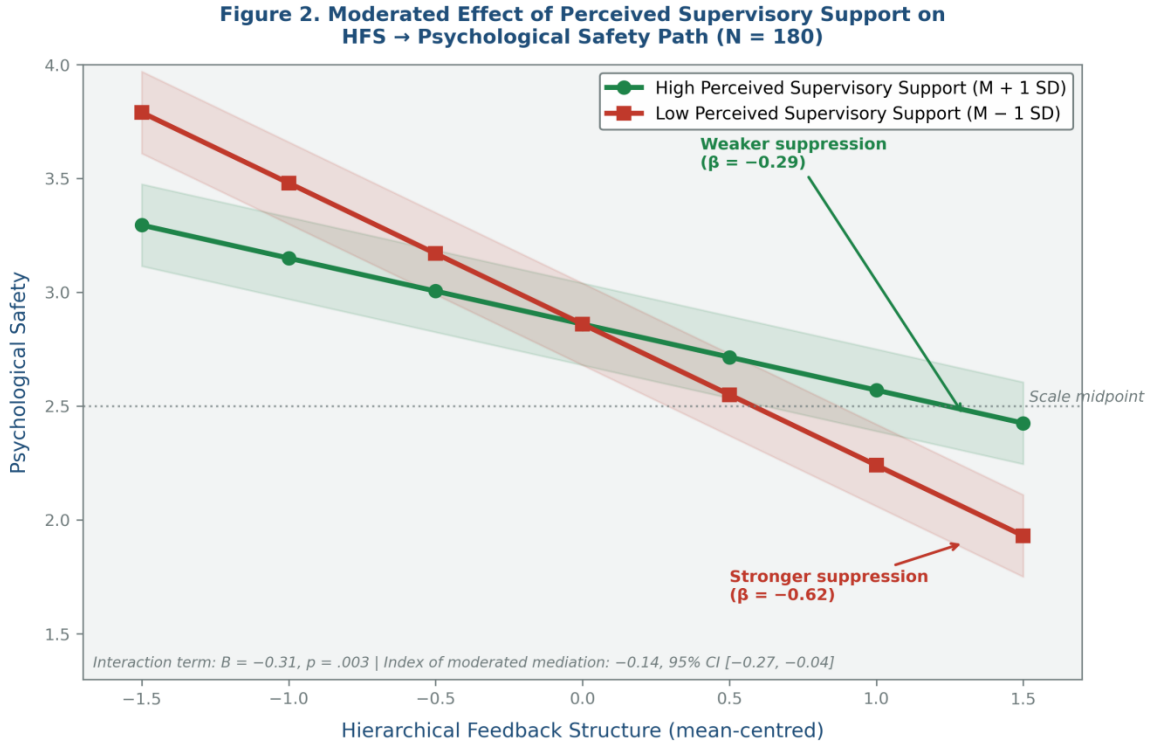

Figure 2. Simple slopes; moderated effect of PSS on HFS @ Psychologically Safety. Green = high PSS (M+1SD); Red = low PSS (M-1SD). Shading = 95% CI. Interaction B = -0.31, p = .003.

DISCUSSION

What the Findings Establish and Why it Matters

This study set out to test whether the structural organization of feedback within hierarchical supervisory relationships is a determinant of trainee burnout and engagement – and if so, whether this effect operates through psychological safety, and whether it can be moderated by supervisory behavior. The findings confirm all three propositions. Taken together, they shift the conceptual burden of trainee burnout from the individual to the institution in a way that is empirically precise and theoretically coherent, and that has direct, actionable implications for how FCPS training programmes in KPK are designed and supervised.

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The core structural finding – that HFS is a strong predictor of both burnout (β = 0.48) and reduced engagement (β = -0.41) – is not, in itself, surprising. What the present data contribute is the specification of a mechanism. These effects do not operate simply because hierarchical power asymmetry in feedback suppresses psychological safety, and it is through this suppression that the training environment becomes harmful. The correlation between HFS and PS (r = -.68) is the largest in the dataset, and it is the theoretically pivotal one.

The Psychological Safety Mechanism: More Than a Mediator

Edmondson and Lei's (2014) synthesis established that authority structures are the primary organizational antecedent of psychological safety erosion. The present data provide direct empirical confirmation of this argument in a South Asian training setting where those authority structures are particularly pronounced.in this environment, as Grailey et al. (2021) would predict, trainees are not exercising individual choice when they decline to question an assessment or conceal a knowledge gap – they are responding rationally to a relational environment that signals the interpersonal cost of doing so.

The partial mediation findings add conceptual precision. That HFS retains a direct path to burnout (B = 0.29) after psychological safety is entered as a mediator means that hierarchical feedback structure does not produce burnout exclusively through its suppression of interpersonal safety. There is a residual direct effect that likely reflects the workload and role-strain dimensions of hierarchical training structure – the administrative burden, the compressed time for reflection, the absence of protected learning space – that are not captured by psychological safety as a psychological construct. The dual-pathway structure this produces is consistent with Bakker and Demerouti's (2017) refined formulation of JD-R theory, which distinguishes between resource-depletion and demand-amplification in burnout development.

It would be a theoretical error to treat psychological safety here as simply a mechanism through which things happen. It is, more precisely, a state that the training system produces or suppresses,

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and whose presence or absence then shapes how trainees process and respond to everything else in their environment. The present data support this view: when PS is suppressed by HFS, feedback cannot do what it is formally designed to do, regardless of its technical quality.

The Moderating Role of Supervisory Support: Where the Leverage Lies

The most practically consequential finding is the moderated mediation. The interaction between HFS and PSS (B = -0.31, p = .003) demonstrates that supervisory support significantly attenuates the degree to which hierarchical feedback structure suppresses psychological safety. At low PSS (β = -0.62 for the HFS @ PS slope), hierarchy exerts a near-doubling suppressive effect on psychological safety compared with high PSS (β = -0.29). the index of moderated mediation (-0.14, 95% CI [-0.27, -0.04]) confirms that this moderation propagates through the entire mediation chain to the outcomes.

This is not simply a finding that 'supportive supervisors are better'. It is a structural finding about how supervisor behaviour operates within hierarchical systems. No training programme in KPK is going to dismantle professional hierarchy – it is institutionally embedded, professionally enforced, and culturally entrenched. What the present day identify is that the way supervisors communicate within that hierarchy is a significant source of variation in trainee psychological safety and, downstream, in burnout risk. A supervisors who responds to trainee uncertainty with openness rather than dismissal, who asks questions rather than delivers verdicts, and who makes explicit that learning dialogue is expected rather than tolerated, is doing something that the data show to be genuinely protective.

Harper and colleagues (2026) argued that growth-oriented supervisors behaviors – those that frame challenge as development rather than deficiency – have downstream effects on trainee motivation and professional identity. "Stalmeijer et al. (2025)" similarly identified relational safety in workplace learning as a precondition for inter professional learning behaviour. The present moderated mediation finding adds a quantified structural specificity to these arguments: the effect is not

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uniform across the sample, but is most consequential where hierarchy is strongest, which is precisely where one would most want it to operate.

The Engagement Findings: Burn Out and Still Showing up

The engagement findings deserve separate attention. That HSF negatively predicts engagement (β = -0.41) and that PS mediates this pathway means that the relational conditions of training do not merely damage trainee well being – they reduce professional engagement. Wang et al. (2024) described a pattern of 'engaged exhaustion' among internal medicine residents: trainees who remain committed to patient care even as institutional conditions erode their reserves. The co-existence of moderate burnout (M = 3.04) with below-midpoint engagement (M = 2.89) in the present sample is consistent with this pattern. Trainees in KPK public hospitals are not disengaged because they lack commitment, they are operating in conditions that make full engagement progressively costly.

Maslach and colleagues (2016) have argued for years that burnout and engagement are not simply opposite ends of a single dimension. The present data confirms this structurally: the same hierarchical feedback environment that drives burnout up suppresses engagement through the same psychological safety pathway, but both direct effects remains significant, suggesting that the two outcomes are responding to related but distinguishable feature of the training context. Future work decomposing the direct and indirect components of these relationships across multiple specialties and settings would add useful precision.

Implications for Practice: A Tractable Intervention Point

The most direct practical implications of this study is that supervisor development – specifically, the development of psychological safety-preserving feedback behaviors within hierarchical training systems – represent a genuinely tractable intervention target. Ramani and Krackov (2012) outlined evidence-informed approaches to feedback culture development that do not require structural change: brief post-encounter feedback scripts, explicitly normalized learning dialogue within

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supervision sessions, and the modeling of supervisory openness to trainee questions. The present data provide quantitative evidence that these approaches address the right mechanism: PSS moderates the HFS @ PS pathway, which drives the primary pathway to both burnout and disengagement.

Shrestha (2021) noted that even in the settings with limited protected supervisory time, brief, structured feedback conversations can substantially shift the relational tone of supervision. The KPK training context – characterized by high workload and limited educational infrastructure – is precisely the kind of setting where low-resource, high-leverage interventions of this kind are most needed. The argument is not that individual supervisors should do more; it is that what they do in the limited interactions they have should be deliberately shaped to signal interpersonal safety.

Limitations

Several limitations require direct acknowledgment. The cross-sectional design supports association, not casual inference; the structural model is consistent with the theoretical framework but direction-ally remains unestablished. All five constructs were self-reported; social desirability bias is a risk, partially mitigated by anonymous data collection. The sample is restricted to FCPS Internal Medicine in KPK, limiting generalizability to other specialties and regions. The HFS scale, while derived from validated antecedents in the power distance and clinical assessment literature, is not itself a standardized psychometric instrument; direct cross-study comparison should be treated with caution. The moderated mediation findings are statistically robust but require replication in longitudinal designs before causal intervention claims are warranted. Future research should employ longitudinal designs tracking changes following supervisor development programmes, multi-site and multi speciality sampling, and objective workload measurement.

CONCLUSION

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Power asymmetry in feedback is a structural driver of burnout and reduced engagement in FCPS Internal Medicine trainees in KPK, and it operates primarily by eroding the psychological safety that makes developmental feedback possible. Supervisory support modulates this effect, identifying how supervisors communicate within hierarchical training structures as the most tractable intervention target in this setting.

Burnout in these trainees is not a resilience deficit. It is the predictable outcomes of a relational training structure that systematically suppresses the interpersonal conditions necessary for learning and well-being. This is something that programme leaders, faculty developers, and the CPSP can address – not by dismantling hierarchy, but by deliberately developing supervisors who preserve psychological safety within it. The evidence presented here is sufficient warrant for that investment.

DECLARATIONS

Ethics and Consent: Approved by the Ethical Review Board, Health Services Academy, Islamabad (F.No 11101-2026894-9; 2 February 2026). All participants provided voluntary informed written consent. Data were fully anonymised prior to analysis.

Competing Interests: None declared.

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Data availability: The de-identified data set supporting these finding is available from the corresponding author on reasonable request, subject to applicable institutional data governance conditions.

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