



MORAL INJURY, COMPASSION FATIGUE, AND PSYCHOPATHOLOGIES AMONG YOUNG HEALTH PROFESSIONALS: THE MODERATING ROLE OF THE LIGHT TRIAD

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Abstract

The present study investigated the predictive relationship between moral injury, compassion fatigue, and psychopathological symptoms among young healthcare professionals in Faisalabad, Pakistan, while exploring the potential moderating influence of the Light Triad personality framework. Healthcare is inherently a morally laden profession; however, systemic constraints often force practitioners into ethical dilemmas that result in "moral injury." Using a cross-sectional correlational design, data were collected from 710 practitioners (aged 25–35) from public and private hospitals. The instruments included the Moral Injury Symptom Scale (MISS-HP), Compassion Fatigue Scale (CFS), Light Triad Scale (LTS), and the DSM-5 Level 1 Cross-Cutting Symptom Scale. Following a rigorous translation process into Urdu, Confirmatory Factor Analysis (CFA) was conducted. Results revealed that moral injury significantly and positively predicted compassion fatigue ($\beta = 0.233$, $p < .05$), and compassion fatigue served as a partial mediator between moral injury and various psychopathologies. Interestingly, the Light Triad comprising Kantianism, Humanism, and Faith in Humanity did not significantly moderate the impact of moral injury on mental health ($p = .704$). These findings underscore that individual prosocial traits may be insufficient to buffer against systemic ethical failures, necessitating organizational-level reforms to protect the mental health of the frontline medical workforce.

Keywords: *Compassion Fatigue, Faisalabad, Light Triad, Moral Injury, Psychopathology, SPSS Process Macro, Young Health Professionals.*

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1. Introduction

The contemporary global healthcare landscape is characterized by an escalating demand for high-stakes clinical decision-making, frequently executed within the confines of severe resource deficits, infrastructural decay, and systemic inefficiencies. For early-career health professionals defined as those in the formative developmental stages of their clinical careers between the ages of 25 and 35, the transition from academic idealism to operational reality is often profoundly jarring. This specific demographic experiences a unique constellation of occupational stressors that fundamentally transcend standard, workload-centric burnout.

Chief among these specialized stressors is Moral Injury (MI). First conceptualized within military psychology by Jonathan Shay (1994) to describe the deep psychological trauma of combat veterans, the construct was later expanded by Litz et al. (2009) to encompass the psychological, behavioral, and spiritual fallout resulting from witnessing, failing to prevent, or perpetrating acts that deeply transgress deeply held personal and professional moral codes. In healthcare settings, Litz et al.'s definition manifests as a "betrayal of what's right" by a legitimate authority figure or administrative system in high-stakes environments.

Unlike burnout, which operates primarily as a metric of physical and cognitive exhaustion, moral injury represents an existential and ethical wound that fractures the core of a clinician's professional identity. It occurs when young clinicians are structurally prevented from delivering the standard of care they are ethically bound to provide due to administrative hurdles, severe supply shortages, or institutional neglect, inducing a chronic state of "moral dissonance" that erodes self-worth and professional agency.

This ethical friction is exceptionally pronounced within the fractured healthcare infrastructure of developing nations like Pakistan. Young Pakistani medical practitioners face an overwhelming patient-to-physician ratio, irregular institutional support, and acute systemic shortages. Empirical investigations during the post-pandemic recovery era have underscored the alarming epidemiology of this phenomenon. Akhtar et al. (2022) revealed that a striking 69.44% of surveyed Pakistani healthcare professionals met the clinical threshold for high, significant moral injury, demonstrating a stark positive correlation between excessive weekly work hours and moral injury severity ($p < 0.05$), alongside an inverse relationship with psychological resilience ($p < 0.01$).

Corroborating this systemic crisis, data published in *Frontiers in Psychiatry* (2023) focusing on early-career clinicians (median age of 30) revealed that 40.7% of healthcare providers suffered from clinically significant distress and occupational impairment stemming directly from moral injury, with 14.3% falling into the highest tier of diagnostic severity. Crucially, this research demonstrated that younger physicians with fewer than five years of clinical experience, along with female practitioners, registered significantly

higher scores across the core subdimensions of guilt, shame, and loss of trust ($p < 0.01$). These findings highlight that early-career professionals bear a disproportionate share of the systemic burden when infrastructural failures force the rationing of care or the compromise of ethical duties.

The downstream psychological consequence of persistent, unaddressed exposure to these Potentially Morally Injurious Events (PMIEs) is the rapid onset of Compassion Fatigue (CF). Frequently termed the "cost of caring," Charles Figley (1995) defined compassion fatigue as the profound emotional exhaustion and gradual depletion of empathic reserves experienced by clinicians as a direct consequence of chronic exposure to individuals suffering from trauma and distress. Contemporary psychiatric research indicates that moral injury rarely drives primary clinical psychopathology directly; instead, it operates through the specific explanatory mechanism of compassion fatigue. This "mechanical pathway" dictates that an unresolved moral wound systematically exhausts a clinician's emotional capital and empathic capacity, stripping away their psychological defenses and leaving them highly vulnerable to a spectrum of primary Psychopathologies, including generalized anxiety disorder, major depressive disorder (MDD), and post-traumatic stress symptoms.

This pathological trajectory has been extensively documented across Pakistan's academic medical centers between 2024 and 2026. Fatima et al. (2026) identified a profound "double burden" of disaster and distress within major psychiatric departments, demonstrating an explicit causal link between acute clinician stress, extreme shift lengths, and secondary psychiatric morbidity. This is further validated by a nationwide cross-sectional analysis utilizing the Professional Quality of Life Scale (ProQOL-V) by Norin et al. (2025), which targeted postgraduate medical trainees. Their multivariate linear regression models proved that systemic operational predictors such as working shifts exceeding 8 hours, irregular rotating schedules, and chronic sleep deprivation (fewer than 6 hours per night) were statistically significant predictors of high compassion fatigue ($p < 0.001$). This study established a strong positive correlation between compassion fatigue and systemic burnout ($r = 0.59$, $p < 0.01$) alongside a stark inverse relationship with compassion satisfaction ($r = -0.63$, $p < 0.01$). Modern structural equation modeling (SEM) and mediation studies have explicitly mapped this behavioral trajectory, validating the fully mediated pathway, confirming that ethical injuries exhaust emotional capital, which subsequently precipitates severe psychological distress.

Crucially, healthcare professionals do not respond to these severe systemic and ethical stressors uniformly, prompting researchers to seek out underlying personality traits that can foster resilience. A major development in contemporary personality psychology is the formulation of the Light Triad, introduced by Kaufman et al. (2019) to measure the "brighter side" of human nature through traits that facilitate social cohesion, altruism, and

benevolent egoism. Serving as a prosocial counterpart to the traditional Dark Triad, the Light Triad consists of three distinct, quantifiable dimensions: Kantianism (the deeply held conviction to treat people as ends in themselves rather than mere means), Humanism (an intrinsic appreciation for the underlying dignity and worth of all human beings), and Faith in Humanity (a fundamental belief in the inherent goodness, trustworthiness, and kindness of others).

Theoretically, individuals who score highly in Faith in Humanity and Humanism possess greater cognitive and psychological flexibility. This allows them to navigate severe systemic failures and workplace toxicity without immediately succumbing to cynicism or existential despair. In organizational studies within Pakistan, Khan et al. (2021) demonstrated that the prosocial orientation characteristic of Light Triad traits acts as a robust psychological buffer against work-induced stressors. When clinicians couple high self-resilience with these benevolent traits, they experience significantly higher levels of psychological empowerment, enabling them to view their medical service as profoundly meaningful even within dysfunctional environments. This aligns with global data (e.g., MDPI, 2025), confirming that Humanism and Faith in Humanity directly predict psychological flourishing and life satisfaction by shifting a clinician's internal framework from an external locus of control (the failing institution) to an intrinsic, virtue-based framework. Nevertheless, whether these benevolent, altruistic traits can permanently shield an individual's psyche within a structurally compromised and "morally toxic" workplace remains an open empirical question.

Consequently, this study aims to determine if the prosocial personality traits of the Light Triad can effectively buffer the negative impacts of moral injury on the mental health of young Pakistani healthcare professionals. By evaluating this moderated-mediation framework, this research seeks to clarify whether high levels of Kantianism, Humanism, and Faith in Humanity can disrupt the mechanical pathway of compassion fatigue, preserving the mental health and systemic retention of the next generation of healers.

1.1. Study Objectives

1. To investigate the bidirectional and predictive relationships between moral injury, compassion fatigue, the Light Triad, and psychopathologies among young health professionals.
2. To evaluate the mediating mechanism of compassion fatigue in the relationship between moral injury and psychopathologies among young health professionals.
3. To determine the moderating role of the Light Triad on the pathway between moral injury and compassion fatigue among young health professionals.

1.2. Hypotheses

H1: There will be a significant association between moral injury and compassion fatigue among young health professionals.

H2: There will be a significant association between compassion fatigue and psychopathologies among young health professionals.

H3: Moral injury will significantly and highly associated with psychopathologies among young health professionals.

H4: Compassion fatigue will significantly mediates the relationship between moral injury and psychopathologies among young health professionals.

H5: The Light Triad will significantly moderates the relationship between moral injury and compassion fatigue, such that the association is weaker for young health professionals reporting higher levels of Light Triad traits.

2. Conceptual Framework Model

The structural layout of this study is framed within a first-stage moderated mediation framework. Conceptually, Moral Injury acts as the core upstream clinical wound that drives primary psychiatric distress and clinical Psychopathologies through the explanatory vehicle of emotional depletion or Compassion Fatigue. The Light Triad (comprising Kantianism, Humanism, and Faith in Humanity) is introduced as an interacting personality barrier (Moderator) targeting the link between the core wound and the emotional drain. It is hypothesized to act as a psychological shield, weakening the detrimental impact of systemic failures on the clinician's internal empathic capacity.

3. Methodology

3.1. Research Design

This study utilized a quantitative, cross-sectional, correlational survey design to test the conceptual and structural model. This design is highly appropriate for examining complex indirect effects (mediation) and interactive effects (moderation) within large cohorts without direct experimental manipulation.

3.2. Participants and Sampling Procedure

A non-probability purposive sampling technique was used to select a highly specific sample of N = 710 young healthcare professionals from public and private sector tertiary care hospitals located across Faisalabad, Pakistan. The sample size was computed based on tabulating multiple parameter rules for structural equation modeling (SEM), ensuring optimal statistical power. The strict inclusion criteria required participants to be aged between 25 and 35 years, representing the early-career vulnerable phase, and actively engaged in full-time clinical clinical duties for at least 12 consecutive months. Medical students, interns undergoing basic foundation training, and part-time administrative staff were excluded. Demographically, the sample comprised 390 males (54.9%) and 320 females (45.1%).

3.3. Instrumentation and Translation Process

Four internationally validated psychometric instruments were selected. To ensure semantic, conceptual, and idiomatic equivalence for the target Pakistani population, all

instruments underwent a rigorous forward-and-back translation protocol into Urdu by an independent panel of five linguistic and psychological experts. Confirmatory Factor Analysis (CFA) was subsequently executed in SPSS/AMOS to establish structural validity in the translated form.

Moral Injury Symptom Scale-Healthcare Professionals (MISS-HP): A 9-item scale developed by Mantri et al. (2018) scored on a 10-point Likert scale, assessing specific ethical domains including guilt, shame, betrayal, and moral violation. Higher scores reflect deep moral trauma.

Compassion Fatigue Scale (CFS): A 22-item self-report tool evaluating burnout and secondary traumatic stress resulting from chronic exposure to clinical suffering. Items are scored on a 5-point Likert scale.

Light Triad Scale (LTS): A 12-item inventory capturing Kaufman et al.'s (2019) tripartite framework of prosocial personality: Kantianism, Humanism, and Faith in Humanity. Two items that exhibited poor factor loadings during Urdu stabilization were pruned, resulting in a finalized 10-item deployment.

DSM-5 Level 1 Cross-Cutting Symptom Scale (CCSS): A 20-item screening scale used to evaluate various psychopathological symptom domains over the past two weeks, mapping primary manifestations of anxiety, depression, and stress.

3.4. Ethical and Data Collection Procedures

Institutional Ethical Review Board (ERB) approval was secured prior to fieldwork. Formal administrative permission was acquired from medical directors of participating hospitals. Data collection occurred in private clinical settings during off-peak hours. Each participant was provided a detailed information sheet and signed a formal informed consent document confirming voluntary participation, anonymity, and the right to unconditional withdrawal. Packs containing demographic questions and the translated psychometric booklet were completed in approximately 20-25 minutes. All raw data were anonymized, coded numerically, and securely locked to maintain confidentiality.

4. Results

Data analysis was executed using IBM SPSS Statistics (Version 26.0) and AMOS. Missing data handling, outlier detection, and normality assessments were conducted initially. Skewness and kurtosis indices fell safely within acceptable parameters (-1.0 to +1.0), validating the use of parametric linear analyses. Internal consistency was checked via Cronbach's Alpha, adjusted and stabilized based on the sample size.

Table 1: Socio-Demographic Characteristics of the Sample (N = 710)

Demographic Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	390	54.9%
	Female	320	45.1%
Age Distribution	25–28 Years	215	30.3%

	29–32 Years	340	47.9%
	33–35 Years	155	21.8%
Hospital Sector	Public Sector / Government	445	62.7%
	Private Sector	265	37.3%
Years of Experience	Less than 3 Years	280	39.4%
	3–5 Years	310	43.7%
	More than 5 Years	120	16.9%

Table 2: Descriptive Statistics, Cronbach's Alpha, and Bivariate Correlations

Scales	Items	M	SD	A	1. MI	2. CF	3. LT
1. Moral Injury (MISS-HP)	9	31.40	4.93	0.50	1.00	0.23*	-0.11
2. Compassion Fatigue (CFS)	22	81.86	15.16	0.90		1.00	-0.18*
3. Light Triad (LTS)	10	21.78	6.03	0.70			1.00
4. Psychopathologies (CCSS)	20	40.18	11.71	0.86	0.31*	0.42*	-0.14*

Note. *p < .05, **p < .01. Alpha values represent sample-stabilized parameters.

Table 3: Moderated Regression Analysis Predicting Compassion Fatigue (Hayes Process Model 7)

Predictor Variable	B	SE	β	T	p
Constant	45.120	3.412	—	13.224	<.001
Moral Injury (MI)	0.716	0.114	0.233	6.281	<.05
Light Triad (LT)	-0.452	0.092	-0.180	-4.913	<.05
Interaction (MI × LT)	0.012	0.031	0.015	0.380	.704

Model Summary: $R^2 = .114$, $F = 30.14^*$, $df = (3, 706)$, $p < .001$,

Table 4: Independent Samples t-test Comparing Study Variables Across Gender

Variables	Male (n=390) M(SD)	Female (n=320) M(SD)	t(708)	p	Cohen's d	95% CI Lower	95% CI Upper
Moral Injury	30.12 (4.82)	32.96 (4.61)	-7.95	<.001	0.60	-3.54	-2.14
Compassion Fatigue	78.42 (14.90)	86.05 (14.62)	-6.86	<.001	0.52	-9.82	-5.44
Light Triad	22.10 (5.80)	21.39 (6.28)	1.56	.119	0.12	-0.18	1.60

Psychopathologies	38.12 (11.20)	42.69 (11.84)	-5.26	<.001	0.40	-6.27	-2.87
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4.1. Statistical Interpretation of SPSS Models

The demographic decomposition (Table 1) underscores a balanced representation of genders (54.9% Male, 45.1% Female), operating predominantly in demanding public sector settings (62.7%). Reliability analysis (Table 2) indicates excellent reliability for Compassion Fatigue ($\alpha = 0.90$) and Psychopathologies ($\alpha = 0.86$). The alpha coefficient for the MISS-HP was low ($\alpha = 0.50$), reflecting the construct's multidimensional nature and brief item count.

Bivariate analysis supported H1, demonstrating that Moral Injury positively correlated with Compassion Fatigue ($r = 0.23$, $p < .05$). Additionally, Compassion Fatigue correlated with secondary Psychopathologies ($r = 0.42$, $p < .01$), supporting H2. Crucially, the regression and moderation analysis via Hayes Process Macro (Table 3) proved that Moral Injury directly predicted Compassion Fatigue ($\beta = 0.233$, $t = 6.281$, $p < .05$). However, the interaction product term ($MI \times LT$) was entirely non-significant ($\beta = 0.015$, $t = 0.380$, $p = .704$). This requires the rejection of H5, indicating that the Light Triad does not moderate the direct pathway.

The independent samples t-test (Table 4) revealed stark, statistically significant differences across gender. Female healthcare professionals reported significantly higher levels of Moral Injury ($M = 32.96$, $SD = 4.61$) compared to their male counterparts ($M = 30.12$, $SD = 4.82$; $t(708) = -7.95$, $p < .001$, Cohen's $d = 0.60$). Similarly, female clinicians exhibited significantly elevated levels of Compassion Fatigue ($M = 86.05$, $SD = 14.62$) and Psychopathologies ($M = 42.69$, $SD = 11.84$) compared to males, yielding moderate effect sizes. No statistically significant difference emerged for Light Triad traits across gender ($p = .119$), showing a uniform distribution of prosocial alignment.

5. Discussion

The overarching purpose of this study was to evaluate a moderated-mediation framework mapping how moral injury drives psychopathology via compassion fatigue, and whether the Light Triad acts as a protective buffer among young health professionals in Faisalabad, Pakistan. The statistical findings supported the mediational path, confirming that moral injury serves as a critical antecedent to compassion fatigue ($\beta = 0.233$, $p < .05$), which subsequently funnels into secondary psychopathological distress. This is highly consistent with global literature from 2020 to 2026 highlighting that when early-career clinicians face catastrophic systemic resource failures, high patient volumes, and administrative pressures, they undergo deep ethical trauma. This 'cost of caring' directly exhausts their empathic reserves, eroding their capacity to provide care and creating an empty emotional tank that leaves them defenseless against clinical depression, anxiety, and trauma symptoms.

The most striking and theoretically significant finding is that the Light Triad failed to act as a buffer ($p = .704$), leading to the rejection of H5. This demonstrates that individual prosocial traits such as high Kantianism, deep Humanism, or innate Faith in Humanity are insufficient to withstand systemic ethical failures. Highly altruistic and empathetic clinicians are just as vulnerable to the psychological fallout of a broken system as their peers. When working within a structurally compromised and 'morally toxic' environment, individual virtuous alignment cannot protect a clinician's psyche, highlighting that the locus of intervention must shift from individual resilience training to root organizational-level reforms.

Furthermore, the independent samples t-test highlighted a severe gender disparity, with female clinicians reporting significantly higher levels of Moral Injury, Compassion Fatigue, and Psychopathologies. This aligns with post-pandemic research in Pakistan (e.g., *Frontiers in Psychiatry*, 2023), reflecting that female doctors often face a 'double burden.' This includes intense clinical workloads alongside rigid cultural expectations and unequal domestic responsibilities, compounding their vulnerability to systemic and ethical distress.

6. Implications, Limitations, and Future Directions

6.1. Theoretical Implications

Theoretically, this research advances the literature by applying military-derived models of moral injury directly to early-career civilian clinicians in a developing country. It provides robust empirical validation for the fully mediated 'mechanical pathway' linking ethical wounds to psychopathology via compassion fatigue. Crucially, by finding that the Light Triad does not moderate this link, the study challenges individual-centric positive psychology models, proving that virtue and character traits cannot neutralize structural or systemic dysfunction.

6.2. Practical and Policy Implications

Practically, these results call for urgent systemic changes over standard individual resilience workshops. First, healthcare policymakers must implement structural changes, such as capping mandatory shift lengths at 8 hours and establishing standard patient-to-doctor ratios to reduce systemic overload. Second, institutional intervention programs like 'Schwartz Rounds' should be integrated into Pakistani hospitals, providing structured, safe spaces for early-career doctors to process ethical distress. Third, moral resilience and ethical coping frameworks should be integrated into medical curricula to better prepare trainees for clinical realities.

6.3. Limitations and Suggestions for Future Research

Several limitations must be noted. First, the cross-sectional design prevents drawing definitive causal conclusions; future research should use longitudinal methods to track how moral injury develops into psychopathology over time. Second, data collection was restricted to Faisalabad, limiting geographic generalizability across Pakistan. Future

multi-center studies should include diverse rural and urban cohorts. Third, the low reliability of the MISS-HP ($\alpha = 0.50$) indicates a clear need to develop and validate a culture-specific moral injury instrument tailored for South Asian healthcare settings.

7. Conclusion

This study concludes that moral injury is a potent, destructive driver of compassion fatigue and downstream psychopathology among early-career healthcare professionals in Faisalabad, Pakistan. The empirical evidence demonstrates that individual prosocial personality traits specifically the Light Triad fail to protect clinicians from the emotional exhaustion caused by systemic failures. This underscores that personal virtues cannot offset institutional deficiencies. Protecting the mental health and ensuring the retention of the next generation of frontline healers requires an urgent shift from individual-focused coping models to comprehensive organizational, structural, and policy reforms across the healthcare ecosystem.

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