

**MOONLIGHTING AND BURNOUT: THE ROLE OF DUAL LOYALTY AND
POLICY**

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Abstract

The healthcare industry is confronted with a severe workforce problem, with the added problem of moonlighting activities that trigger role conflicts and ethical issues. In this study, the dual loyalty dilemma problem caused by moonlighting among healthcare workers in Delhi NCR is investigated using the Job Demands–Resources (JD-R) model and role theory. Adopting a cross-sectional design and analysed 683 valid responses to test a moderated-mediation model using PLS-SEM. Results indicate that moonlighting does not have a direct contribution to professional burnout, but an indirect one in amplifying dual loyalty conflicts, which in turn enhance the risk of burnout. Institutional policies were shown to play a protective function, diminishing both dual loyalty conflicts as well as burnout, albeit failing a statistically significant moderating effect. The findings emphasize the organizational and moral dimensions of moonlighting, emphasizing the importance of open institutional policies, flexible working arrangements, and ethical support systems to counteract workforce stress and ensure healthcare provision.

Keywords: Moonlighting, Dual loyalty dilemma, Professional burnout, Institutional Policies, Healthcare

1. Introduction

The worldwide health system is experiencing an unprecedented workforce crisis, with an estimated deficit of 11 million health workers projected by the World Health Organization (WHO, 2023) for 2030. The combination of this deficit along with increasing patient demand has escalated reliance on the willingness and ability of healthcare professionals to perform at a high level even under extreme pressures. One yet-to-be-adequately-explored factor affecting this equation is moonlighting, which means concurrently holding multiple jobs, assignments and gig works. While moonlighting, in and of itself, has existed for a long time in various forms, structural changes in employment and advancements in gig-style arrangements—such as temporary staffing of clinicians—are now making this phenomenon much more prevalent within the healthcare systems (Alanezi 2020).

The 2019 pandemic acted as a trigger for these changes, worsening both moonlighting and professional burnout. Burnout includes emotional exhaustion, depersonalization, and a feeling of reduced accomplishment (Maslach & Leiter, 2016). Reports reveal that up to 50% of healthcare workers faced burnout symptoms during the pandemic (Zheng et al., 2023). This had negative impacts on patient safety, quality of care, and staff retention (Profit et al., 2014). In India's Delhi NCR region, where healthcare involves high patient volumes, limited

resources, and a mix of public and private services, moonlighting is both a coping strategy and a workplace danger.

Yet, the connection between moonlighting and burnout is still debated. Some scholars believe that moonlighting increases role conflict and dual loyalty issues. These are situations where healthcare workers' responsibilities to patients clash with those to their employers, institutions, or secondary job providers. This can lead to faster burnout (Gramma et al., 2023; Sun & Wang, 2018). Others argue that moonlighting might act as a coping strategy, increasing engagement and offering financial or professional advantages that help prevent burnout (Asravor, 2021; Engelbrecht et al., 2020).

Drawing on role theory (Kahn et al., 1964), the JD-R model (Bakker & Demerouti, 2017), and literature on organizational ethics, this study asserts dual loyalty as a key mediator that relates moonlighting to burnout. It also views institutional policy frameworks as factors that influence this relationship. Understanding these mechanisms is important for workforce sustainability, especially in high-demand, low-resource healthcare settings. We will test a conceptual model (Figure 1) that addresses three questions:

1. Does moonlighting have a direct relationship with professional burnout?
2. Does dual loyalty mediate the moonlighting–burnout relationship?
3. Do supportive institutional policies moderate the dual loyalty–burnout link?

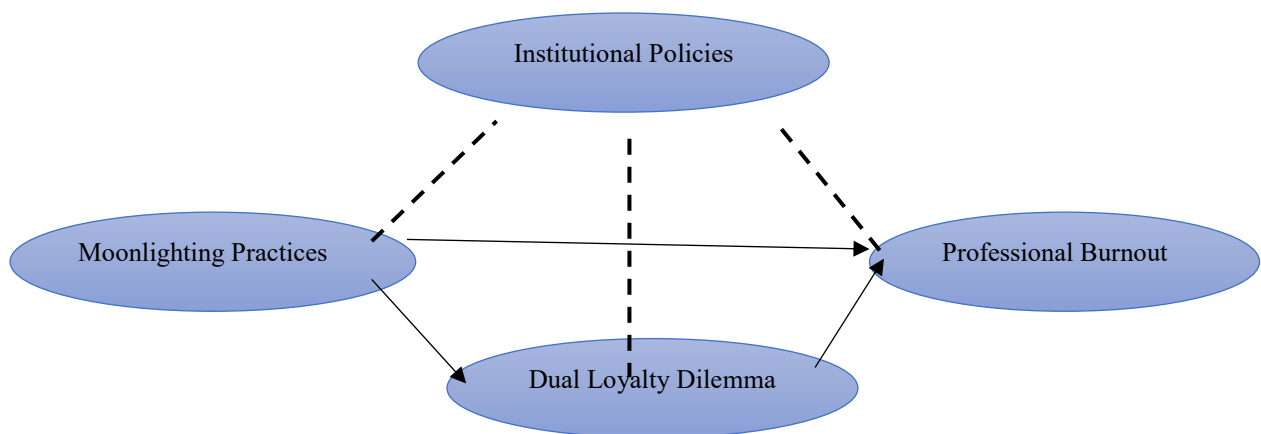


Figure1: Conceptual Model

2.Literature Review

2.1 Moonlighting and Professional Burnout

Moonlighting in healthcare reflects systemic pressures and individual choices. Economic challenges, low pay, and limited chances for career growth push many doctors, nurses, and allied health workers to find additional jobs (Baharudin et al., 2022). In India and other low- and middle-income countries, this trend rose during and after COVID-19, which also saw higher burnout rates (Gandhi et al., 2024). The JD-R model indicates that moonlighting raises

job demands, such as longer hours and split schedules, without necessarily providing more resources. This situation increases the risk of burnout (Innstrand, 2022; Jia et al., 2021).

The empirical findings are diverse and show mixed results. Several studies have demonstrated a positive association between moonlighting and burnout (Gramma et al., 2023; Yongmei, 2024), while others highlight protective effects where moonlighting satisfies financial needs or increases skill diversity (Engelbrecht et al., 2020; Asravor, 2021). These contradictions can partly be attributed to methodological variations such as the differences in measuring burnout, defining moonlighting, and the cultural contexts wherein these studies are conducted. In this light, it can be hypothesized based on the current evidence:

H1: Moonlighting has a significant direct relationship with professional burnout among healthcare employees.

2.2 Dual Loyalty as Mediator

Dual loyalty dilemmas occur when clinicians owe some duties to patients and other duties to third parties (London, 2005). In moonlighting-type situations, competing obligations multiply as professionals juggle their responsibilities between primary and secondary employers, usually under conflicting rules of law or ethical codes. This strain may diminish organizational commitment, cloud moral clarity, and trigger emotional exhaustion (Gramma et al., 2023; Sun & Wang, 2018).

Kahn et al. (1964) states that the contradiction in role expectations tends to create psychological tensions and reduced performance. The existing clinical duties, to which demands of moonlighting are added, may axially increase the cognitive and ethical load intensive ambially. Thus:

H2: Moonlighting has a statistically significant indirect effect on causing burnout by dual loyalty dilemmas.

H3: Dual loyalty significantly mediates the relationship between moonlighting and professional burnout.

2.3 Institutional Policies as Moderator

The institutional policies regarding moonlighting and its associated role conflicts have an impact on the experiences of those involved in the practice. But a well-structured framework of transparent guidelines, flexible schedules, and ethics support can buffer role expectation discomfort and stress and mitigate burnout (Maglalang et al., 2021; Bharathi & Sujatha, 2024). In contrast, restrictive or poorly articulated policies would augment role tensions and perceptions of institutional betrayal (Park et al., 2023).

According to the JD-R model, institutional policy has been defined as a class of resources that can offset the effects of job demand dual loyalty, making it contingent on the relative conditioning of the dual loyalty-burnout relationship on the policy environment:

H4: Supportive institutional policies weaken the positive association between dual loyalty and professional burnout

3. Methodology

The focus of the research was the healthcare providers moonlighting in the Delhi NCR region, including physicians, nurses, and allied health personnel. Inclusion criteria mandated that a participant must be actively working in primary care for six months or more and have at least one aspect of secondary employment or assignment. An N = 1100 target sample size was established both statistically and practically.

3.1 A Priori Power Analysis

An a priori power analysis was performed to ascertain sufficient statistical power for testing the mediation–moderation model. With G*Power (F test: linear multiple regression – R² increase by means of $\alpha = 0.05$, power = 0.8, one predictor tested and four covariates), a required number of ≈ 395 participants were needed to obtain a minimum interaction effect ($f^2 = 0.02$). A medium effect ($f^2 = 0.15$) was about 92 participants. For mediation, the Groningen guidelines suggested that an approximately 462 participants should be required to observe a little indirect effect. The sample size finally achieved (N = 683) tends to exceed such thresholds, accommodating detection of small effects, subgroup analyses, and potential missing data too.

3.2 Sampling Procedure

A snowball sampling method of recruitment was employed to recruit respondents from 43 private hospitals, nursing homes, and clinics dispersed throughout Delhi NCR. From a multi-hospital recruitment perspective, the various settings are well represented, thereby facilitating access to a richly professional population often quite difficult to reach through probability sampling schemes.

3.3 Data Collection Instrument

The structured questionnaire was evolved through the process of merging validated scales and items from previous studies to measure four constructs:

- Moonlighting practices (MP): Burton (2010), Goh et al. (2016), Newell & MacNeil (2010), Cohen et al. (1989), Brown et al. (2010), Seema et al. (2020), plus one new item for salary retention.
- Dual Loyalty Dilemma (DLD): Schuler et al. (1977), Pont et al. (2012), and original items on divided attention and role conflict.
- Institutional Policies (IP): Prasad et al. (2024).
- Professional burnout (PBO): Dyrbye et al. (2019), Montgomery et al. (2020), Hall et al. (2016) Salyers (2016), along with stress-related symptoms based on Shirom (1989), plus one new item for self-care neglect.

Items were rated on a 5-point Likert scale (1=Strongly disagree to 5=Strongly agree). To ascertain content validity, the instrument was argued over by three experts in health management and occupational psychology. The language and structure were adjusted based on the reports provided by 30 healthcare professionals on the pilot test. The final version of the

instrument was thereafter distributed via WhatsApp and email in an anonymous fashion, with informed consent taken from all participants.

3.4 Response Rate

Of the 1,054 invitations sent out via social media channels and professional contacts, a total of 712 responses were received (gross response rate=67.6%). After screening for eligibility and completeness, 683 valid responses were retained for analysis (net response rate=64.8%) (see figure-2).

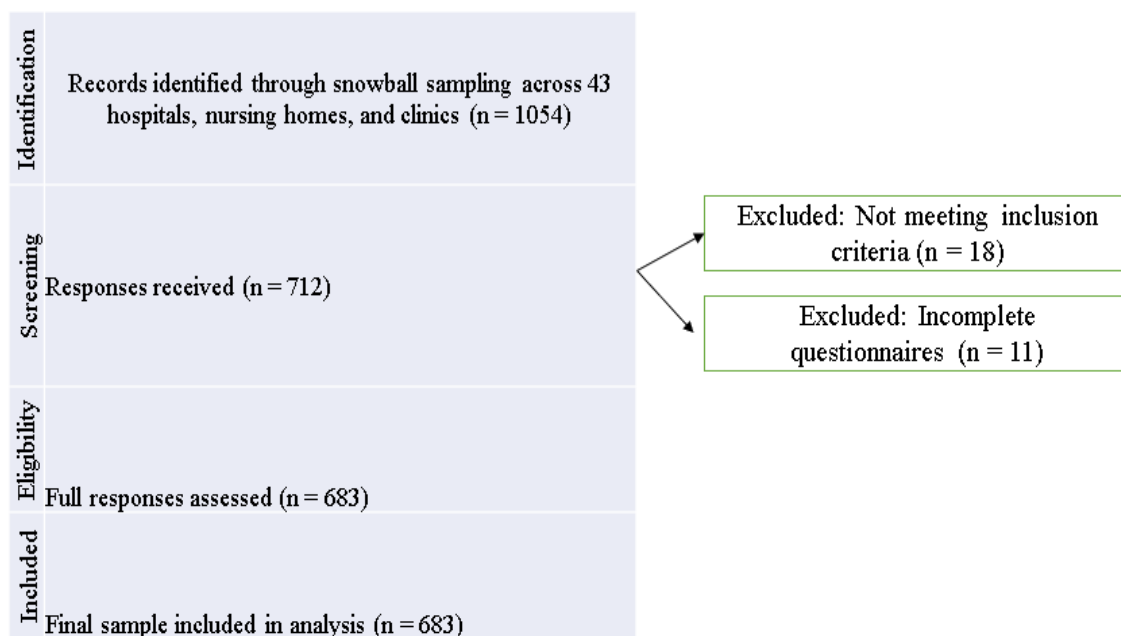


Figure2: PRISMA diagram for recruitment flow

3.5 Ethics

Prior to responding to the questionnaire, each participating community healthcare worker (CHW) provided their consent. The Declaration of Helsinki's (2000 revision) ethical principles were adhered to in this investigation. All patient and participant data were treated with absolute confidentiality and remained anonymous.

3.6 Statistical Analysis

Data were analysed using Smart-PLS 4. We assessed scale reliability and validity with Cronbach's alpha, Average Variance Extracted (AVE), and the Heterotrait-Monotrait (HTMT) ratio for discriminant validity. We tested the hypotheses using the bootstrapping method. The proposed model looked at Dual Loyalty Dilemma (DLD) as a mediator and Institutional Policies (IP) as a moderator.

4. Results

4.1 Measurement Model Evaluation

According to Hair et al. (2022), the measurement model has been evaluated for reliability, convergent validity, and discriminant validity. The internal consistency for all latent constructs was very high, with Cronbach's α values ranging from 0.918 (Institutional Policies) to 0.967 (Dual Loyalty Dilemma), thus surpassing the cutoff value of 0.70. In terms of construct reliability, CR values ranging between 0.943 and 0.973 indicated excellent reliability.

Convergent validity was confirmed since AVE values lay above the threshold of 0.50 (0.603–0.808) (Fornell & Larcker, 1981). All other outer loadings were higher than 0.70, except for MP1 (0.680); however, it was retained as it had theoretical importance and did not jeopardize overall construct reliability (Hair et al., 2022).

The model showed good fit indices. SRMR was 0.055, which is less than 0.08. NFI was 0.911, exceeding 0.90. This indicates a reasonable level of fit between the model and the data.

4.2 Structural Model Evaluation

The structural model was assessed for collinearity, the coefficient of determination (R^2), and hypothesis testing. Variance Inflation Factor (VIF) values for all predictors were below 3.0, which indicates no multicollinearity issues.

The model accounted for 42.8% of the variance in Dual Loyalty Dilemma (DLD), 72.5% in Professional Burnout (PBO), and 2.6% in Moonlighting Practices (MP). According to Chin (1998), these correspond to moderate, substantial, and weak levels of predictive power, respectively.

4.3 Hypothesis Testing

Bootstrapping (5,000 resamples) was used to estimate path coefficients and test hypotheses (Table 1).

1. **H1** predicted a direct positive relationship between MP and PBO that failed to be supported ($\beta = -0.017$, $p = 0.351$), indicating that the moonlighting practices themselves do not increase significantly burnout levels.
2. **H2** proposed that the effect of MP on PBO occurred through DLD. It negatively linked to DLD ($\beta = -0.662$, $p < 0.001$), whilst DLD positively contributed to PBO (i.e., $\beta = 0.089$, $p = 0.012$), thus proving the grounds for an indirect effect.
3. **H3** expected mediation by DLD. While the indirect effect through DLD was significant, suggesting full mediation, the direct effect of MP on PBO was not (Zhao et al., 2010).
4. **H4** studied Institutional Policies (IP) moderating the relationship between DLD and PBO. IP negatively correlated with DLD ($\beta = -0.116$, $p = 0.003$) and had a strong negative relationship with PBO ($\beta = -0.847$, $p < 0.001$). Therefore, the moderation effect was not statistically tested in this model. Nonetheless, the pattern seems to

portray buffering evidence of IP, and therefore, moderation deserves further consideration.

Table 1
Path Coefficients, t-values, and Significance Levels

Path	β	t-value	p-value	Result
MP → PBO	-0.017	0.932	0.351	Not supported
MP → DLD	-0.662	21.234	<0.001	Supported
DLD → PBO	0.089	2.510	0.012	Supported
IP → DLD	-0.116	2.985	0.003	Supported
IP → PBO	-0.847	27.431	<0.001	Supported
IP → MP	-0.160	2.211	0.027	Supported

4.4 Model Summary

Figure 3 shows the PLS-SEM structural model with standardized path coefficients and explained variances (R^2). The findings suggest that moonlighting does not directly cause burnout; instead, it indirectly influences it by increasing dual loyalty conflicts. Institutional policies seem to offer some protection by reducing both dual loyalty issues and professional burnout.

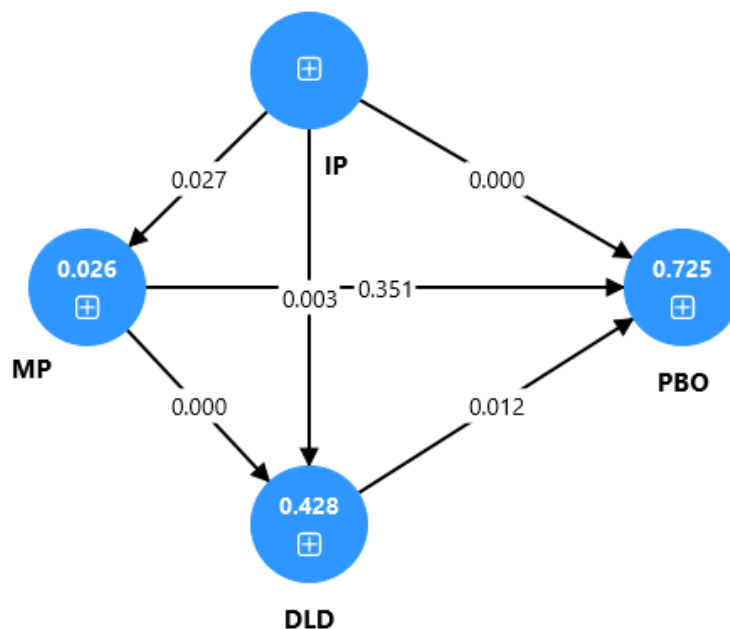


Figure-3: PLS -SEM structural model

5. Discussion

This study provides timely empirical justification for the hypothesized interrelations that exist between Moonlighting Practices (MP), Dual Loyalty Dilemma (DLD), Institutional Policies (IP) and Professional Burnout (PBO) among healthcare workers of the Delhi NCR region. In line with the Job Demands–Resources (JD-R) model (Bakker & Demerouti, 2017), moonlighting was not found to be a significant direct predictor of professional burnout ($\beta = -0.017$, $p = 0.351$). However, it strongly predicted dual loyalty dilemmas ($\beta = -0.662$, $p < 0.001$), which in turn were positively associated with professional burnout ($\beta = 0.089$, $p = 0.012$). These results support the proposition that cognitions and emotions associated with multiple work roles can lead to prolonged chronic stress, negatively impacting working professionals' ability to sustain optimum performance of work -- a finding also suggested to hold validity by previous studies on multi-role work engagement in both healthcare and academia (Dyrbye et al., 2019; Montgomery et al., 2020).

Institutional policies had a crucial protective function. Facilitative structures were inversely linked with dual loyalty conflicts ($\beta = -0.116$, $p = 0.003$) and burnout ($\beta = -0.847$, $p < 0.001$), and decreased the incidence of moonlighting ($\beta = -0.160$, $p = 0.027$). This finding is consistent with previous research that found buffering effects of organizational resources, such as flexibility in scheduling, role clarity, and ethical counselling, from excessive job demands (Schaufeli & Taris, 2014; Xanthopoulou et al., 2007). The rather limited moderating effect suggests that, while perhaps beneficial, organizational interventions would ideally be coupled with individual-level strategies such as resilience trainings, stress management programs, and specific support for ethical decision-making, to garner higher mileage in burnout alleviation.

The mediation results highlight the important role of ethical and operational conflicts in increasing burnout risk. Healthcare professionals often face conflicting responsibilities from multiple employers. This situation leads to what Epstein and Hamric (2009) call “moral distress,” which is a long-lasting form of psychological strain caused by ongoing ethical compromises. These findings support earlier research that connects ongoing ethical conflicts to higher levels of emotional exhaustion, depersonalization, and lower job satisfaction (Lachman, 2016; Lamiani et al., 2017).

This research builds on the Job Demands–Resources (JD-R) model (Bakker & Demerouti, 2017) by expanding it to the context of dual loyalty dilemma in the health care sector. Even though JD-R historically places demand like workload and emotional labor as predictors of burnout, our results identify that dual loyalty dilemmas themselves are a new job demand, which increases stress above and beyond classic workload. Through the placement of dual loyalty as a mediator, this research illustrates how ethical and role-based contradictions turn moonlighting into a risk for burnout. This nuance adds to the increasing tide of JD-R research that focuses on context-specific demands and mediators (Schaufeli & Taris, 2014; Xanthopoulou et al., 2007). Practically, the findings have implications for healthcare management and human resource policies. Initially, the findings indicate that moonlighting must not just be viewed as a staffing or monetary concern but rather as an organizational and ethical dilemma that impacts workforce sustainability directly (Grama et al., 2023). Second, institutional policies, although lacking a statistically significant moderating effect, did exhibit negative associations with both dual loyalty challenges and burnout, pointing towards a

potential buffering effect. This implies that positive HR practices—flexible work arrangements, clear moonlighting guidelines, and availability of ethical support systems—can mitigate the burden of dual employment (Maglalang et al., 2021; Park et al., 2023). Still, due to the non-significant moderation effect, this contribution must be considered as exploratory evidence calling for more stronger longitudinal and cross-national research.

6. Conclusion

This study contributes to the discussion on healthcare workforce sustainability by examining how moonlighting increases professional burnout. By combining the JD-R model with a moderated-mediation PLS-SEM framework, the findings show that moonlighting, while not directly causing burnout. It significantly contributes to dual loyalty dilemmas, which in turn heighten the risk of professional burnout. Institutional policies showed a protective effect, reducing both DLD and PB. From a practical viewpoint, healthcare leaders should see moonlighting as more than just a staffing or compensation issue. It should be recognized as a key factor that drives role conflict, ethical strain, and disengagement. Policy changes that include clear moonlighting rules, improved ethical support systems, and flexible working conditions, along with developing personal coping resources, could significantly lower burnout rates and improve retention.

7. Limitations and Future Research

This research has its limitations. First, the cross-sectional design restricts our ability to draw causal links. Longitudinal designs could provide a clearer view of temporal dynamics and causal pathways. Second, relying on self-reported data carries the risk of common method bias, even though we used some procedures, like ensuring anonymity and varying item formats. Third, focusing on Delhi NCR limits how well we can apply the findings to different social and cultural settings. Lastly, unmeasured factors like personality traits, intrinsic motivation, and family responsibilities might influence both moonlighting practices and burnout outcomes. Looking forward, future studies should build on these findings by using longitudinal and diary study designs to capture temporal and situational variation in dual loyalty conflicts and burnout. Cross-nationally comparative research would be useful to explore how cultural context, economic environment, and policy environments influence the interplay between moonlighting and professional well-being. Mixed-method designs, particularly qualitative interviews, may yield greater insight into the ethical and emotional aspects of role conflicts. In addition, investigating the quality, safety, and satisfaction of patient care as outcomes affected by moonlighting-induced stress would add to the applied utility of this research stream. Lastly, intervention studies that combine organizational policy overhauls with resilience training and ethical decision support should be piloted to determine their additive effect on burnout reduction. Together, these directions for the future can enrich theoretical models such as the JD-R model and inform effective policies to maintain healthcare workers in low-resource settings.

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