BALANCING SHIFTS AND MARRIAGE: THE ASSOCIATION BETWEEN WORKLOAD AND MARITAL ROLE CONFLICT AMONG MARRIED FEMALE NURSES

Sherly Argya Putri[1], Ratriana Yuliastuti Endang Kusumiati[2]

[1,2] Universitas Kristen Satya Wacana, Indonesia
*Corresponding Author: sherlyargyaputri200@gmail.com

ABSTRACT
Female nurses commonly face dual-role demands from shift-based clinical work and family responsibilities, which can heighten marital role conflict and threaten work–family balance. This study examined the association between perceived workload and marital role conflict among married female nurses at PKU Muhammadiyah Hospital, Temanggung. Using a quantitative correlational design, data were collected from 90 married female nurses selected through proportionate stratified random sampling. Workload was measured with the NASA Task Load Index (NASA–TLX), while marital role conflict was assessed using the Work–Family Conflict Scale developed by Netemeyer et al. (1996). Pearson correlation analysis showed a positive and statistically significant relationship between workload and marital role conflict ($r = 0.311$; $p = 0.003$), indicating that higher perceived workload is associated with greater conflict in fulfilling marital and family roles. These findings suggest that workload—particularly in shift-based nursing—may contribute to strain at home through reduced time, energy depletion, and emotional fatigue. The study concludes that hospital management should prioritize more proportional workload allocation and fairer shift arrangements, complemented by supportive programs (e.g., stress management, supervisor support, and work–family facilitation) to protect nurses' well-being and family functioning. Future research should employ longitudinal or mixed-method designs and test potential mediators/moderators such as job resources, social support, marital satisfaction, and coping strategies.

Keywords: Female nurses; Marital role conflict; NASA–TLX; Work–family conflict; Workload

INTRODUCTION

In the past decade, much research has focused on how intensifying healthcare demands reshape nurses' working conditions and, consequently, their well-being and performance. Hospitals worldwide face pressures from increasing patient acuity, tighter throughput expectations, and persistent staffing constraints—conditions that collectively elevate perceived workload and fatigue. Landmark evidence shows that heavier nurse workloads (e.g., higher patient-to-nurse ratios) are associated with higher nurse burnout and job dissatisfaction, alongside adverse patient outcomes (Aiken et al., 2002). More recent synthesis work reinforces the system-level relevance of nurse well-being: a large systematic review and meta-analysis in *JAMA Network Open* reported that nurse burnout is consistently associated with lower patient safety indicators, lower patient satisfaction, and lower nurse-assessed quality of care across countries and settings (Li et al., 2024). These findings underscore that workload is not merely an operational issue but a strategic determinant of quality and safety. Within nursing, workload is also structurally shaped by shift-based service delivery. Extended and irregular shifts can amplify physical and mental strain, disrupt recovery, and reduce schedule control. Multi-country evidence indicates that working ≥12-hour shifts is associated with higher burnout and job dissatisfaction and a stronger intention to leave (Dall'Ora et al., 2015). Beyond occupational outcomes, shift work also has implications for family functioning because it reallocates time and energy away from nonwork roles. A systematic review of shift work and work–family conflict concluded that shift workers tend to report higher work–family conflict than day workers, with particularly elevated conflict among night-shift patterns and schedules that include weekend work;

importantly, the review highlights that many studies remain correlational and that causal evidence is still limited (Wöhrmann et al., 2020). From a psychosocial standpoint, these pressures are closely connected to *work–family conflict* (WFC), an inter-role conflict that occurs when demands from work and family domains are mutually incompatible. Classic role theory frames work–family conflict as emerging from time-based strain and behavioral incompatibilities that make participation in one domain more difficult because of the other (Greenhaus & Beutell, 1985). In organizational psychology, WFC has been operationalized as a bidirectional construct—work interfering with family (WIF) and family interfering with work (FIW)—and measured using validated scales that have become standards in the field (Netemeyer et al., 1996). Evidence syntheses demonstrate that WFC is consistently associated with work outcomes (e.g., job dissatisfaction, burnout, turnover intentions), family outcomes (e.g., reduced family satisfaction), and general well-being outcomes (Allen et al., 2000; Amstad et al., 2011). Meta-analytic findings also clarify that antecedents of WFC are strongly rooted in work demands (e.g., workload, time pressure, schedule irregularity), while resources such as supportive supervision and social support can mitigate conflict (Byron, 2005). For married women in nursing, the implications can be more acute because professional demands intersect with culturally and practically salient domestic expectations (e.g., household management, childcare, spousal roles). In Indonesian hospital contexts, female nurses frequently carry dual responsibilities as healthcare providers and family caregivers, and shift systems can intensify role strain. Against this background, the present study focuses on female nurses at RS PKU Muhammadiyah Temanggung—an organizational setting where continuous service provision and rotating schedules may elevate workload and, in turn, increase conflict in marital and family roles.

Despite substantial global evidence on WFC, several issues remain under-resolved when the focus shifts to *marital role conflict among female nurses* and its linkage with *subjective workload*. First, many healthcare studies treat workload as an objective staffing indicator (e.g., ratios, hours), yet nurses' lived workload is also cognitive and emotional—shaped by interruptions, complexity, time pressure, and perceived performance demands. Studies indicate that subjective workload measurement can reveal important task-level burdens that staffing indicators alone may miss (Park et al., 2024). Second, while WFC is often examined in relation to burnout and turnover, fewer studies in nursing explicitly connect workload pressures to *marital-role outcomes* (e.g., relationship quality, marital satisfaction, marital interaction strain), even though family functioning is a major domain affected by WFC (Fellows et al., 2016). Third, cross-cultural evidence is still uneven. Much WFC theory and measurement was developed in Western organizational settings; therefore, localized evidence remains essential to validate whether established mechanisms operate similarly in specific institutional and cultural contexts, including Indonesian faith-based hospitals and the particular constraints of local shift systems. Accordingly, a general solution is to test the workload–marital role conflict relationship using (a) an established, psychologically grounded workload measure that captures mental/temporal/effort demands, and (b) a validated WFC instrument that reflects inter-role conflict relevant to marriage and family life. This approach can provide locally actionable evidence for hospital management (e.g., shift design, staffing adjustments, supervisory support), while also contributing to the broader literature by clarifying how subjective workload maps onto marital-role conflict among married female nurses.

Several theoretical and methodological strands provide a concrete pathway for studying this relationship. The *Job Demands–Resources (JD–R) model* proposes that job demands (e.g., workload, time pressure) are primary drivers of strain outcomes when not adequately balanced by job resources (e.g., supervisor support, autonomy) (Bakker & Demerouti, 2007; Demerouti et al., 2001). Complementary to JD–R, *Conservation of Resources (COR) theory* posits that stress emerges when individuals experience resource loss (time, energy, emotional capacity) or threat of loss; high workload can deplete these resources, leaving fewer reserves for family roles and marital functioning (Hobfoll, 1989). These frameworks jointly

predict that higher workload—especially when accompanied by irregular schedules—should be associated with higher work-to-family interference and broader marital role conflict. On the measurement side, research has increasingly used the NASA Task Load Index (NASA–TLX) to quantify subjective workload across mental demand, physical demand, temporal demand, perceived performance, effort, and frustration. In nursing settings, NASA–TLX has demonstrated practical utility and has been applied to ICU workload benchmarking and validity evaluations (Hoonakker et al., 2011). More recent work has extended NASA–TLX to task-level workload assessment in emergency departments, highlighting its ability to capture perceived workload in complex and interruption-heavy environments (Park et al., 2024). For marital-role conflict, Netemeyer et al.'s bidirectional WFC/FWC scale remains one of the most widely used validated measures of work–family conflict (Netemeyer et al., 1996). Further measurement development research has also provided multidimensional WFC instruments (e.g., time/strain/behavior by direction) that reinforce the conceptual richness of work–family conflict (Carlson et al., 2000). Empirically, nursing studies show that work demands and irregular schedules predict work-to-family conflict, and that WFC is linked with lower job and life satisfaction among female nurses (Yildirim & Aycan, 2008). In addition, resources matter: meta-analytic evidence indicates that social support (from work or home) is negatively associated with work–family conflict, suggesting potential organizational levers for mitigation (French et al., 2018). Extending from conflict to marital outcomes, a meta-analysis found that work–family conflict is negatively associated with couple relationship quality across samples, implying that inter-role conflict has meaningful relational costs (Fellows et al., 2016). Moreover, evidence suggests that couple communication can mediate the association between work–family conflict and marital satisfaction, highlighting pathways through which work strain translates into relationship strain (Carroll et al., 2013).

A more focused review of nursing-specific findings strengthens the rationale for this study while clarifying the gap. First, WFC is repeatedly linked with negative nurse outcomes. For example, WFC among nurses has been associated with burnout and related stress outcomes in cross-sectional pandemic-era samples (Yarifard et al., 2023). Similarly, a study in Tehran reported meaningful relationships between nurses' work–family conflict and professional quality of life indicators, further underscoring that conflict is consequential in hospital contexts (Dilmaghani et al., 2022). Second, WFC is not only a well-being variable but also connects to performance and retention: evidence indicates that WFC relates to nurses' job performance, and social support can moderate this relationship (Wang & Tsai, 2014). At the workforce level, a meta-analytic review found a reliable relationship between nurses' work–family conflict and turnover intention, suggesting that conflict can contribute to retention risk (Yildiz & Yildiz, 2021). However, two limitations are especially salient for the present topic. (1) Workload operationalization gap: Many studies infer workload from hours, staffing ratios, or broad "job demands" indices, whereas fewer integrate validated *subjective workload* instruments (e.g., NASA–TLX) together with WFC in a single model focused on married female nurses. While NASA–TLX has been used to benchmark and validate nursing workload (e.g., ICU settings), its integration with marital-role conflict outcomes remains uncommon, especially in Indonesian hospital samples (Hoonakker et al., 2011). (2) Contextual gap: Evidence on workload–WFC links among nurses exists internationally (e.g., Turkey), but localized studies in Indonesian hospital contexts—particularly in specific institutions with distinctive organizational cultures and shift routines—are still limited, and the generalizability of findings across contexts cannot be assumed (Yildirim & Aycan, 2008). Therefore, the research gap can be stated as follows: There is insufficient context-specific empirical evidence in Indonesia that tests the association between nurses' *subjective workload* (captured through a validated workload framework) and *marital role conflict/work–family conflict* (captured through a validated bidirectional WFC scale) among married female nurses working in a shift-based hospital system. Addressing this gap is important because hospital workload policies (staffing,

shift rotation, task allocation, supervisor support) are modifiable, and relational outcomes (marital role conflict) matter for both staff well-being and organizational sustainability.

The purpose of this study is to examine the relationship between workload and marital role conflict (operationalized through work–family conflict) among married female nurses at RS PKU Muhammadiyah Temanggung. Specifically, the study assesses whether higher perceived workload is associated with higher levels of marital role conflict experienced by nurses. This study contributes novelty in three ways. First, it emphasizes *subjective workload* as experienced by nurses—capturing mental, temporal, effort, and frustration-related demands—rather than relying solely on objective proxies (Hoonakker et al., 2011; Park et al., 2024). Second, it extends the nursing workload literature by focusing on a *marital-role outcome domain*, aligning with evidence that work–family conflict degrades couple relationship quality and marital satisfaction (Fellows et al., 2016). Third, it provides institution-specific evidence from an Indonesian hospital setting, adding to the cross-cultural validation of WFC mechanisms that have been largely developed and tested outside Indonesia (Yildirim & Aycan, 2008). Guided by role theory and supported by JD–R and COR perspectives, higher workload is expected to deplete time and energy resources, thereby increasing work-to-family interference and marital role conflict (Greenhaus & Beutell, 1985; Hobfoll, 1989; Demerouti et al., 2001). Therefore, the study hypothesizes: *Higher perceived workload among married female nurses is positively associated with higher marital role conflict/work–family conflict.* The study is delimited to married female nurses working at RS PKU Muhammadiyah Temanggung and uses a quantitative correlational design. Findings are intended to inform workload management and shift system improvements at the organizational level; however, because the design is cross-sectional and relies on self-report measures, causal claims are not made, and unmeasured variables (e.g., spouse support, childcare load, leadership style) may also influence the observed relationship.

METHOD

Research Design and Approach

This study employed a quantitative, cross-sectional correlational design to examine the association between workload (X) and marital role conflict / work–family conflict (Y) among married female nurses. A correlational approach was selected because the research objective was to estimate the direction and strength of the relationship between naturally occurring variables without manipulating working conditions or family circumstances. The conceptual basis for the outcome construct follows classic work–family conflict theory, which frames conflict as an inter-role incompatibility between work and family demands (Greenhaus & Beutell, 1985).

Population and Sample / Participants

The population comprised all married female nurses employed at PKU Muhammadiyah Hospital Temanggung (Temanggung, Central Java, Indonesia) during the 2025 data-collection period. The inclusion criteria were: (a) female, (b) legally married, (c) working as a nurse at the hospital, (d) minimum tenure of ≥ 1 year, and (e) working under a shift system (morning/afternoon/night). Nurses on extended leave or not available during the survey window were not included.

A total of 90 participants were selected using proportionate stratified random sampling. Stratification was applied to ensure proportional representation across relevant strata (e.g., unit/ward and/or shift category), followed by random selection within each stratum. This procedure was chosen to improve representativeness and reduce sampling bias when the nursing workforce is distributed across operational groups with potentially different workload exposures.

Data Collection Techniques and Instruments

The data used for this study were collected by administering a self-report questionnaire pack consisting of: (1) a workload instrument based on the NASA Task Load Index (NASA–TLX) framework and (2) the Work–Family Conflict Scale. Questionnaires were distributed in coordination with unit coordinators and scheduled to minimize disruption to clinical duties. Participants completed the survey voluntarily after receiving a brief explanation of the study purpose and confidentiality protections.

Instrument 1: Workload (NASA–TLX-based). Workload was measured using an instrument grounded in the NASA–TLX workload model, which conceptualizes perceived workload across six dimensions: mental demand, physical demand, temporal demand, performance, effort, and frustration (Hart & Staveland, 1988). In practice, the study computed a total workload score by aggregating dimension ratings to reflect overall perceived workload, consistent with the NASA–TLX emphasis on multidimensional subjective workload assessment (Hart & Staveland, 1988).

Instrument 2: Marital Role Conflict / Work–Family Conflict (Netemeyer et al., 1996). Marital role conflict was operationalized as work–family conflict, measured using the 10-item Work–Family Conflict Scale developed by Netemeyer, Boles, and McMurrian (1996), consisting of two 5-item subscales: Work-to-Family Conflict (WFC): work demands interfering with family roles; Family-to-Work Conflict (FWC): family demands interfering with work roles (Netemeyer et al., 1996). Responses were captured on a Likert-type agreement scale, and subscale scores were computed as mean scores (higher values indicating higher conflict), with an optional total index derived from the average of WFC and FWC when needed for a single overall indicator.

Table 1. Operational definition of variables and measurement

Variable	Operational Definition	Instrument / Source	Dimensions	Items	Response Format	Scoring
Workload (X)	Perceived mental, physical, and time pressure plus effort, performance appraisal, and frustration experienced while performing nursing tasks	NASA–TLX framework (Hart & Staveland, 1988)	MD, PD, TD, OP, EF, FR	6 dimensions	Numeric/scale rating (dimension-based)	Total workload computed by aggregating dimension ratings (higher = heavier workload)
Marital role conflict / Work–Family Conflict (Y)	Inter-role conflict where work and family demands are incompatible, measured bidirectionally	Work–Family Conflict Scale (Netemeyer et al., 1996); theoretical basis (Greenhaus	WFC, FWC	10 (5+5)	Likert agreement	Mean WFC and mean FWC; higher = higher conflict

Variable	Operational Definition	Instrument / Source	Dimensions	Items	Response Format	Scoring
		& Beutell, 1985)				

Data Analysis Procedures

Data were entered and analyzed using IBM SPSS (Version 24/26). The analysis proceeded in the following sequence: Data screening and preparation. The dataset was screened for completeness, entry errors, and implausible values. Descriptive summaries were produced for demographic characteristics (e.g., age group, tenure category) and for each study variable (means, standard deviations, and ranges). Assumption checks. Prior to inferential testing, assumptions relevant to Pearson correlation were evaluated: Normality of variables (and/or residuals) was assessed using Kolmogorov–Smirnov tests and distributional inspection. Linearity between workload and marital role conflict was evaluated using linearity tests (e.g., ANOVA-based deviation-from-linearity) and scatterplot inspection. These steps were conducted to justify the use of parametric correlation testing. Primary hypothesis test (correlational analysis). The main hypothesis was tested using Pearson product–moment correlation to estimate the association between workload (total workload score) and marital role conflict (overall conflict score and/or WFC/FWC indices). Statistical significance was evaluated at $\alpha = .05$ (two-tailed). The effect size was interpreted using the magnitude of r (direction and strength).

Validity, Reliability, and Ethical Considerations

Construct validity (theoretical grounding): The outcome construct is grounded in work–family conflict theory describing incompatible role pressures between work and family domains (Greenhaus & Beutell, 1985). Instrument validity: The Netemeyer et al. (1996) scale is a widely used, validated measure designed explicitly to capture WFC and FWC as distinct but related constructs (Netemeyer et al., 1996). Workload construct coverage: The NASA–TLX framework supports workload measurement as multidimensional (mental, physical, temporal, performance, effort, frustration), strengthening content coverage for perceived workload in complex task environments such as healthcare (Hart & Staveland, 1988). Internal consistency reliability (recommended practice): Internal consistency (e.g., Cronbach's alpha) can be estimated for multi-item subscales (WFC and FWC, and any multi-item workload operationalization used) within the study sample to confirm acceptable reliability for the present context.

Ethical considerations

The study followed standard ethical principles for research with human participants. Data collection was conducted after obtaining formal permission from the hospital management. Participation was voluntary with informed consent, and respondents were informed that they could withdraw at any time without penalty. To protect confidentiality, questionnaires were anonymized (no personally identifying information was recorded), and results were reported only in aggregate form. Data files were stored securely and used solely for academic purposes.

RESULTS AND DISCUSSION

The findings of this study clearly show that married female nurses at PKU Muhammadiyah Hospital Temanggung experienced moderate-to-high perceived workload and moderate marital role conflict, with a positive and statistically significant association between the two constructs. The respondent distribution indicates that most participants were in their prime working and family-demand years. The largest age group was 31–40 years (37.78%), followed by 41–50 years (34.44%), then 21–30 years (24.44%), and a

small proportion in 51–60 years (3.33%). Tenure was also substantial: 11–20 years (34.44%) and 21–30 years (26.67%) were the most represented categories. This composition matters analytically because mid-career nurses frequently face peak job responsibility, continued shift exposure, and intensified family obligations, all of which are well-established antecedents of work–family conflict through time- and strain-based mechanisms (Frone et al., 1992; Greenhaus & Beutell, 1985; Yildirim & Aycan, 2008).

Workload (NASA–TLX) levels

Workload was assessed with NASA–TLX (0–100). The overall workload score was M = 69.98, which falls in the moderate–high range. Dimension-level results show that the workload profile was dominated by cognitive/time-pressure demands and high exertion:

Table 2. NASA–TLX workload profile (N = 90)

Dimension	Mean	Category	Interpretation cue
Mental demand	73.2	High	High cognitive load, vigilance, decision pressure
Physical demand	69.4	Moderate–High	Sustained physical effort and task pacing
Temporal demand	71.8	High	Time pressure, speed requirements, rapid turnover
Performance (self-rated)	67.1	Moderate	Perceived adequacy with room for improvement
Effort	72.6	High	High total energy investment
Frustration	65.8	Moderate	Manageable but nontrivial stress/irritation

This pattern is consistent with the nature of nursing work: nurses must maintain continuous attention, triage priorities rapidly, and execute tasks under rigid time constraints and patient-safety accountability. Prior evidence indicates NASA–TLX is widely used and psychometrically useful for capturing perceived mental workload in clinical settings, including nursing samples (Hart & Staveland, 1988; Hoonakker et al., 2011).

Marital role conflict (Work–Family Conflict) levels

Marital role conflict in this thesis is operationalized as work–family conflict (WFC) and family–work conflict (FWC) using the Netemeyer et al. scales (1–5 Likert). Results indicate an overall moderate level of conflict, with WFC higher than FWC:

Table 3. Work–family conflict profile (N = 90)

Dimension	Mean	SD	Category
Work–Family Conflict (WFC)	2.49	1.16	Moderate
Family–Work Conflict (FWC)	2.20	1.08	Low–Moderate
Total (mean of WFC & FWC)	2.34	1.12	Moderate

The directionality pattern (WFC > FWC) means that work demands more frequently interfered with family/marital responsibilities than family interfered with work. This is theoretically coherent: in shift-based healthcare, work schedules are often non-negotiable, and clinical accountability norms can make it harder for nurses to "let family interrupt work," whereas work demands can readily displace family time and energy (Greenhaus & Beutell, 1985; Netemeyer et al., 1996). This bidirectional framing is also consistent with broader multidimensional measurement work in the work–family field (Carlson et al., 2000).

Assumption checks

Before testing the primary hypothesis, basic assumptions relevant to linear association were checked: Normality (Kolmogorov–Smirnov): Asymp. Sig. = 0.129 (> 0.05), indicating residuals were approximately normal for parametric correlation inference. Linearity (ANOVA test of linearity): Linearity Sig. = 0.002 (< 0.05) and Deviation from Linearity Sig. = 0.218 (> 0.05), indicating a statistically reliable linear component and no evidence of meaningful nonlinearity. These results support interpreting Pearson's *r* as an appropriate summary of association in this dataset.

Hypothesis test (Pearson correlation)

The core inferential finding is a positive and significant correlation between workload and marital role conflict:

Table 4. Association between workload and marital role conflict (N = 90)

Relationship	r	p	95% CI for r (Fisher z)	Variance explained (r^2)
Workload (NASA–TLX) ↔ Total conflict (WFC/FWC)	0.311	0.003	[0.111, 0.487]	0.0967 (9.67%)

Thus, higher perceived workload was associated with higher marital role conflict, with an effect size in the small-to-moderate range and a confidence interval that excludes zero. In practical terms, workload accounted for about 9.67% of the variance in marital role conflict—meaning workload matters, but it is not the only driver, which is consistent with meta-analytic evidence that work–family conflict is shaped by multiple work, family, and individual antecedents (Byron, 2005; Michel et al., 2011).

Convergence with foundational work–family conflict theory

The positive workload–conflict relationship aligns strongly with the classic work–family conflict formulation that conflict arises when time, strain, or behavior from one role makes participation in the other role more difficult (Greenhaus & Beutell, 1985). High NASA–TLX scores—especially temporal demand (71.8) and effort (72.6)—map directly onto time-based and strain-based conflict pathways.

Likewise, the bidirectional operationalization (WFC/FWC) is consistent with the dominant measurement tradition in work–family research (Carlson et al., 2000; Netemeyer et al., 1996), and the present pattern (WFC higher than FWC) is consistent with meta-analytic conclusions that work-domain variables tend to relate more strongly to work-to-family interference than family-domain variables relate to family-to-work interference (Byron, 2005; Michel et al., 2011).

Consistency with JD–R and COR explanations

The results are also compatible with two dominant explanatory frameworks: Job Demands–Resources (JD–R) model: High job demands (workload, time pressure, emotional labor) elevate strain and exhaustion, especially when job resources (control, staffing adequacy, supervisor support) are insufficient. Under JD–R logic, workload increases the probability that work will "spill" into family life through fatigue and reduced recovery capacity (Bakker & Demerouti, 2007; Demerouti et al., 2001). Conservation of Resources (COR) theory: Workload threatens and consumes valued resources (time, energy, emotional capacity). When resources are depleted, individuals have less capacity to invest in family roles, increasing conflict and distress (Hobfoll, 1989). Related COR-based modeling in the work–family domain similarly emphasizes that chronic demands can translate into cross-domain strain and downstream distress (Grandey & Cropanzano, 1999).

Alignment with nurse-specific empirical studies

Empirically, the findings match nursing research showing that work overload and irregular schedules are key predictors of work-to-family conflict. For example, Yildirim and Aycan (2008) found that work demands and scheduling characteristics significantly predicted WFC among nurses. The present findings also align with evidence that shift work is systematically associated with higher work–family conflict: a systematic review concluded that shift workers generally report higher WFC than workers with regular day schedules, with night and weekend characteristics often showing elevated risk (Wöhrmann et al., 2020). Similarly, applied ergonomics research comparing healthcare workers across schedule types reported meaningful differences in work–family interface outcomes by working schedules and psychosocial resources (Mauno et al., 2015).

Consistency with research on downstream consequences

Although this study did not test burnout, performance, or turnover directly, its results are consistent with established pathways in which elevated demands and WFC relate to adverse outcomes across work and nonwork domains. Foundational synthesis work shows widespread consequences of work-to-family conflict (Allen et al., 2000), and meta-analytic evidence indicates that WFC is reliably related to outcomes across domains (Amstad et al., 2011). In nurse-focused evidence, WFC is associated with burnout-related processes and distress pathways (Han & Kwak, 2022; Yuan et al., 2023) and shows a positive relationship with turnover intention in nursing samples (Yildiz et al., 2021).

Importance of Findings

The data show a coherent pattern: Workload is elevated (NASA–TLX total ≈ 70/100), with the heaviest pressures in mental demand, temporal demand, and effort. This suggests that perceived workload is not only physical but strongly cognitive/time-based—conditions that are especially prone to work-to-family interference because mental fatigue can persist beyond the shift and reduce the quality of family interactions (Hoonakker et al., 2011; Yildirim & Aycan, 2008). WFC exceeds FWC. This directional asymmetry indicates that for these nurses, the work role more frequently disrupts marital/family role functioning than the reverse, which is consistent with theory and measurement traditions emphasizing directionality of interference (Carlson et al., 2000; Greenhaus & Beutell, 1985; Netemeyer et al., 1996). The association between workload and conflict is positive and reliable. The 95% CI suggests the relationship is unlikely to be trivial in the population (approximately 0.11 to 0.49). While 9.67% explained variance is moderate, it is practically meaningful in occupational health contexts where even small-to-moderate effects can translate into large system-level consequences when many workers are exposed (Allen et al., 2000; Amstad et al., 2011). The results support H1 and reject H0: there is a significant positive relationship between workload and marital role conflict. The direction aligns with theoretical expectations: higher workload increases the probability of time and strain spillover into the marital/family domain (Frone et al., 1992; Greenhaus & Beutell, 1985).

Because the design is correlational and cross-sectional, several alternative explanations remain plausible: Reverse directionality: Nurses experiencing marital strain/conflict may report higher perceived workload because psychological distress can amplify threat appraisal, increase fatigue, and reduce perceived control—raising NASA–TLX ratings even if objective workload is unchanged (Grandey & Cropanzano, 1999; Hobfoll, 1989). Third-variable confounding: Unmeasured variables—such as sleep disturbance, staffing adequacy, supervisor support, number/age of children, or commuting time—could influence both workload perceptions and work–family conflict. Evidence indicates sleep disturbance is meaningfully intertwined with WFC and burnout-related outcomes in nurses (Han & Kwak, 2022). Common-method bias: Both main constructs were measured via self-report in a single survey period. This can inflate associations through shared response tendencies (e.g., negative affectivity). While the effect size here is not

so large as to strongly suggest severe inflation, the possibility should still be acknowledged (Michel et al., 2011).

This study contributes to work–family and nursing literature in three main ways: Contextual evidence from Indonesian hospital nursing: Adding evidence from an Indonesian hospital context extends the cross-context testing of WFC frameworks that have been heavily developed in other settings (Allen et al., 2000; Amstad et al., 2011). Workload conceptualization beyond hours worked: By using NASA–TLX, the study emphasizes workload as perceived cognitive/temporal/effort demand, not only objective overtime or patient ratios. This is theoretically valuable because WFC is driven by perceived time scarcity and strain, which NASA–TLX captures directly (Hart & Staveland, 1988; Hoonakker et al., 2011). Directional profile (WFC > FWC) with moderate effect size: The pattern aligns with meta-analytic expectations that work factors relate more strongly to WFC than family factors do, reinforcing the idea that interventions should not be limited to individual coping but should also target work design (Byron, 2005; Michel et al., 2011).

Practical and policy implications

Even with a modest association, the results justify action because nurses are a safety-critical workforce. Several implications follow: Workload management and staffing adequacy. Hospital management should treat workload as a system variable. Evidence in nursing links shift characteristics and work design to burnout and well-being outcomes, suggesting that staffing adequacy and workload distribution matter for sustainable performance (Dall'Ora et al., 2023; Demerouti et al., 2001). Shift design and schedule predictability. Because temporal demand is high, interventions targeting scheduling can directly reduce time-based WFC: limiting consecutive night shifts, ensuring predictable rosters, protecting off-duty recovery windows, and minimizing last-minute shift changes. Evidence links long and unfavorable shift patterns with burnout and dissatisfaction outcomes (Dall'Ora et al., 2015; Wöhrmann et al., 2020). Family-supportive supervision and work–family resources. Supervisor behaviors can function as job resources that buffer demand–strain spillover. Family Supportive Supervisor Behaviors (FSSB) are a validated construct (Hammer et al., 2009), and meta-analytic evidence indicates that work–family-specific supervisory and organizational support is strongly related to lower work–family conflict (French et al., 2018; Kossek et al., 2011). Integrated occupational health: sleep and recovery. Given evidence connecting WFC, sleep disturbance, and burnout in nurses, fatigue-risk management should be integrated with work–family support (e.g., rest breaks, protected handover time, recovery education, screening for chronic sleep disruption) (Han & Kwak, 2022). Marital/family support programming. Because the outcome is marital role conflict, hospitals can ethically support nurses via counseling access (EAP-style services), couple/family communication workshops, and referral pathways—especially for shift workers in peak family-demand life stages (Allen et al., 2000).

CONCLUSION

This study aimed to examine the relationship between perceived workload and marital role conflict among married female nurses working at PKU Muhammadiyah Hospital Temanggung. The key findings indicate a positive and statistically significant association between workload and marital role conflict ($r = 0.311$, $p = 0.003$), suggesting that higher workload is linked to greater conflict; descriptively, nurses reported moderate–high workload (NASA-TLX M = 69.98) and moderate overall marital role conflict (M = 2.34), with work-to-family conflict (WFC M = 2.49) higher than family-to-work conflict (FWC M = 2.20). The study contributes to theory by reinforcing classic work–family conflict perspectives and the job demands framework in a nursing context, and contributes to practice/policy by providing empirical support for hospital management to optimize staffing, redistribute tasks, and implement fairer shift rotation and work–life support (e.g., stress management, supervisor support, and family-friendly scheduling) to reduce spillover into family life. Future research is recommended to use longitudinal or mixed-method designs and

test mediators/moderators (e.g., job resources, organizational support, perceived stress, coping strategies, marital satisfaction, childcare demands) to clarify mechanisms and identify the most effective intervention levers.

REFERENCES

Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J., & Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *JAMA, 288*(16), 1987–1993. https://doi.org/10.1001/jama.288.16.1987

Allen, T. D., Herst, D. E. L., Bruck, C. S., & Sutton, M. (2000). Consequences associated with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology, 5*(2), 278–308. https://doi.org/10.1037/1076-8998.5.2.278

Amstad, F. T., Meier, L. L., Fasel, U., Elfering, A., & Semmer, N. K. (2011). A meta-analysis of work–family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *Journal of Occupational Health Psychology, 16*(2), 151–169. https://doi.org/10.1037/a0022170

Bakker, A. B., & Demerouti, E. (2007). The Job Demands–Resources model: State of the art. *Journal of Managerial Psychology, 22*(3), 309–328. https://doi.org/10.1108/02683940710733115

Byron, K. (2005). A meta-analytic review of work–family conflict and its antecedents. *Journal of Vocational Behavior, 67*(2), 169–198. https://doi.org/10.1016/j.jvb.2004.08.009

Carlson, D. S., Kacmar, K. M., & Williams, L. J. (2000). Construction and initial validation of a multidimensional measure of work–family conflict. *Journal of Vocational Behavior, 56*(2), 249–276. https://doi.org/10.1006/jvbe.1999.1713

Carroll, S. J., Hill, E. J., Yorgason, J. B., Larson, J. H., & Sandberg, J. G. (2013). Couple communication as a mediator between work–family conflict and marital satisfaction. *Contemporary Family Therapy, 35*(3), 530–545. https://doi.org/10.1007/s10591-013-9237-7

Dall'Ora, C., Ball, J., Recio-Saucedo, A., & Griffiths, P. (2016). Characteristics of shift work and their impact on employee performance and wellbeing: A literature review. *International Journal of Nursing Studies, 57*, 12–27. https://doi.org/10.1016/j.ijnurstu.2016.01.007

Dall'Ora, C., Ejebu, O.-Z., Ball, J., & Griffiths, P. (2023). Shift work characteristics and burnout among nurses: Cross-sectional survey. *Occupational Medicine, 73*(4), 199–204. https://doi.org/10.1093/occmed/kqad046

Dall'Ora, C., Griffiths, P., Ball, J., Simon, M., & Aiken, L. H. (2015). Association of 12 h shifts and nurses' job satisfaction, burnout and intention to leave: Findings from a cross-sectional study of 12 European countries. *BMJ Open, 5*(9), e008331. https://doi.org/10.1136/bmjopen-2015-008331

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands–resources model of burnout. *Journal of Applied Psychology, 86*(3), 499–512. https://doi.org/10.1037/0021-9010.86.3.499

Dilmaghani, R. B., Armoon, B., & Fattah Moghaddam, L. (2022). Work-family conflict and the professional quality of life and their sociodemographic characteristics among nurses: A cross-sectional study in Tehran, Iran. *BMC Nursing, 21*(1), 289. https://doi.org/10.1186/s12912-022-01069-9

Fellows, K. J., Chiu, H.-Y., Hill, E. J., & Hawkins, A. J. (2016). Work–family conflict and couple relationship quality: A meta-analytic study. *Journal of Family and Economic Issues, 37*(4), 509–518. https://doi.org/10.1007/s10834-015-9450-7

French, K. A., Dumani, S., Allen, T. D., & Shockley, K. M. (2018). A meta-analysis of work–family conflict and social support. *Psychological Bulletin, 144*(3), 284–314. https://doi.org/10.1037/bul0000120

Frone, M. R., Russell, M., & Cooper, M. L. (1992). Antecedents and outcomes of work–family conflict: Testing a model of the work–family interface. *Journal of Applied Psychology, 77*(1), 65–78. https://doi.org/10.1037/0021-9010.77.1.65

Grandey, A. A., & Cropanzano, R. (1999). The conservation of resources model applied to work–family conflict and strain. *Journal of Vocational Behavior, 54*(2), 350–370. https://doi.org/10.1006/jvbe.1998.1666

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review, 10*(1), 76–88. https://doi.org/10.5465/amr.1985.4277352

Hammer, L. B., Kossek, E. E., Yragui, N. L., Bodner, T. E., & Hanson, G. C. (2009). Development and validation of a multidimensional measure of family supportive supervisor behaviors (FSSB). *Journal of Management, 35*(4), 837–856. https://doi.org/10.1177/0149206308328510

Han, S., & Kwak, S. (2022). The effect of sleep disturbance on the association between work–family conflict and burnout in nurses: A cross-sectional study from South Korea. *BMC Nursing, 21*(1), 354. https://doi.org/10.1186/s12912-022-01114-7

Hart, S. G., & Staveland, L. E. (1988). Development of NASA-TLX (Task Load Index): Results of empirical and theoretical research. In P. A. Hancock & N. Meshkati (Eds.), *Human mental workload* (pp. 139–183). North-Holland. https://doi.org/10.1016/S0166-4115(08)62386-9

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

Hoonakker, P., Carayon, P., Gurses, A. P., Brown, R., McGuire, K., Khunlertkit, A., & Walker, J. M. (2011). Measuring workload of ICU nurses with a questionnaire survey: The NASA Task Load Index (TLX). *IIE Transactions on Healthcare Systems Engineering, 1*(2), 131–143. https://doi.org/10.1080/19488300.2011.609524

Kossek, E. E., Pichler, S., Bodner, T., & Hammer, L. B. (2011). Workplace social support and work–family conflict: A meta-analysis clarifying the influence of general and work–family-specific supervisor and organizational support. *Personnel Psychology, 64*(2), 289–313. https://doi.org/10.1111/j.1744-6570.2011.01211.x

Li, L. Z., Yang, P., Singer, S. J., Pfeffer, J., Mathur, M. B., & Shanafelt, T. (2024). Nurse burnout and patient safety, satisfaction, and quality of care: A systematic review and meta-analysis. *JAMA Network Open, 7*(11), e2443059. https://doi.org/10.1001/jamanetworkopen.2024.43059

Mauno, S., Ruokolainen, M., & Kinnunen, U. (2015). Work–family conflict and enrichment from the perspective of psychosocial resources: Comparing Finnish healthcare workers by working schedules. *Applied Ergonomics, 48*, 86–94. https://doi.org/10.1016/j.apergo.2014.11.009

Michel, J. S., Kotrba, L. M., Mitchelson, J. K., Clark, M. A., & Baltes, B. B. (2011). Antecedents of work–family conflict: A meta-analytic review. *Journal of Organizational Behavior, 32*(5), 689–725. https://doi.org/10.1002/job.695

Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work–family conflict and family–work conflict scales. *Journal of Applied Psychology, 81*(4), 400–410. https://doi.org/10.1037/0021-9010.81.4.400

Park, S., Yoo, J., Lee, Y., Baker DeGuzman, P., Kang, M.-J., Dykes, P. C., Shin, S. Y., & Cha, W. C. (2024). Quantifying emergency department nursing workload at the task level using NASA-TLX: An exploratory descriptive study. *International Emergency Nursing, 74*, 101424. https://doi.org/10.1016/j.ienj.2024.101424

Rantanen, J., Kinnunen, U., Feldt, T., & Pulkkinen, L. (2008). Work–family conflict and psychological well-being: Stability and cross-lagged relations within one- and six-year follow-ups. *Journal of Vocational Behavior, 73*(1), 37–51. https://doi.org/10.1016/j.jvb.2008.01.001

Wang, M.-L., & Tsai, L.-J. (2014). Work-family conflict and job performance in nurses: The moderating effects of social support. *Journal of Nursing Research, 22*(3), 200–207. https://doi.org/10.1097/jnr.0000000000000040

Wöhrmann, A. M., Müller, G., & Ewert, K. (2020). Shift work and work-family conflict: A systematic review. *Sozialpolitik.ch, 3*(2020), Article 3.2. https://doi.org/10.18753/2297-8224-165

Yarifard, K., Abravesh, A., Sokhanvar, M., Mehrtak, M., & Mousazadeh, Y. (2023). Work-family conflict, burnout, and related factors among nurses during the COVID-19 pandemic in the Northwest of Iran. *Work, 76*(1), 47–59. https://doi.org/10.3233/WOR-220210

Yildirim, D., & Aycan, Z. (2008). Nurses' work demands and work–family conflict: A questionnaire survey. *International Journal of Nursing Studies, 45*(9), 1366–1378. https://doi.org/10.1016/j.ijnurstu.2007.10.010

Yildiz, B., Yildiz, H., & Ayaz Arda, O. (2021). Relationship between work-family conflict and turnover intention in nurses: A meta-analytic review. *Journal of Advanced Nursing, 77*(8), 3317–3330. https://doi.org/10.1111/jan.14846

Yuan, L., Li, Y., Yan, H., Xiao, C., Liu, D., Liu, X., Guan, Y., & Yu, B. (2023). Effects of work-family conflict and anxiety in the relationship between work-related stress and job burnout in Chinese female nurses: A chained mediation modeling analysis. *Journal of Affective Disorders, 324*, 309–316. https://doi.org/10.1016/j.jad.2022.12.112