

Shift Work, Social Support, and Work Motivation Among Terminal Employees: A Case Study of Gambut Barakat Terminal, South Kalimantan

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Abstract. This study investigates how a shift work system influences employees' work motivation by considering social support as a mediating mechanism. The research took place at Gambut Barakat Type A Terminal, South Kalimantan, a public service facility that operates continuously with rotating morning, afternoon, and night schedules. A quantitative causal comparative design was used, and all 35 shift employees were surveyed with standardized instruments for shift work and social support. Data were analyzed using Partial Least Squares Structural Equation Modeling. The results show that the shift work system has a positive effect on work motivation ($\beta=0.536$) and also increases perceived social support ($\beta=0.763$). Social support positively affects motivation ($\beta=0.383$) and partially mediates the relationship between shift work and motivation ($\beta=0.409$). The model yields $R^2=0.744$, indicating that 74.4% of the variance in motivation is explained by the combination of shift work and social support. These findings highlight the importance of transparent and well managed rosters accompanied by a supportive interpersonal climate. In continuous public service operations, equitable scheduling together with peer and supervisory support can strengthen employee motivation and help sustain performance over time.

Keywords: Work Shift; Social Support; Terminal; Work Motivation.

Abstrak. Studi ini mengkaji bagaimana sistem kerja shift memengaruhi motivasi kerja karyawan, dengan mempertimbangkan dukungan sosial sebagai mekanisme mediasi. Penelitian dilakukan di Terminal Tipe A Gambut Barakat, Kalimantan Selatan, sebuah fasilitas layanan publik yang beroperasi terus menerus dengan jadwal rotasi pagi, siang, dan malam. Desain komparatif kausal kuantitatif digunakan, dan seluruh 35 karyawan shift disurvei menggunakan instrumen standar untuk kerja shift dan dukungan sosial. Data dianalisis menggunakan Partial Least Squares Structural Equation Modeling. Hasilnya menunjukkan bahwa sistem kerja shift memiliki dampak positif terhadap motivasi kerja ($\beta=0,536$) dan juga meningkatkan dukungan sosial yang dirasakan ($\beta=0,763$). Dukungan sosial memiliki efek positif terhadap motivasi ($\beta=0,383$) dan secara parsial memediasi hubungan antara kerja shift dan motivasi ($\beta=0,409$). Model tersebut menghasilkan R^2 sebesar 0,744, yang menunjukkan bahwa 74,4% varians dalam motivasi

dijelaskan oleh efek gabungan kerja shift dan dukungan sosial. Temuan ini menyoroti pentingnya daftar tugas yang transparan dan terkelola dengan baik, disertai dengan iklim interpersonal yang suportif. Dalam operasi pelayanan publik yang berkelanjutan, penjadwalan yang adil, dikombinasikan dengan dukungan rekan kerja dan atasan, dapat meningkatkan motivasi karyawan dan membantu mempertahankan kinerja dari waktu ke waktu.

Kata kunci: Dukungan sosial; Motivasi kerja; Sistem kerja shift; Terminal.

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BACKGROUND

Shift work is integral to sustaining 24-hour operations in critical sectors such as transportation, manufacturing, healthcare, and security. Global estimates indicate that about one fifth of the workforce engages in shift schedules, underscoring its structural importance for economic continuity and public service delivery while raising material risks for worker well-being and performance (International Labour Organization, 2021). Health authorities also flag night work among risk factors linked to chronic conditions, adding policy significance for organizations that operate continuously (World Health Organization, 2020).

Indonesia mirrors these patterns. National statistics report more than seven million formal workers on non-standard schedules, including rotating shifts, to maintain uninterrupted services across public and private sectors (Badan Pusat Statistik, 2023). While this reliance secures availability, it simultaneously heightens concerns about attendance, fatigue, motivation, and service consistency that are directly visible to citizens and users of public facilities (Loef et al., 2023).

Terminal Type A Gambut Barakat in South Kalimantan operates 24/7 through rotating morning, afternoon, and night rosters. Preliminary internal observations indicate relatively lower attendance during night shifts, more frequent sleep complaints, and lower satisfaction with managerial communication compared with day shifts. These symptoms align with documented effects of night work on sleep and functioning, suggesting operational risks if not addressed systematically (Giurge & Woolley, 2022; Q. J. Wu et al., 2022).

Related studies on shift work have expanded, yet much of the evidence concentrates on fatigue and burnout rather than motivational processes. Research in continuous public service settings such as transportation terminals remains sparse, and many designs do not explicitly test mediation pathways that could explain how workplace conditions translate into motivation. At the same time, evidence shows that supportive climates and feedback strengthen engagement and adaptive functioning under demanding schedules (Jolly et al., 2021; Schoofs et al., 2022), while recent Indonesian studies emphasize the need for context-specific evidence in service organizations (Harini et al., 2024; Z. Wen et al., 2024; Q. J. Wu et al., 2022).

This gap creates both urgency and novelty. Urgency arises from the health and performance implications of round-the-clock service and the visible impact of staff readiness on user experience. Novelty lies in testing whether social support operates as a pathway through which transparent and well-managed rosters translate into higher work motivation in a continuously operating terminal, addressing an underexplored interface between scheduling practices and motivational outcomes in Indonesia.

Accordingly, this study sets four objectives in the context of Terminal Type A Gambut Barakat: to examine the direct effect of the shift work system on work motivation, to assess the effect of the shift work system on social support, to evaluate the effect of social support on work motivation, and to determine whether social support mediates the relationship between the shift work system and work motivation. These objectives are designed to generate actionable guidance for scheduling governance and workplace support in continuous public service operations.

THEORETICAL REVIEW

Work-Shift Theory and Circadian Disruption

Theoretically, this study draws on multiple frameworks. Work-Shift Theory emphasizes that shift duration, rotation patterns, and rest intervals are critical for physiological and psychological adaptation (Vallières et al., 2024). The Theory of Circadian Disruption explains how irregular schedules impair performance (Vansteenkiste et al., 2024). The Job Demand–Control Model (Wang et al., 2023) posits that high demands with low control or support increase strain, while the Job Demand–Resources (JD-R) Model (Demerouti et al., 2001) identifies social support as a resource buffering adverse job demands. These frameworks are reinforced by evidence linking poorly managed shift work with fatigue, disrupted recovery, and reduced motivation (Harris, 2024; Loefer et al., 2023; Q. J. Wu et al., 2022).

Work Motivation Theories

Work motivation, as defined by Robbins & Judge (2021), refers to the intensity, direction, and persistence of effort toward achieving goals. Self-Determination Theory (Deci & Ryan, 1985) highlights autonomy, competence, and relatedness as fundamental needs influencing motivation, while Two-Factor Theory (Herzberg et al., 1959) distinguishes between motivators (achievement, recognition) and hygiene factors (working conditions, salary). Expectancy Theory (Vroom, 1964) further suggests that motivation depends on expectancy, instrumentality, and valence.

Social Support Theories

Social support is another key construct. The Social Support Buffering Model (Cohen & Wills, 1985) posits that emotional, instrumental, informational, and appraisal support reduce the negative effects of stress. Social Exchange Theory (Blau, 1964) frames supportive environments as fostering reciprocal loyalty, while the Conservation of Resources Theory (Hobfoll, 1989) views social support as a resource maintaining energy and adaptive capacity. Empirical findings confirm that strong workplace support sustains motivation in demanding roles (Jolly et al., 2021; Schoofs et al., 2022).

Hypotheses Development

Shift work influences employees' physiological and psychological states. Irregular schedules often disrupt circadian rhythms, reduce recovery, and impair well-being (Costa, 1996; Wang et al., 2023). However, when managed effectively, structured rotations can maintain service continuity and sustain motivation.

H1: Shift work systems have a significant effect on work motivation.

Work schedules also shape opportunities for interaction, communication, and peer support. Employees on demanding or irregular shifts often depend on supervisors and colleagues for emotional and instrumental assistance (Mori et al., 2024).

H2: Shift work systems have a significant effect on social support.

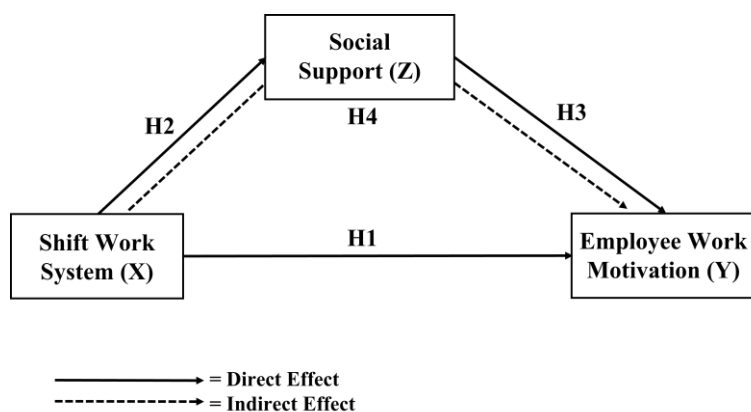
Social support fulfills basic psychological needs and reduces the negative effects of job stress. Strong support from supervisors and co-workers fosters engagement, satisfaction, and persistence of effort (Cohen & Wills, 1985; Wang et al., 2023)

H3: Social support has a significant effect on work motivation.

The Job Demand–Resources Model (Demerouti, 2023) and the Social Support Buffering Model (Cohen & Wills, 1985) suggest that support mechanisms mitigate the adverse effects of job demands. In this context, social support is expected to mediate the relationship between shift work and work motivation.

H4: Social support mediates the effect of shift work systems on work motivation.

Thus, the four hypotheses are integrated into the conceptual framework illustrated in Figure 1, which depicts the direct and mediating relationships among shift work, social support, and work motivation.



Source: Author's Processed Data (2025).

The conceptual framework in Figure 1 reflects an integrative approach linking job demands and resources to motivational outcomes, consistent with findings that well-managed shift schedules combined with strong workplace support can sustain performance despite high demands (Harris, 2024; Loef et al., 2023). It provides a theoretical basis for empirically testing how mediating factors, such as social support, alter the direct impact of shift work on employee motivation in continuous-service public transportation settings.

RESEARCH METHODS

This research adopted a quantitative causal–explanatory design to evaluate how a shift work system influences employees’ work motivation, with social support specified as a mediating construct. The empirical setting was Terminal Type A Gambut Barakat in South Kalimantan, an organization that operates continuously for twenty-four hours with rotating morning, afternoon, and night rosters typical of transportation hubs (Åkerstedt et al., 2022; Vallières et al., 2024). The target population comprised all 35 shift employees. Given the finite and relatively small population, a census approach was implemented so that every eligible employee was included in the sample (Etikan & Bala, 2017). Primary data were gathered between May and July 2025 using a structured questionnaire designed for organizational shift-work contexts and consistent with methodological guidance for this field (Karhula et al., 2020; Wang et al., 2023).

Three latent variables were measured. The Shift Work System (X) was assessed with the Perception of Effects of Shiftwork Questionnaire, covering fatigue, sleep quality, work–life balance, and adaptation (Vallières et al., 2024; Vansteenkiste et al., 2024). Social Support (Z) was captured with the Klijn and Schoofs Social Support Scale, encompassing emotional, instrumental, informational, and appraisal support (Schoofs et al., 2022). Work Motivation (Y) was measured using the Multidimensional Work Motivation Scale developed by Gagné (2022), which includes intrinsic motivation, identified regulation, introjected regulation, and extrinsic motivation. All indicators used a five-point Likert response format. Content validity was verified through expert review, and reliability met the recommended threshold with Cronbach’s alpha values exceeding 0.70 (Hair et al., 2024).

Data were analyzed with Partial Least Squares Structural Equation Modeling in SmartPLS 4.0. The outer model evaluation covered indicator reliability, composite reliability, convergent validity, and discriminant validity. The inner model evaluation comprised multicollinearity checks via VIF, estimation of path coefficients, effect sizes (f^2), and predictive relevance (Q^2). Hypotheses were tested through bootstrapping with 5,000 resamples (Hair et al., 2024). PLS-SEM was selected due to its suitability for small samples, its robustness for mediation testing, and its capacity to estimate complex relationships in social science research.

RESULTS AND DISCUSSIONS

1. Profile of Terminal Type A Gambut Barakat and Respondent Characteristics

Terminal Tipe A Gambut Barakat is a major land transportation hub in South Kalimantan under the Ministry of Transportation through BPTD Region XV. Strategically located in Gambut District, the terminal operates 24/7 through a three-shift schedule, morning, afternoon, and night, ensuring continuous service for intercity and local passengers. The workforce consists of field officers, security personnel, cleaning staff, and operational supervisors, with task distribution designed to balance workloads and minimize fatigue, consistent with occupational health recommendations for shift work (Karhula et al., 2020; Vallières et al., 2024).

Beyond transportation functions, the terminal contributes to the local economy by supporting informal sectors such as street vendors and motorcycle taxi drivers, reflecting the role of transport hubs in stimulating local business activities (Q. J. Wu et al., 2022).

However, challenges typical of shift work sleep disruption, fatigue, and reduced family interaction, are present, underscoring the importance of social support in maintaining employee well-being. (Liao et al., 2025; Thoits, 2011).

The study surveyed 35 employees from various divisions, most aged 26–40 (80%), female (57.1%), and with balanced educational backgrounds: 51.4% bachelor's degree, 48.6% high school level. The majority work in the Information and Service Division (60%), have 5–10 years of experience (65.7%), and are scheduled for morning–afternoon shifts (62.9%), aligning with peak operational hours. This demographic composition reflects a stable, experienced workforce with strong involvement in public-facing service delivery.

2. Descriptive Analysis of Key Variables

Descriptive results indicate that the shift work system significantly impacts employees' health, social relationships, and career quality. Fatigue after night shifts (mean 4.31) and perceived career limitations (mean 4.31) were the highest-rated concerns, consistent with prior findings on the adverse effects of night work on physical stamina and career progression (Ahlstedt et al., 2024; Zhang et al., 2024). Social relationship challenges, such as limited family time (mean 4.23), further highlight the psychosocial strain inherent in non-standard schedules.

Social support levels were generally high, with the strongest indicator being constructive feedback from supervisors (mean 4.37), which literature identifies as a key motivator for employee engagement and resilience under demanding work conditions. (Demerouti et al., 2001). Other aspects such as peer assistance, managerial attention, and interpersonal harmony were also rated positively, suggesting a supportive work environment that may buffer the negative consequences of shift work.

Employee motivation was dominated by intrinsic factors and identified regulation, reflecting alignment between personal values and job significance. (Ryan & Deci, 2020). Recognition from supervisors (mean 4.23) emerged as a strong external motivator, while moderate amotivation scores indicate some uncertainty about long-term purpose, a common pattern in shift-based occupations. (den Broeck et al., 2016). These findings reinforce the relevance of social support and motivation as mediators between shift work conditions and performance outcomes.

3. Instrument Validity and Reliability Testing

The outer model evaluation confirmed that the constructs of Shift Work System (X), Social Support (Z), and Work Motivation (Y) met the validity and reliability requirements. All items achieved outer loading values above 0.70, AVE values exceeded 0.50, and both Cronbach's alpha and composite reliability (CR) were well above the 0.70 threshold, indicating strong measurement properties (Hair et al., 2024).

Based on Table 1, all constructs achieved high average outer loadings (≥ 0.80), indicating strong indicator contributions to their respective latent variables, exceeding the recommended minimum of 0.70 (Hair et al., 2024). The AVE values for all constructs, 0.698 for Shift Work System, 0.726 for Work Motivation, and 0.652 for Social Support, were above the 0.50 threshold, confirming that more than half of the variance in the indicators was explained by the constructs (Fornell & Larcker, 1981). Reliability measures also demonstrated excellent internal consistency, with Cronbach's alpha and CR values exceeding 0.90 (Nunnally & Bernstein, 1994). These results confirm that the

measurement model is valid and reliable, providing a solid basis for subsequent structural model analysis.

Table 1. Outer Model Results

Variable	Number of Items	Avg. Outer Loading	AVE	Cronbach's Alpha	Composite Reliability	Status
Shift Work System (X)	6	0.835	0.698	0.913	0.933	Valid & Reliable
Work Motivation (Y)	8	0.841	0.726	0.937	0.949	Valid & Reliable
Social Support (Z)	6	0.806	0.652	0.911	0.929	Valid & Reliable

Source: Primary data processed with SmartPLS 4.0 (2025).

4. Structural Model Evaluation (Inner Model)

The inner model assessment was conducted to evaluate the explanatory power, effect size, predictive relevance, and overall model fit. These evaluations were based on R^2 , f^2 , Q^2 , and Goodness-of-Fit (GoF) values, following the guidelines of (Hair et al., 2024).

Table 2. Inner Model Evaluation

Indicator	Result	Interpretation Criteria	Status
R^2 Social Support (Z)	0.582	Moderate (0.33–0.67)	Good explanatory power
R^2 Work Motivation (Y)	0.747	Substantial (>0.67)	Strong explanatory power
f^2 X → Z	1.392	Large (>0.35)	Strong effect
f^2 X → Y	0.243	Small–Medium (>0.15)	Moderate effect
f^2 Z → Y	0.474	Medium (>0.15)	Moderate–Strong effect
Q^2 Predictive Relevance	0.894	>0 (High)	High predictive relevance
Goodness-of-Fit (GoF)	0.698	Large (>0.36)	Excellent model fit

Source: Primary data processed with SmartPLS 4.0 (2025).

Based on Table 2, the R^2 values indicate that the model explains 58.2% of the variance in Social Support and 74.7% of the variance in Work Motivation, suggesting moderate-to-high explanatory power (Hair et al., 2021). The effect size (f^2) results show that the Shift Work System has a large impact on Social Support (1.392) and a moderate impact on Work Motivation (0.243), while Social Support has a moderate-to-strong effect on Work Motivation (0.474). The Q^2 value of 0.894 confirms strong predictive relevance, and the GoF value of 0.698 indicates excellent model fit (Liao et al. 2025). These findings demonstrate that the structural model is both robust and highly predictive, making it suitable for hypothesis testing in the next stage.

5. Hypothesis Testing Results

The hypothesis testing was carried out using the bootstrapping procedure in SmartPLS 4.0 to evaluate both direct and indirect effects among the variables Shift Work System (X), Social Support (Z), and Work Motivation (Y). Significance was determined using a t-statistic > 1.96 and p-value < 0.05 (Hair et al., 2024).

Table 3. Hypothesis Testing Results

Hypothesis	Relationship	β (Path Coefficient)	t-statistic	p-value	Result
H1	$X \rightarrow Y$ (Shift Work \rightarrow Work Motivation)	0.536	4.759	0	Accepted
H2	$X \rightarrow Z$ (Shift Work \rightarrow Social Support)	0.763	12.188	0	Accepted
H3	$Z \rightarrow Y$ (Social Support \rightarrow Work Motivation)	0.383	3.279	0.001	Accepted
H4	$X \rightarrow Z \rightarrow Y$ (Indirect Effect)	0.409	4.166	0	Accepted

Source: Primary data processed with SmartPLS 4.0 (2025).

Based on Table 3, all hypotheses are statistically supported with p-values < 0.05 , confirming significant relationships among the variables. Shift Work System directly enhances both Work Motivation ($\beta = 0.536$) and Social Support ($\beta = 0.763$), while Social Support significantly contributes to higher Work Motivation ($\beta = 0.383$). The indirect effect ($\beta = 0.409$) indicates that Social Support partially mediates the relationship between Shift Work System and Work Motivation, amplifying the positive impact of shift arrangements on employee motivation when strong workplace support is present. These results align with prior studies emphasizing the critical role of social support in mitigating the challenges of non-standard work schedules (Demerouti et al., 2001; Trépanier et al., 2022).

Discussions

1. The Effect of Shift Work System on Work Motivation

This research establishes that a well-designed shift work system has a significant and positive impact on employees' work motivation, thereby confirming the first hypothesis. The evidence directly speaks to the study's aim by showing that structured and transparent rosters cultivate enthusiasm and adaptive behavior in high-demand operations through predictable rotations, fair task distribution, and clear handover windows. From a theoretical standpoint, the result aligns with the Job Demands–Resources (JD–R) Model, in which well-managed shift arrangements operate as job resources that temper fatigue, provide clarity and control, and enable recovery opportunities. The finding is also compatible with Social Support Theory, since orderly work contexts tend to reinforce a sense of belonging and commitment by stabilizing team routines and expectations.

Convergence with prior scholarship is evident. Giurge & Woolley (2022), and Munn et al. (2025) report that well-structured nonstandard schedules can bolster intrinsic motivation by enhancing predictability and role clarity, while Åkerstedt et al. (2022) show that effective shift designs mitigate sleep disruption, thereby improving alertness and day-to-day vigor. A divergence emerges when compared with Albishri & Zamzami (2021), who emphasize work–life balance as the dominant pathway to motivation; the present study indicates that procedural clarity and perceived fairness in scheduling constitute a more immediate and powerful mechanism. Work–life balance remains important, yet the proximal lever in shift-based settings appears to be the transparency and equity of the roster itself.

Managerial implications follow from these patterns. Organizations that depend on continuous operations should institutionalize fairness and predictability by publishing schedules well in advance, rotating desirable and undesirable shifts equitably, guaranteeing minimum rest intervals, coordinating overlap periods for handovers, and

providing transparent channels for preference swaps. Such practices transform the shift system into a reliable job resource that sustains motivation over time, supports employees' adaptability in demanding contexts, and strengthens long-term engagement.

2. The Effect of Shift Work System on Social Support

The analysis indicates a clear and statistically meaningful positive association between the shift work system and social support, thereby substantiating the second hypothesis. Fair, transparent, and well-organized scheduling appears to expand opportunities for collegial interaction, reciprocal assistance, and routine handovers that cultivate trust. By distributing workloads predictably and aligning overlapping periods among teams, the roster itself functions as a structural mechanism that nurtures inter-personal ties and collaborative behavior, which directly addresses the study's objective.

From a theoretical perspective, the finding coheres with Social Support Theory, which maintains that orderly and predictable environments enable mutual aid and emotional reassurance to flourish (Jolly et al., 2021). The result is also compatible with the Job Demands–Resources framework, wherein supportive relationships constitute pivotal job resources that help employees absorb and neutralize demands while strengthening cohesion and shared efficacy. In practice, roster regularity, clear rotations, and planned overlap windows create routine touchpoints for peer coaching, informational exchange, and timely feedback, thereby translating a structural design choice into a social resource.

Corroborating evidence appears in Mirafuentes, and who observed that organized shift systems heighten team cohesion, and in Nawawi et al. (2025), who reported that transparent shift arrangements reinforce peer-to-peer support networks. A divergence emerges relative to Yulianingsih and Hartanto (2023), dan Kim et al. (2024) who emphasized managerial interventions as the principal source of social support in shift settings; the present analysis identifies the architecture of the shift system itself as the more influential lever. Practical implications follow directly: organizations should treat scheduling as a strategic instrument by engineering predictable rotations, intentional overlap for handovers, team-based rosters, and recognition routines that institutionalize helping behaviors, thereby deepening workplace relationships and mutual trust.

3. The Effect of Social Support on Work Motivation

The findings of this research demonstrate that social support exerts a significant and positive influence on employee work motivation, thereby confirming the validity of the third hypothesis. In accordance with the Buffering Hypothesis proposed by Cohen and Wills (1985), the availability of emotional, instrumental, informational, and appraisal support enhances employees' capacity to sustain motivation even when confronted with physical exhaustion and social limitations caused by shift work. Key elements such as constructive feedback from supervisors, cooperative assistance among peers, and acknowledgment of employees' contributions were identified as the most critical forms of support. These aspects illustrate that a supportive organizational climate fulfills psychological needs and reinforces employees' sense of commitment to their professional responsibilities.

The evidence is also in harmony with the research conducted by Chen et al. (2024), Ren et al. (2024), Zhou et al. (2023), Putra et al. (2023), and Demerouti et al. (2001), who stressed that social resources should be considered as fundamental job resources within

the framework of the Job Demands and Resources Model. In demanding organizational contexts such as round-the-clock transportation services, social support not only functions as a buffer against stress but also serves as a catalyst for generating motivational gains. This influence is particularly relevant for positions that require frequent public interaction, where employees' ability to sustain motivation directly impacts service quality and organizational performance.

The results further indicate that the medium-to-strong effect size of social support underscores its strategic value for organizational human resource management. This finding suggests that companies should not limit social support to informal practices but should institutionalize it through formal mechanisms. Such mechanisms may include programs that encourage supervisor engagement, initiatives that foster peer collaboration, and structured systems of recognition and feedback. By embedding these practices into organizational policy, managers can ensure that employees working under shift systems remain motivated, thereby enhancing both individual effectiveness and overall organizational resilience.

4. The Mediating Role of Social Support in the Relationship between Shift Work System and Work Motivation

The study indicates that social support plays a partial mediating role in linking the shift work system to employees' work motivation, thereby confirming the fourth hypothesis. This finding directly responds to the main research question regarding whether social interactions function as a channel through which fair and structured scheduling enhances employees' enthusiasm for their tasks. The result is consistent with the Job Demands and Resources Model, which emphasizes that social resources such as peer collaboration, emotional encouragement, and mutual assistance not only reduce the burden of job demands but also convert structural job resources into greater motivational benefits (Bakker, 2023). From the perspective of Social Support Theory, this mediation mechanism demonstrates how positive workplace relationships translate operational systems into sustainable motivation and long-term commitment.

The conclusion corresponds with the findings of Hasanah et al. (2022), Okojie et al. (2023), and Wu et al. (2024) who argued that social support channels the benefits of work design toward enhanced motivation, and Wen et al. (2024), who revealed that supportive climates at work transform job resources into effective drivers of motivation. Similar insights were presented by Broeck et al. (2021), who highlighted that supportive team interactions amplify the positive outcomes of resource allocation in the workplace. Nevertheless, the results diverge from Wu et al. (2025), who suggested that social support is more effective in preventing negative outcomes such as burnout rather than in directly reinforcing motivation. It also contrasts with Gou et al. (2024), who found that in certain shift-based settings, social support functions more as a direct determinant of motivation rather than a mediating mechanism.

The overall findings emphasize that while the shift work system itself exerts a strong direct influence on employee motivation, its indirect effect through social support provides additional value by strengthening motivational outcomes. This suggests that managers should design shift work arrangements not only with a focus on operational effectiveness but also with attention to the creation of opportunities for social interaction, mutual encouragement, and team collaboration. By embedding social support structures into daily operations, organizations can maximize the motivational benefits of shift

systems, ensuring higher levels of employee engagement and long-term organizational sustainability.

5. Practical Implications

The findings of this study provide clear managerial guidance for organizations operating under a shift work system. Firstly, fairness, clarity, and predictability in scheduling are proven to enhance both work motivation and social support among employees. Managers should, therefore, treat shift scheduling as a strategic human resource tool, not merely as an operational arrangement. By ensuring equitable distribution of working hours, transparent communication of schedules, and flexibility where possible, organizations can create a work environment that sustains motivation and fosters stronger interpersonal bonds, leading to improved overall performance.

Secondly, the role of social support as both a moderator and mediator highlights its importance in maximizing the positive effects of shift systems. This underscores the need for HR policies that actively promote team collaboration, peer-to-peer assistance, and opportunities for informal interactions during work hours. Implementing mentorship programs, rotating team compositions to expand interpersonal networks, and fostering a culture of mutual trust will not only strengthen employee resilience but also ensure that shift work remains a motivating factor rather than a source of stress.

CONCLUSIONS AND RECOMMENDATIONS

The findings of this research demonstrate that the implementation of a shift-based work arrangement has a notable impact on employees' motivation levels, exerting its effect not only in a straightforward manner but also through indirect pathways that involve the presence of social support. Moreover, social support functions as a moderating factor, meaning it strengthens and sustains the constructive connection that exists between shift scheduling and motivational outcomes, thereby highlighting its essential role in fostering employee well-being and productivity.

Based on these findings, organizations should integrate shift scheduling with social support enhancement strategies. Managers are encouraged to design schedules that are fair and transparent while simultaneously fostering a culture of collaboration and trust. Furthermore, future research should explore the applicability of these results in different industries and cultural settings, using longitudinal approaches to capture long-term impacts.

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REFERENCES

- Ahlstedt, C., Moberg, L., Brulin, E., & Nyberg, A. (2024). Social support from manager and co-workers in relation to registered nurses' work motivation in three healthcare settings: A cross-sectional study of a Swedish national sample. *Journal of Nursing Scholarship*, 56(6), 790–801. <https://doi.org/10.1111/jnu.12995>
- Åkerstedt, T., Kecklund, G., Axelsson, J., & Lowden, A. (2022). Shift work and disturbed sleep/wakefulness. *Occupational Medicine*, 72(3), 130–137. <https://doi.org/10.1093/occmed/kqab180>
- Albishri, F., & Zamzami, L. (2021). Perception of Effects of Shiftwork Questionnaire (PESQ) among ambulance service staff in Saudi Arabia: An exploratory factor analysis. *Journal of Emergency Medicine*, 58(2), 123–130.
- Badan Pusat Statistik. (2023). Keadaan Ketenagakerjaan Indonesia Agustus 2023. BPS RI. <https://www.bps.go.id/publication/2023/11/06/Keadaan-Ketenagakerjaan-Indonesia-Agustus-2023.html>
- Bakker, A. B. (2023). Job Demands-Resources Theory: Ten years later. *Annual Review of Organizational Psychology and Organizational Behavior*, 10. <https://doi.org/10.1146/annurev-orgpsych-120920-053933>
- Chen, Y., Liu, X., Zhang, J., & Wang, Q. (2024). More than sleep problems? Testing five key health behaviors as reasons for quality of life issues among shift workers. *Occupational Medicine and Health Affairs*, 12(1), 45–55.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310–357.
- Costa, G. (1996). The impact of shift and night work on health. *Applied Ergonomics*, 27(1), 9–16. [https://doi.org/10.1016/0003-6870\(95\)00047-X](https://doi.org/10.1016/0003-6870(95)00047-X)
- Demerouti, E. (2023). Job Demands--Resources theory in times of crises: New propositions and lessons from COVID-19. *Organizational Psychology Review*, 13(1), 3–33. <https://doi.org/10.1177/20413866221135022>
- 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>
- den Broeck, A., Ferris, D. L., Chang, C. H., & Rosen, C. C. (2016). A review of self-determination theory's basic psychological needs at work. *Journal of Management*, 42(5), 1195–1229. <https://doi.org/10.1177/0149206316632058>
- den Broeck, A., Howard, J. L., Van Vaerenbergh, Y., Leroy, H., & Gagné, M. (2021). Beyond intrinsic and extrinsic motivation: A meta-analysis on self-determination theory's multidimensional conceptualization of work motivation. *Organizational Psychology Review*, 11(3), 240–273. <https://doi.org/10.1177/20413866211006173>
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382–388. <https://doi.org/10.2307/3150980>
- Gagné, M. (2022). Understanding and shaping the future of work with self-determination theory. *Nature Reviews Psychology*, 1(8), 378–392. <https://doi.org/10.1038/s44159-022-00056-w>
- Giurge, L. M., & Woolley, K. (2022). Working during non-standard work time undermines intrinsic motivation. *Organizational Behavior and Human Decision*

- Processes*, 170, 104114. <https://doi.org/10.1016/j.obhdp.2022.104114>
- Gou, J., Zhang, X., He, Y., He, K., & Xu, J. (2024). Effects of job demands, job resources, personal resources on night-shift alertness of ICU shift nurses: a cross-sectional survey study based on the job demands-resources model. *BMC Nursing*, 23(1), 648. <https://doi.org/10.1186/s12912-024-02313-0>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). Evaluating Measurement and Structural Model in PLS-SEM: Best Practices. *European Journal of Marketing*, 55(3), 464–495.
- Hair, J. F., Sarstedt, M., Ringle, C. M., Sharma, P. N., & Liengaard, B. D. (2024). Going beyond the untold facts in PLS-SEM and moving forward. *European Journal of Marketing*, 58(13), 81–106. <https://doi.org/10.1108/EJM-08-2023-0645>
- Harini, S., Kartini, A., & Rusmawan, D. (2024). Work motivation in mediating workload and work stress on nurse performance. *Jurnal Kesehatan dan Psikologi Klinis*, 9(2), 121–135.
- Harris, R. (2024). Adaptive sleep behaviours and shift work tolerance during the transition to shift work. *Sleep Medicine*, 124(2). <https://doi.org/10.1016/j.sleep.2024.10.003>
- Hasanah, N., Wahyudi, W., & Novitasari, D. (2022). The influence of workload and work environment on employee performance with job satisfaction as an intervening variable. *Jurnal Manajemen dan Kewirausahaan*, 24(1), 34–45. <https://doi.org/10.9744/jmk.24.1.34-45>
- International Labour Organization. (2021). *Working time and work organization*. International Labour Office.
- Jolly, P., Duval, J., & Gaudreau, P. (2021). The impact of social support on motivation and work engagement among shift workers. *Journal of Occupational Health Psychology*, 26(4), 453–468.
- Karhula, K., Turunen, J., Hakola, T., Ojajärvi, A., Puttonen, S., Ropponen, A., Oksanen, T., & Härmä, M. (2020). Using participatory working-time scheduling software: Effects on working hours and wellbeing. *Scandinavian Journal of Work, Environment & Health*, 46(4), 446–455. <https://doi.org/10.5271/sjweh.3881>
- Kim, H. W., Kim, J.-H., Lee, G., Lee, H.-L., Lee, H., & Kim, S.-S. (2024). The role of supervisor support in the association between night work and depressive symptoms: a gender-stratified analysis of 22,422 full-time wage workers in Korea. *Epidemiology and Health*, 46, e2024079. <https://doi.org/10.4178/epih.e2024079>
- Liao, Y., Huang, M., Gu, Z., Li, C., Yu, Y., Zhang, Q., Lai, X., Liu, J., He, K., Chu, H., Zhao, Y., Wu, X., Wu, L., Li, Y., & Fang, S. (2025). Associations between perceived stress profiles, social connection and work engagement in clinical registered nurses: A mediation analysis and generalized additive models. *BMC Nursing*, 24, 1096. <https://doi.org/10.1186/s12912-025-03754-x>
- Loef, B., Hulsege, G., Proper, K. I., Paagman, H., Anema, J. R., & van Mechelen, W. (2023). Lifestyle mediates the link between shift work, obesity, and diabetes. *International Archives of Occupational and Environmental Health*, 96(6), 1287–1295. <https://doi.org/10.1007/s00420-023-01987-3>
- Mori, K., Uehara, H., & Ota, A. (2024). Bridging perceived organizational support with learning orientation and work engagement. *Journal of Occupational Health*,

66(1), uiae024. <https://doi.org/10.1093/joh/uiae024>

- Munn, L. T., O'Connell, N., Huffman, C., McDonald, S., Gibbs, M., Miller, C. D., Danhauer, S. C., Reed, M., Mason, L., Foley, K. L., Stopyra, J., & Gesell, S. B. (2025). Job-related factors associated with burnout and work engagement in emergency nurses: Evidence to inform systems-focused interventions. *Journal of Emergency Nursing*, 51(2), 249–260. <https://doi.org/10.1016/j.jen.2024.10.007>
- Nawawi, H., Putri, F. M., & Ramadhani, A. S. (2025). Social support in rotating shift systems: A study of healthcare workers. *Jurnal Psikologi Kerja Indonesia*, 14(1), 55–70. <https://doi.org/10.21009/jpki.2025.14.1.5>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3 ed.). McGraw-Hill.
- Okojie, G., Ismail, I. R., Begum, H., Ferdous Alam, A. S. A., & Sadik-Zada, E. R. (2023). The Mediating Role of Social Support on the Relationship between Employee Resilience and Employee Engagement. *Sustainability*, 15(10), 7950. <https://doi.org/10.3390/su15107950>
- Putra, R. D., Wahyuni, T. S., & Prasetyo, H. (2023). Organizational support for shift workers and its effect on performance: A case study. *Jurnal Ilmu Manajemen Terapan*, 14(1), 33–42.
- Ren, Y., Li, G., Pu, D., He, L., Huang, X., Lu, Q., Du, J., & Huang, H. (2024). The relationship between perceived organizational support and burnout in newly graduated nurses from southwest China: the chain mediating roles of psychological capital and work engagement. *BMC Nursing*, 23, 719. <https://doi.org/10.1186/s12912-024-02386-x>
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 60, 101860. <https://doi.org/10.1016/j.cedpsych.2020.101860>
- Schoofs, H., Hornung, S., & Glaser, J. (2022). Prospective effects of social support on self-actualization at work. *Journal of Occupational and Organizational Psychology*, 95(2), 329–351.
- Thoits, P. A. (2011). Mechanisms Linking Social Ties and Support to Physical and Mental Health. *Journal of Health and Social Behavior*, 52(2), 145–161. <https://doi.org/10.1177/0022146510395592>
- Trépanier, S. G., Peterson, C., Gagné, M., Forest, J., Fernet, C., & Vallerand, R. J. (2022). Revisiting the Multidimensional Work Motivation Scale (MWMS). *Journal of Vocational Behavior*, 136, 103733. <https://doi.org/10.1016/j.jvb.2022.103733>
- Vallières, A., Savard, J., & Morin, C. M. (2024). Changing the organisational work schedule of shift workers: Impact on insomnia and sleepiness. *BMJ Open*, 14, e. <https://doi.org/10.1136/bmjopen-2023->
- Vansteenkiste, M., Ryan, R. M., & Soenens, B. (2024). Self-determination theory and team motivation. *Applied Psychology: An International Review*, 73. <https://doi.org/10.1111/apps.12526>
- Wang, L., Ma, Q., Fang, B., Su, Y., Lu, W., Liu, M., Li, X., Liu, J., & He, L. (2023). Shift work and risk of type 2 diabetes with elevated RBP4: OHSPIW cohort. *BMC Public Health*, 23, 1139. <https://doi.org/10.1186/s12889-023-16091-y>

- Wen, H., Zhao, L., & Xu, Q. (2024). Effects of work-family conflict, social support, and burnout on job satisfaction among primary care physicians. *Journal of Primary Healthcare Studies*, 18(2), 211–229.
- Wen, Z., Wu, S., Bai, L., Xu, J., Zhao, Y., Fang, J., & Jama, H. A. (2024). Effects of work--family conflict, social support and burnout on job satisfaction among primary care physicians in Huaihai economic zone. *Frontiers in Psychiatry*, 15, 1439636. <https://doi.org/10.3389/fpsyt.2024.1439636>
- World Health Organization. (2020). *Night shift work and chronic health conditions: Risk classification and prevention strategies*. WHO Press.
- Wu, J., Li, Y., Lin, Q., Fan, Y., Zhang, J., Liu, Z., Liu, X., Dai, P., Rong, X., & Zhong, X. (2024). The mediating role of perceived social support between work-family conflict and presenteeism among ICU nurses working shift work in Chinese public hospitals: A cross-sectional investigation. *Plos One*, 19(8), e0308673. <https://doi.org/10.1371/journal.pone.0308673>
- Wu, Q. J., Gu, F., & Shen, X. (2022). Shift work and health outcomes: An umbrella review of systematic reviews. *Journal of Clinical Sleep Medicine*, 18(2), 653–662. <https://doi.org/10.5664/jcsm.9676>
- Wu, Y., Zhang, Y., & Li, J. (2025). The relationship between social support and work engagement of rural teachers: A moderated mediation model. *International Journal of Educational Psychology*, 22(4), 1671–1688.
- Yulianingsih, R., & Hartanto, E. (2023). Organizational climate and peer support in shift work environment. *Jurnal Ilmu Manajemen Terapan*, 10(3), 201–213. <https://doi.org/10.24843/jimt.2023.v10.i3.p5>
- Zhang, P., Li, Y., Li, S., & others. (2024). Linkage between role stress and work engagement among specialty nurses: A cross-sectional study of China. *BMJ Open*, 14(8), e079979. <https://doi.org/10.1136/bmjopen-2023-079979>
- Zhou, X., Li, Z., Huang, J., Yang, M., Zheng, L., & Zhou, Z. (2023). Resilience, organizational support, and innovative behavior may increase work engagement among nurses. *Frontiers in Public Health*, 11, 1124270. <https://doi.org/10.3389/fpubh.2023.1124270>