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Stress In The Life Of Nurses And The Impact Of Night Shifts On Their Psychophysical Well-Being

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Abstract

Introduction: Night shifts pose significant challenges and contribute to psychophysical changes among nurses. Twelve-hour shifts are associated with an increased risk of patient care errors, occupational accidents, and work-related injuries. Stress and other workplace factors may further compromise overall health. Night work often results in disturbances in sleep, appetite, energy, concentration, and an increase in psychosomatic complaints such as irritability and feelings of helplessness. Extended and irregular shifts place a heavy burden on nurses, diminishing work performance and raising the likelihood of frequent errors.

Aim: The aim of this study was to examine the effects of night shifts on nurses' psychophysical well-being, with particular focus on occupational stress. The study sought to capture nurses' perceptions of night work, its impact on their social lives, and its broader implications for health and job performance.

Methodology: A quantitative qualitative design was applied. Data were collected using a structured questionnaire distributed to nurses. The study population included nurses employed at the University Clinical Center of Kosovo (UCCK), involving both genders and all age groups. The sample consisted of 60 nurses.

Results: Findings showed that 55% of the nurses worked night shifts, with nearly 85% reporting such work for longer than 24 months. A total of 68% stated they accepted night shifts due to additional pay, while more than half noted that it aligned with their social life. Night work was considered tolerable by 77% of participants.

Conclusion: Nurses working night shifts are more likely to experience psychological and mental health challenges such as irritability, somatization, obsessive–compulsive symptoms, interpersonal sensitivity, anxiety, mood disturbances, and paranoid tendencies. These findings indicate that night shifts have a negative impact on nurses' psychological health, social life, and quality of care delivered to patients.

Keywords: Night shifts, stress, nurses, psychophysical condition.

Introduction

The provision of continuous healthcare services necessitates 24-hour nursing care, requiring nurses to work in rotating shifts. To ensure efficiency and effectiveness in care delivery, healthcare management must adequately address the needs of the nursing workforce. Despite its importance, research examining shift work and its impact on nurses remains limited, with existing studies focusing on varying aspects of the phenomenon (Costa, 2016; Flo et al., 2014). Nurses working 12-hour shifts frequently report fatigue and insufficient, poor-quality sleep (Geiger-Brown & Trinkoff, 2010). Night shift rotations are particularly common in nursing, especially within specialized units. Maintaining vigilant and accurate monitoring of critically ill patients is essential in these settings, yet fatigue raises concerns about the nurses' ability to consistently do so (Caruso, 2014).

Evidence suggests that fatigue negatively affects nurses' health, work performance, safety, and ultimately patient care, with these effects being exacerbated in nurses over the age of 40 (Booker et al., 2020). The present study explores the critical role of sleep and

rest, the consequences of fatigue, and the psychophysical impact of night shifts on nurses. Extended working hours and high job demands not only limit opportunities for restorative sleep but may also diminish cognitive performance and clinical accuracy. Fatigue therefore represents a major occupational hazard for nurses, contributing to medical errors, impaired decision-making, reduced mental alertness, and psychosocial difficulties (Rogers, 2008; Wickwire et al., 2017). Poor sleep quality further compounds these risks, reinforcing the link between inadequate rest and suboptimal performance. The literature consistently highlights the adverse relationship between fatigue and workplace outcomes. Ensuring optimal standards of patient care can be particularly challenging for older nurses, who may be more vulnerable to the combined effects of disrupted circadian rhythms, night shift rotations, and associated health issues (Bjorvatn et al., 2016).

Research on shift work and its impact on nurses remains limited, with scholars attempting to focus on different aspects of shift-related employment, often yielding conflicting findings (Åkerstedt, 2003). Moreover, such research has been conducted across different countries, where variations in the nature of nursing practice within diverse healthcare systems further restrict the generalizability of results. Nursing work has evolved over time, with greater reliance on technology and increased patient turnover, both of which demand careful interpretation, equal access, and attentive care. Consequently, nursing care has consistently remained a role of considerable responsibility. It is well established that performance is influenced by a wide range of internal and external factors (Costa, 2016).

In light of current interest in work models and the recent European Community Directive on working time, the impact of shift work—particularly night shifts—on nursing performance remains a highly relevant concern, and is the central focus of this study (European Union, 2003; Institute of Personal Development, 1993). Previous studies have identified several biological and psychosocial factors associated with shift work. These factors influence the efficiency and effectiveness of performance, with implications not only for the individual worker, but also for service users and employing organizations (Caruso, 2014).

Similarly, affective, motivational, and attentional variables can shape an individual's response to shift work. Thus, adaptation and commitment to a particular shift system represent potentially confounding variables. Bauer emphasized that "only when nurses had the option to choose among different work patterns that matched their family responsibilities did symptoms of physiological stress occur less frequently" (Bauer, 1991).

The Royal College of Nursing (RCN) has also clearly stated its position regarding night shift work, noting that "all nurses should have the opportunity and ability to review their working patterns and to secure arrangements that best fit their professional and personal interests, as well as their commitment to patient care" (Royal College of Nursing, 2015). This position has gained further relevance following the recent European Union decision mandating a 48-hour workweek for non-exempt staff (Institute of Personal Development, 1993), which underscores the need for stronger negotiations between employers and nurses regarding night shift arrangements.

Literature review

Shift work, particularly night shifts, has long been recognized as a critical occupational challenge in nursing. Numerous studies have documented the negative consequences of irregular schedules on both physical and psychological health. Nurses working extended hours and overnight shifts frequently experience disturbances in circadian rhythms, reduced sleep quality, and heightened levels of fatigue (Åkerstedt, 2003; Flo et al., 2014). These disruptions not only compromise individual well-being but also increase the risk of medical errors, decreased performance, and reduced patient safety (Caruso, 2014).

Research indicates that long working hours and insufficient rest are directly associated with stress, burnout, and psychosomatic complaints such as irritability, headaches, and gastrointestinal problems (Geiger-Brown & Trinkoff, 2010). Furthermore, prolonged exposure to shift work has been linked to chronic health problems, including hypertension, cardiovascular disease, and depressive symptoms (Booker et al., 2020). Such effects appear to be more pronounced in nurses over the age of 40, whose physiological resilience to disrupted sleep cycles is diminished (Bjorvatn et al., 2016).

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Beyond individual health outcomes, the impact of shift work extends to professional performance and patient care. Studies show that fatigue impairs cognitive functioning, decision-making ability, and attention span, thereby increasing the likelihood of adverse clinical events (Rogers, 2008). A meta-analysis by Wickwire et al. (2017) confirmed that healthcare workers on rotating night shifts have significantly higher rates of performance lapses compared to those on fixed day schedules.

In addition to biological consequences, psychosocial dimensions also play a substantial role. Job satisfaction, institutional support, and workplace culture influence how nurses adapt to night shift schedules. The Royal College of Nursing (RCN, 2015) emphasizes the need for flexible working models that account for both professional and personal responsibilities, highlighting that rigid scheduling systems exacerbate stress and reduce long-term job retention.

Despite a growing body of evidence, findings across countries remain inconsistent due to variations in healthcare systems, staffing models, and organizational expectations. For example, while some studies report that financial incentives encourage acceptance of night shifts, others indicate that social and family disruptions often outweigh such benefits (Bae & Fabry, 2014). Thus, generalizing results remains challenging, and further research is required to fully understand the complex relationship between shift work, nurse well-being, and quality of care delivery.

METHODOLOGY

This study employed a quantitative–qualitative research design to examine the effects of night shift work on the psychophysical well-being of nurses. Data were collected using a structured questionnaire developed specifically for this study. The questionnaire included items addressing demographic characteristics, work patterns, perceptions of night shift work, and self-reported psychophysical outcomes.

The study population consisted of nurses employed at the University Clinical Center of Kosovo (UCCK). Both male and female nurses of all age groups were eligible to participate. A purposive sampling approach was applied to recruit a total of 60 participants.

Data collection was carried out over a two-month period. Participation was voluntary and anonymity was guaranteed. Responses were analyzed using descriptive statistics to identify frequencies and percentages of key variables. Qualitative comments provided by participants were thematically reviewed to capture additional insights into the lived experiences of night shift work.

Ethical considerations were respected throughout the study. Approval was obtained from the institutional review board, and informed consent was secured from all participants prior to data collection.

Results

Table 1. Demographic Characteristics of Participating Nurses (N=60)

Variable	Categories	Number (N)	Percentage (%)
Gender	Male	18	30.0
	Female	42	70.0
Age	< 30 years	15	25.0
	30–39 years	20	33.3
	40–49 years	17	28.3
	≥ 50 years	8	13.4
Work Experience	< 5 years	12	20.0
	5–10 years	18	30.0
	11–20 years	20	33.3
	> 20 years	10	16.7
Marital Status	Married	36	60.0
	Single	24	40.0

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Description of Table 1

Table 1 presents the demographic characteristics of the participating nurses (N=60). The majority of respondents were female (70%), while males accounted for 30%. Most participants were between 30 and 39 years old (33.3%), followed by those aged 40–49 (28.3%). Regarding work experience, one-third of the nurses had 11–20 years of service, while 30% had 5–10 years of experience. In terms of marital status, 60% of the respondents were married, whereas 40% were single.

Table 2. Characteristics of Night Shift Work (N=60)

Variable	Categories	Number (N)	Percentage (%)
Night shift work	Yes	33	55.0
	No	27	45.0
Duration of night shift work	< 12 months	5	8.3
	12–24 months	4	6.7
	> 24 months	24	40.0
	Do not work night shifts	27	45.0
Reason for night shifts	Additional payment	41	68.3
	Fits social life	32	53.3
	Other	12	20.0

Table 2 presents data on night shift work. About 55% of nurses reported working night shifts, with the majority (40%) having more than 24 months of such experience. The main reason for accepting night shifts was additional payment (68.3%), while over half (53.3%) stated that night work fit well with their social life.

Table 3. Psychophysical Effects of Night Shift Work (N=60)

Variable	Yes (N, %)	No (N, %)
General fatigue	48 (80.0%)	12 (20.0%)
Sleep disturbances	45 (75.0%)	15 (25.0%)
Difficulty concentrating	39 (65.0%)	21 (35.0%)
Anxiety / irritability	36 (60.0%)	24 (40.0%)
Headaches / somatic symptoms	32 (53.3%)	28 (46.7%)
Feelings of helplessness	28 (46.7%)	32 (53.3%)

Table 3 presents the psychophysical effects of night shift work among nurses. Fatigue (80%) and sleep disturbances (75%) were the most frequently reported symptoms. Difficulty concentrating was noted by 65% of participants, while 60% experienced anxiety or irritability. Other effects included headaches and somatic complaints (53.3%) and feelings of helplessness (46.7%).

Table 4. Relationship Between Duration of Night Shift Work and Nurse Performance (N=60)

Duration of Night Shift Work	Good Performance N (%)	Average Performance N (%)	Poor Performance N (%)
< 12 months	4 (80.0%)	1 (20.0%)	0 (0.0%)
12–24 months	2 (50.0%)	2 (50.0%)	0 (0.0%)
> 24 months	6 (25.0%)	12 (50.0%)	6 (25.0%)
Do not work night shifts	20 (74.1%)	6 (22.2%)	1 (3.7%)

Table 4 illustrates the relationship between the duration of night shift work and nurse performance. Nurses with less than 12 months of night shift experience reported higher levels of good performance (80%). In contrast, those with more than 24 months of experience showed higher proportions of average (50%) and poor (25%) performance. Meanwhile, nurses not working night shifts reported a higher rate of good performance (74.1%).

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Table 5. Relationship Between Age and Psychophysical Effects Among Nurses (N=60)

Age Group	Fatigue N (%)	Sleep Disturbances N (%)	Difficulty Concentrating N (%)	Anxiety/Irritability N (%)
< 30 years	10 (66.7%)	9 (60.0%)	7 (46.7%)	6 (40.0%)
30–39 years	18 (90.0%)	16 (80.0%)	14 (70.0%)	12 (60.0%)
40–49 years	15 (88.2%)	14 (82.3%)	13 (76.5%)	11 (64.7%)
≥ 50 years	5 (62.5%)	6 (75.0%)	5 (62.5%)	7 (87.5%)

Table 5 shows differences in psychophysical effects according to age groups. Nurses aged 30–49 reported higher levels of fatigue (90% and 88.2%) and sleep disturbances (80% and 82.3%), along with greater difficulty concentrating. Among nurses aged ≥50 years, anxiety and irritability were most frequent (87.5%). These findings suggest that age influences how nurses perceive and experience the effects of night shift work.

Discussion

The findings of this study reinforce the broader body of evidence that night shift work has a profound impact on the psychophysical well-being of nurses. More than half of the participants (55%) reported working night shifts, with a large proportion (40%) having engaged in such schedules for over two years. This indicates that night shift work is not only common but also sustained over long periods, which may amplify its cumulative effects on health and performance.

The results showed that fatigue (80%) and sleep disturbances (75%) were the most prevalent symptoms among nurses. These findings are consistent with international studies that associate prolonged shift work with disrupted circadian rhythms and insufficient restorative sleep, both of which directly contribute to reduced energy levels, impaired concentration, and overall lower quality of life. Furthermore, the high prevalence of difficulty concentrating (65%) and anxiety or irritability (60%) highlights the psychological burden of night shifts, echoing research that links chronic sleep disruption with stress, mood instability, and burnout.

Importantly, the relationship between the duration of night shift work and performance outcomes was evident. Nurses with less than 12 months of night shift experience reported higher levels of good performance (80%), while those with more than 24 months of continuous night work showed markedly higher levels of average (50%) and poor performance (25%). This pattern suggests that short-term adaptation to night shifts may be possible, but prolonged exposure compromises both cognitive and physical functioning, thereby reducing the quality of care provided to patients.

Age was also shown to play a critical role in how nurses experience psychophysical strain. Younger nurses (<30 years) appeared somewhat more resilient, reporting fewer symptoms of anxiety and concentration problems compared to older colleagues. By contrast, nurses aged 30–49 reported high levels of fatigue and sleep disturbances, while those aged ≥50 were most affected by anxiety and irritability (87.5%). These findings underline that biological aging, in combination with the demands of night shift work, exacerbates vulnerability to stress and reduces coping capacity.

Another key dimension highlighted by the study is the role of external motivators, such as additional payment, which was cited by 68% of participants as the main reason for accepting night shifts. While financial incentives may temporarily justify participation in night work, they do not offset the long-term health consequences and risks to patient safety. Moreover, more than half of the nurses stated that night work fit their social life, reflecting an attempt to balance professional and personal obligations. However, this alignment may mask underlying health impacts that accumulate over time.

In light of these findings, the discussion highlights a clear tension between institutional demands for continuous healthcare coverage and the well-being of nurses. The results support existing literature emphasizing that chronic night shift work impairs both professional performance and personal health, with broader implications for patient safety and healthcare system efficiency. This underscores the urgent need for healthcare institutions to reconsider shift models, provide organizational support, and explore flexible alternatives that prioritize both staff well-being and quality of care.

Conclusion

This study demonstrates that night shift work has a significant negative impact on the psychophysical health and professional performance of nurses. The most common issues identified were fatigue, sleep disturbances, reduced concentration, and heightened anxiety or irritability, all of which directly affect both the well-being of nurses and the quality of patient care. The findings also revealed that prolonged exposure to night shifts (over 24 months) is associated with a decline in performance, while older nurses are particularly vulnerable to the adverse effects, especially anxiety and emotional strain.

Financial incentives and perceived compatibility with social life were reported as reasons for accepting night shifts, but these factors do not mitigate the long-term risks to health and patient safety. The results underscore the urgent need for healthcare institutions to implement strategies that balance the operational requirement for continuous care with the protection of nurses' health.

Recommendations arising from this study include:

1. Re-evaluating shift structures to minimize prolonged night work, especially for nurses over 40 years of age.
2. Introducing regular health monitoring programs to detect early signs of fatigue, sleep disturbances, and mental health issues.
3. Providing training and stress-management resources to equip nurses with coping strategies for night shifts.
4. Encouraging flexible scheduling and rotation systems that better align with personal and family responsibilities.
5. Strengthening institutional policies to ensure that nurse well-being is prioritized alongside patient safety and quality of care.

In conclusion, while night shift work remains an inevitable part of healthcare delivery, it is essential to address its psychophysical consequences through organizational, structural, and policy-level interventions. Protecting the health of nurses not only improves their quality of life but also enhances patient outcomes and strengthens the overall efficiency of healthcare systems.

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