What is the impact of long day or 12 hour working patterns by nurses?

| Date requested: | 03.02.2020 |
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SUMMARY

Key documents
Royal College of Nursing
Safe and effective staffing: nursing against the Odds. RCN 2017
- Requiring staff to work additional time can have an adverse impact on patient safety, particularly when the member of staff has already worked a long shift, so analysis was carried out to understand whether this was prevalent in our survey data. For all respondents, the average intended length of shift was 10.2 hours, with 35% working a shift of eight hours or less (short), 55% working a shift of 9-12 hours (medium), and 9% working a shift longer than 12 hours (long). For those working short shifts, 70% reported working extra time for an average of 64 minutes. For those working medium-length shifts, 63% worked additional time, for an average of 46 minutes. For those working long shifts, 61% worked additional time for an average of 44 minutes. While responses indicate those working short shifts were slightly more likely to work additional time, and for slightly longer, it is clear that significant numbers of those working medium and long shifts were also working additional time.

Rest, Rehydrate, Refuel: a resource to improve the working environments for nursing staff. RCN 2018
- The intensity of work is increasing; 12-hour or longer shifts and increased patient demands make the need for breaks even more important. Frequent shorter breaks are better for
reducing fatigue and improving productivity. For community staff who drive during their shift, rest breaks are of additional importance to avoid fatigue-related road traffic accidents.

**Working time and breaks.** RCN 2019

- It is possible to work a 12 hour night shift as long as the average length of a night shift does not exceed eight hours in a 24 hour period, when measured over a standard reference period of 17 weeks.
- As a night worker, you must have the opportunity of free health assessment before taking up night work and at regular intervals.
- Whenever possible a night worker should be transferred to suitable day work if a medical practitioner confirms to the employer that they are suffering health problems connected with doing night work.
- Read more in the ACAS document ‘Changing Patterns of Work’.

**National Nursing Research Unit**


**Systematic Reviews**

26. Napping on night-shifts among nursing staff: A mixed-methods systematic review. Although research on this topic has just started, napping during night-shift is beneficial to nurses' health and performance. Research should further explore the long-term impact on of night-shift napping on nurses, people and organization using sound methodological designs. Managers should actively develop strategies to address night-shift napping barriers.

82. 12 h shifts and rates of error among nurses: A systematic review. The risk of making an error appears higher among nurses working 12 h or longer on a single shift in acute care hospitals. Hospitals and units currently operating 12 h shift systems should review this scheduling practice due to the potential negative impact on patient outcomes. Further research is required to consider factors that may mitigate the risk of error where 12 h shifts are scheduled and this cannot be changed.

122. Effects of shift length on quality of patient care and health provider outcomes: systematic review.

**Other points of Interest**

- Individual preference for working 12-hour shifts is a function of own health situation, family situation, work load tolerance, degree of sleep problems, personality and other factors. If the goal is to recruit and retain nurses, nurses should be free to choose to work 12-hour shifts. (16)
- Long working hours was associated with fewer sick leave days. The restorative effects of extra days off with long working hours are discussed as possible explanations to this relationship (20)
- Most respondents believed that 12-h shifts would be beneficial for their health, and this belief was validated by official leave records; there was a reduction of 69 days for sick leave and 216 days for family leave. Adverse outcomes for patients were similar in the two periods. Twelve-hour shifts are popular with ICU nurses, days lost to sick and family leave are reduced, and patient outcomes are not compromised. (13)
- Changing from 12 hr to 8 hr day shifts may affect nursing staff satisfaction with their care delivery and handovers, and have a negative effect on staffing wards. (28)
- 12-h nursing shifts can be introduced safely into the critical care environment, without any detriment to patient or healthcare provider outcomes (39).
- There is no evidence indicating 12-hr rotations increased errors. Implications for nursing management: Nurse managers can implement specific strategies, such as greater shift work flexibility and designated quiet time, to reduce the effects of disturbed sleep patterns in nurses. (47)
- There was no conclusive evidence that length of day shift affected patient care or nursing staff communication with patients and families on older people’s wards. (54)
- Working 12-hour shifts may have a positive effect on job satisfaction and allow rehabilitation nurses to have more flexibility to further their education. Facilities should avoid changing patient assignments in the middle of a shift and avoid scheduling nurses for shifts longer than 12 hours to lessen fatigue. (46)
- Longer shifts have also been linked to poorer quality of care, yet this only appears significant when shifts exceed 12 hours. (35)
- Shifts longer than 12 hours contribute to increased fatigue and errors (89).
- Extended-duty shifts (those greater than 12 hours) increased the risk for cognitive and physical functional errors, safety concerns, and decreased quality of life from sleep deprivation. Cognitive function errors included attention lapses, visual tracking errors, decreased mentation and immediate recall, and decreased learning capacity. Physical errors included decreased motor skills and slowed reaction times in clinical simulations. These deficits led to an increased risk of motor vehicle accidents, needle sticks, and performance equivalent to unsafe blood alcohol concentrations. An overall decrease in quality of life and job satisfaction was linked to extended-duty shifts. Seven organizations for medical residents or advanced practice nurses have developed policy statements on duty shifts, with extended-duty shift limitations between 12 and 24 hours. Discussion(s): The risks associated with extended-duty shifts may inhibit the development of SNMs/SMs into competent practitioners and place patients at risk. It is recommended that midwifery education programs adopt evidence-based limitations for the duty shifts of SNMs/SMs. (90)
- Our findings add to the growing international body of evidence reporting that ≥12 shifts are associated with poor ratings of quality of care and higher rates of care left undone. Future research should focus on how 12-h shifts can be optimised to minimise potential risks. (60)
- Implementation of long shifts should be questioned, as reduced opportunity to discuss care or participate in educational activities may jeopardise the quality and safety of care for patients. (3)
- Caution should be employed by personnel and administrators with work schedules involving multiple compressed 12 hour shifts. Fatigue management strategies may be used to improve risks and consequences from fatigue-related mishaps (6).
- European registered nurses working shifts of ≥ 12 hours and those working overtime report lower quality and safety and more care left undone. Policies to adopt a 12-hour nursing shift pattern should proceed with caution. Use of overtime working to mitigate staffing shortages or increase flexibility may also incur additional risk to quality (94).
- More than half of the 12-h shift ICU nurses studied in both hospitals had low to moderate fatigue levels. Age, number of family dependents, years of nursing experience, and frequency of exercise per week were identified as key factors associated with fatigue. The difference in chronic fatigue levels between hospitals suggests that implementing more support for younger and/or less experienced nurses, better strategies for retaining more experienced nurses, and fewer rotating shifts could help reduce fatigue. (8)
- Working long shifts on hospital wards is associated with a higher risk of sickness absence for registered nurses and health care assistants. Implications for Nursing Management: The
higher sickness absence rates associated with long shifts could result in additional costs or loss of productivity for hospitals. The routine implementation of long shifts should be avoided. (30)

- At least three rest days are necessary for full recovery after two consecutive 12-hours day shifts. Thus, adequate time for recovery enables nurses to maintain caring attitudes with patients, thus contributing to patient safety. (62)
- A statistically significant difference was noted among nurses working 8 hours versus 12 hours or combined 8- and 12-hour workloads. Perceptions of nurse benefits were statistically significantly higher for nurses working 8 hours. (64)
- ED nurses' sleep quality, immediately prior to a working 12-hour shift, is more predictive of error than sleep quantity. These results present evidence that a "good night's sleep" prior to working a nursing shift in the ED is beneficial for reducing minor errors. (72)
- Longer working hours for hospital nurses are associated with adverse outcomes for nurses. Some of these adverse outcomes, such as high burnout, may pose safety risks for patients as well as nurses. (75)
- Basic note keeping deteriorated between the middle and the end of the 12-h shift, but it appeared unaffected by workload, with no statistically significant difference between day and night shifts. (81)
- Five rules for scheduling 12 hour night shifts: 1. Work no more than three 12-hour without at least one, preferably two, night shifts off. 2. Know what pattern of nights on and off works best for every staff member. 3. Honor the staffing needs of the staff whenever possible. 4. Never schedule meetings for night shift after the shift. 5. When there's a choice, utilize the staff member who'll be the safest to work overtime hours needed (84)
- A three-year study, involving 23,000 registered nurses from four states, showed that nurses working shifts of 10 hours or longer were up to two and a half times more likely to experience burnout and dissatisfaction with their jobs than nurses working shorter shifts. Also, the study showed that seven out of 10 patient outcomes were adversely impacted by the longest nursing shifts. The Cleveland Clinic's 'parent shift' gives nurses the option of working shifts of six hours or less in exchange for less pay and no benefits. Administrators use these nurses to help their units manage busy hours or patient surges. (106)
- If the airline industry is concerned about pilots flying for 12 hours, health professionals should also consider the impact a 12-hour shift is having on patient safety and the health of the individual working these long hours. (114)

**SEARCH RESULTS**

**1. How do 12-hour shifts affect ICU nurses?**

**Author(s):** Aveyard, David  

**Source:** Kai Tiaki : Nursing New Zealand; ; vol. 22 (no. 11); p. 34-36  

**Publication Type(s):** Literature Review Journal Article  

Available at [Nursing New Zealand (Wellington, N.Z. : 1995)](https://link.to/journal) - from ProQuest (Health Research Premium) - NHS Version  

**Abstract:** Nurses are the largest workforce in hospitals and are monitoring and caring for patients 24 hours a day, seven days a week. Since the 1960s, a nurse's working week has undergone numerous changes in response to nursing shortages, rising health costs and funding cutbacks. The introduction of 12-hour shifts and flexible shifts for nurses was a way of addressing these issues, and
an attempt to increase nurse retention and attract new nurses to the profession. Some research has identified that accommodating flexible work hours for shift workers benefits the employer by increasing nurse recruitment and retention. Shift work's negative impacts are well documented in all industries. Shift work has been described as detrimental to an individual's health, causing disruptions to their circadian rhythms, altered activity-rest patterns, increased stress levels, and creating issues with social and domestic life. Humans are designed to work during daylight hours and sleep at night, and any work outside these daylight hours causes disturbance to the body's internal clock and affects normal function. It is, therefore, difficult to identify whether it is the shift length or shift work itself which negatively affects workers' health and well-being. During this period, UK research relating to 12-hour shifts was very negative for both patient outcomes and nurse perceptions.

Database: BNI

2. The Comorbidity of Musculoskeletal Disorders and Depression: Associations with Working Conditions Among Hospital Nurses

Author(s): Zhang Y.; ElGhaziri M.; Nasuti S.; Duffy J.F.

Source: Workplace Health and Safety; 2020

Publicaton Date: 2020

Publication Type(s): Article

Abstract: Background: Musculoskeletal disorders (MSDs) are the leading cause of pain and disability among nurses and are frequently accompanied by depression. However, the association between the comorbidity of MSDs and depression and working conditions has not been studied, which was the aim of this study. Method(s): In 2015, all nurses (n = 1,102) employed at a community hospital in the Northeast United States were invited to participate in this cross-sectional study. A survey was distributed in which participants were asked to report on MSDs, depressive symptoms, as well as subjective working conditions assessed including physical demands, psychological demands, decision authority, social support, and work-family conflict. Finding(s): 397 nurses responded (36%), and the prevalence of the comorbidity of MSDs and depression was 14.5%. Poisson regression (PR) models suggested that work-family conflict was associated with increased risk of the comorbidity (PR = 2.18; 95% confidence interval [CI] = 1.33-3.58), as was 8-hour night shift (PR = 2.77; 95% CI = [1.22, 6.31]) or 12-hour day shift (PR = 2.20; 95% CI = [1.07, 4.50]). Other working conditions were not directly associated with the comorbidity. Conclusion/Application to Practice: The comorbidity of MSDs and depression is prevalent among hospital nurses, and work-family conflict and night or longer shift were significantly associated with this. Effective workplace programs are needed to address nurses' working conditions to reduce their work-family conflict, thereby improving their musculoskeletal and mental health.

Database: EM CARE

3. 12-hr shifts in nursing: Do they remove unproductive time and information loss or do they reduce education and discussion opportunities for nurses? A cross-sectional study in 12 European countries.

Author(s): Dall'Ora, Chiara; Griffiths, Peter; Emmanuel, Talia; Rafferty, Anne Marie; Ewings, Sean; Sermeus, Walter; Van den Heede, Koen; Bruyneel, Luk; Lesaffre, Emmanuel; Aiken, Linda; Smith, Herbert; Sloane, Douglas; Marie Rafferty, Anne; Jones, Simon; Ball, Jane; Kinnunen, Juha; Ensio, Anneli; Jylhäs, Virpi; Busse, Reinhard; Zander, Britta

Source: Journal of Clinical Nursing (John Wiley & Sons, Inc.); Jan 2020; vol. 29 (no. 1/2); p. 53-59

Publication Date: Jan 2020
**Publication Type(s):** Academic Journal

**Available at:** *Journal of Clinical Nursing* - from Unpaywall

**Abstract:** Aims and objectives: To examine the association between registered nurses' (referred to as "nurses" for brevity) shifts of 12 hr or more and presence of continuing educational programmes; ability to discuss patient care with other nurses; assignments that foster continuity of care; and patient care information being lost during handovers. Background: The introduction of long shifts (i.e., shifts of 12 hr or more) remains controversial. While there are claims of efficiency, studies have shown long shifts to be associated with adverse effects on quality of care. Efficiency claims are predicated on the assumption that long shifts reduce overlaps between shifts; these overlaps are believed to be unproductive and dangerous. However, there are potentially valuable educational and communication activities that occur during these overlaps. Design: Cross-sectional survey of 31,627 nurses within 487 hospitals in 12 European countries. Methods: The associations were measured through generalised linear mixed models. The study methods were compliant with the STROBE checklist. Results: When nurses worked shifts of 12 hr or more, they were less likely to report having continuing educational programmes; and time to discuss patient care with other nurses, compared to nurses working 8 hr or less. Nurses working shifts of 12 hr or more were less likely to report assignments that foster continuity of care, albeit the association was not significant. Similarly, working long shifts was associated with reports of patient care information being lost during handovers, although association was not significant. Conclusion: Working shifts of 12 hr or more is associated with reduced educational activities and fewer opportunities to discuss patient care, with potential negative consequences for safe and effective care. Relevance to clinical practice: Implementation of long shifts should be questioned, as reduced opportunity to discuss care or participate in educational activities may jeopardise the quality and safety of care for patients.

**Database:** CINAHL

4. **Sleep and fatigue in newly graduated nurses—Experiences and strategies for handling shiftwork.**

**Author(s):** Epstein, Majken; Söderström, Marie; Jirwe, Maria; Tucker, Philip; Dahlgren, Anna

**Source:** *Journal of Clinical Nursing* (John Wiley & Sons, Inc.); Jan 2020; vol. 29 (no. 1/2); p. 184-194

**Publication Date:** Jan 2020

**Publication Type(s):** Academic Journal

**Abstract:** Aims and objectives: To explore newly graduated nurses' strategies for, and experiences of, sleep problems and fatigue when starting shiftwork. A more comprehensive insight into nurses' strategies, sleep problems, fatigue experiences and contributing factors is needed to understand what support should be provided. Background: For graduate nurses, the first years of practice are often stressful, with many reporting high levels of burnout symptoms. Usually, starting working as a nurse also means an introduction to shiftwork, which is related to sleep problems. Sleep problems may impair stress management and, at the same time, stress may cause sleep problems. Previously, sleep problems and fatigue have been associated with burnout, poor health and increased accident risk. Design and Methods: Semi-structured interviews were conducted with nurses (N = 11) from four different Swedish hospitals, and qualitative inductive content analysis was used. The study was approved by the Regional Ethical Review Board in Stockholm. The COREQ checklist was followed. Results: Many nurses lacked effective strategies for managing sleep and fatigue in relation to shiftwork. Various strategies were used, of which some might interfere with factors regulating and promoting sleep such as the homeostatic drive. Sleep problems were common during quick returns, often due to difficulties unwinding before sleep, and high workloads exacerbated the problems. The described consequences of fatigue in a clinical work context indicated impaired executive and nonexecutive cognitive function. Conclusion: The findings indicate that supporting strategies and
behaviours for sleep and fatigue in an intervention for newly graduated nurses starting shiftwork may be of importance to improve well-being among nurses and increase patient safety. Relevance to clinical practice: This study highlights the importance of addressing sleep and fatigue issues in nursing education and work introduction programmes to increase patient safety and improve well-being among nurses.

Database: CINAHL

5. Hospital and Shift Work Influences on Nurses' Dietary Behaviors: A Qualitative Study.

Author(s): Horton Dias, Cynthia; Dawson, Robin M

Source: Workplace health & safety; Jan 2020 ; p. 2165079919890351

Publication Date: Jan 2020

Publication Type(s): Journal Article

PubMedID: 31920166

Abstract: Background: Nurses working in hospitals face unique influences on their workplace dietary behaviors, but little is known about what nurses experience as dietary influencers in the hospital setting. Understanding these influences is paramount in developing effective programs that target healthy workplace eating. This study aimed to explore hospital shift nurses' experiences and perceptions of influences on making healthy nutritional choices while at work. Methods: This qualitative, descriptive study was guided by the Theoretical Domains Framework and analyzed using thematic analysis. Twenty-one Registered Nurses working 10- to 12-hour shifts in hospitals in South Carolina, USA, in 2018 were interviewed individually or in focus groups about their workplace dietary behaviors and influences. Findings: Framework constructs most relevant to hospital shift nurses included (a) environmental context and resources; (b) social/professional role and identity; (c) memory, attention, and decision processes; (d) social influences; (e) emotion; and (f) behavioral regulation. In addition, four major themes emerged: (a) Nursing roles and responsibilities restrict freedom of movement and minimize individual control over dietary practices; (b) The hospital food environment is oppressively unhealthy; (c) Free food is currency and influences consumption; and (d) Shift work is a major barrier to healthy eating. Conclusions/Applications to Practice: To achieve healthy eating practices in the workplace, hospital shift nurses need supportive systems, policies, and interventions that target and reduce the barriers inherent in hospital-based nursing shift work. To improve hospital shift nurses' workplace dietary behaviors, these findings should inform hospital food policies, workplace wellness programs, administrative practices, and staff education.

Database: Medline

6. Does work-induced fatigue accumulate across three compressed 12 hour shifts in hospital nurses and aides?

Author(s): Thompson, Brennan J

Source: PloS one; 2019; vol. 14 (no. 2); p. e0211715

Publication Date: 2019

Publication Type(s): Journal Article

PubMedID: 30730927

Available at PloS one - from Europe PubMed Central - Open Access

Abstract: Fatigue-related impairments in the nursing workforce contribute to a multitude of health, safety, and economic consequences at the individual, organizational and societal levels. Long and compressed work schedules are commonly worked in the healthcare industry, but more research is
needed to understand the cumulative effects of multiple work shifts on physiology-based performance outcomes in nurses. The purpose of this study was to compare the effects of a single nursing work shift versus three compressed (one every 24 hours) 12 hour shifts on performance-based fatigue in nurses and aides. Twenty-six fulltime hospital working nurses and aides (age = 36.1 ± 13.3 years) reported to the lab for testing before, immediately after working a single 12 hour shift, and after working three 12 hour shifts in a 72 hour period. Outcome measures included vigilance-based reaction time, lapses of attention, and muscle function assessments (lower and upper body muscle strength, explosive strength and vertical jump performance). All variables except hand grip strength showed a significant decline following the three work shifts. The psychomotor vigilance reaction time and lapses of attention variables also generally showed a significant decline from the end of shift one to the end of shift three, indicating an accumulation of fatigue in these metrics with increasing number of shifts worked. Muscle function variables responded early in the duty cycle, showing a significant decline after a single work shift, but did no further decline by the end of the third shift. These findings use objective measures to substantiate that fatigue impairments occur from working a single 12 hour shift, and in several instances, increase further with more successive work shifts. Caution should be employed by personnel and administrators with work schedules involving multiple compressed 12 hour shifts. Fatigue management strategies may be used to improve risks and consequences from fatigue-related mishaps, and this study reports several variables that appear sensitive to identifying and tracking fatigue in this population.

**Database:** Medline

**7. The extent to which adequacy of staffing predicts nursing teamwork in hospitals.**

**Author(s):** Bragadóttir, Helga; Kalisch, Beatrice J.; Berghóra Tryggvadóttir, Gudný

**Source:** Journal of Clinical Nursing (John Wiley & Sons, Inc.); Dec 2019; vol. 28 (no. 23/24); p. 4298-4309

**Publication Date:** Dec 2019

**Publication Type(s):** Academic Journal


**Abstract:** Aims and objectives: The purpose of this study was to examine the extent to which staffing adequacy predicts nursing teamwork, controlling for demographic and background variables.

Background: Findings from former studies indicate that hospital, unit and staff characteristics may be related to nursing teamwork, such as type of hospital and unit, role, gender, age, work experience, type of shift worked, shift length, number of working hours per week, overtime and staffing adequacy. Teamwork as well as staffing is identified as significant contributors to patient and staff safety in hospitals. However, the contribution of staffing to the quality of nursing teamwork is scarcely studied. Design: This was a quantitative descriptive cross-sectional study using the paper-and-pencil questionnaire Nursing Teamwork Survey-Icelandic. Methods: The study was conducted in 27 inpatient units in eight hospitals in Iceland with a sample of 925 nursing staff members. Participants were 567 registered nurses, practical nurses, unit secretaries and nurse unit managers. The Strengthening the Reporting of Observational Studies in Epidemiology checklist was used for this paper. Results: When controlling for unit type, role, experience on current unit and intent to leave, perceived adequacy of staffing alone explains up to 10% of overall teamwork. Unit type, role, years of experience on current unit and perceived staffing adequacy correlated significantly with overall teamwork. Conclusions: The findings of this study indicate that unit and staff characteristics, including perceived adequacy of staffing, are associated with and explain the variability in nursing teamwork on inpatient hospital units. The findings of this study provide important information for clinical nurses, nurse managers, policymakers and instructors in health care. Relevance to clinical
The findings underline the importance of adequate staffing for nursing teamwork in inpatient hospital units.

**Database:** CINAHL

### 8. Exploring the impact of 12-hour shifts on nurse fatigue in intensive care units.

**Author(s):** Yu, Fiona; Somerville, Deborah; King, Anna  
**Source:** Applied nursing research : ANR; Dec 2019; vol. 50 ; p. 151191  
**Publication Date:** Dec 2019  
**Publication Type(s):** Journal Article  
**PubMedID:** 31515156

**Abstract:**
AIMTo assess 12-h shift Intensive Care Unit (ICU) nurses' fatigue and identify the associated demographic factors.  
BACKGROUNDLiterature reveals inconsistencies as to whether 12-h shifts decrease or increase nurse fatigue levels.  
METHODSA cross-sectional survey of 67 ICU nurses working 12-h shifts was undertaken to determine their fatigue levels in two hospitals. The Occupational Fatigue Exhaustion/Recovery Scale (OFER), Spearman’s correlation, ANOVA, t-tests, and Chi-Square were used for analyses.  
RESULTS57 out of 67 participants experienced low to moderate chronic fatigue; 36 of those exhibited low to moderate acute fatigue levels; 46 reported low to moderate inter-shift fatigue. Age ($\rho = 0.03$, $r^2 = -0.28$), number of family dependents ($\rho = 0.03$, $r^2 = -0.27$), and years of nursing experience ($\rho = 0.03$, $r^2 = -0.27$) were moderately negatively correlated with acute fatigue, while frequency of exercise per week ($\rho = 0.01$, $r^2 = -0.31$) was moderately negatively correlated with chronic fatigue. Hospital A had higher chronic fatigue levels than Hospital B. Age ($p < 0.01$), age group ($\rho = 0.03$), shift schedule ($\rho = 0.02$), and nursing experience ($\rho = 0.03$) were significantly related to the difference in chronic fatigue levels between the two hospitals.  
CONCLUSIONSMore than half of the 12-h shift ICU nurses studied in both hospitals had low to moderate fatigue levels. Age, number of family dependents, years of nursing experience, and frequency of exercise per week were identified as key factors associated with fatigue. The difference in chronic fatigue levels between hospitals suggests that implementing more support for younger and/or less experienced nurses, better strategies for retaining more experienced nurses, and fewer rotating shifts could help reduce fatigue.

**Database:** Medline


**Author(s):** Tahghighi, Mozhdeh; Brown, Janie A.; Breen, Lauren J.; Kane, Robert; Hegney, Desley; Rees, Clare S.  
**Source:** Journal of Advanced Nursing (John Wiley & Sons, Inc.); Nov 2019; vol. 75 (no. 11); p. 2570-2578  
**Publication Date:** Nov 2019  
**Publication Type(s):** Academic Journal  
**Abstract:**
Aims: To investigate the impact of shift work on the psychological functioning and resilience of nurses by comparing nurses who work shifts and nurses who work regular hours.  
Design: A comparative descriptive design using an online self-report questionnaire.  
Method: Data were collected from employed Registered and Enrolled Nurses (N = 1,369) who were members of the Queensland Nurses and Midwives Union (QNMU) in 2013. The survey included standardized measures of resilience, depression, anxiety, compassion satisfaction, compassion fatigue, and
intention to leave the profession. Results: Generalized Linear Mixed Model analysis revealed shift workers had significantly lower levels of compassion satisfaction. However, there were no significant differences between the groups on resilience, depression, anxiety, stress, compassion fatigue or intention to leave nursing. Conclusion: The findings suggest that shift work is not associated with worse psychological functioning or lower resilience in nurses. However, this study requires replication using a longitudinal design to confirm these findings.

Database: CINAHL

10. Let them sleep: The effects of a scheduled nap during the night shift on sleepiness and cognition in hospital nurses.

Author(s): Zion, Nataly; Shochat, Tamar

Source: Journal of Advanced Nursing (John Wiley & Sons, Inc.); Nov 2019; vol. 75 (no. 11); p. 2603-2615

Publication Date: Nov 2019

Publication Type(s): Academic Journal

Abstract: Aims: The aim of this study was to examine the effectiveness of a scheduled 30-min nap and its interaction with individual factors on sleepiness and cognition during an 8-hr night shift. Design: This prospective, within-subjects study conducted between 2011–2014 compared sleepiness and cognition with/without a nap during the night shift, in 109 female nurses, tested on two nights with and two nights without a nap in counterbalanced order. Methods: Nurses completed the Munich ChronoType Questionnaire for Shiftwork, Pittsburgh Sleep Quality Index and Pre-Sleep Arousal Scale at study onset. They reported sleepiness hourly and performed the Digit Symbol Substitution and the Letter Cancellation Tasks at 3:00 and 7:00 a.m. They took a nap at 4:00 a.m. on nap nights and worked as usual on no-nap nights. Sleep–wake patterns were monitored using actigraphs 24 hr before and during the shift. Caffeine consumption, workload and adverse events were reported. To assess the effectiveness of a scheduled nap, mixed-models and repeated measures analyses of variance were used. Results: Lower levels of sleepiness were found at 5:00, 6:00 and 7:00 a.m. on nap versus no-nap nights. Increments in performance between 3:00–7:00 a.m. were significantly greater on nap versus no-nap nights for Digit Symbol Substitution Task correct responses and Letter Cancellation Task capacity. No interactions between the nap and any of the individual factors emerged. Conclusion: A scheduled nap provides an effective countermeasure against the negative consequences of night-time shift work in female nurses above and beyond interpersonal differences. Impact: Changes in attitude and policy are required to implement this beneficial and cost-effective strategy. Trial registration number: ACTRN12618001857291.

Database: CINAHL


Author(s): Lauren, Shaza; Chen, Yichi; Friel, Ciaran; Chang, Bernard P; Shechter, Ari

Source: Journal of the American College of Nutrition; Nov 2019 ; p. 1-7

Publication Date: Nov 2019

Publication Type(s): Journal Article

PubMedID: 31743081

Abstract: Objective: Shift work is associated with risk for adverse health outcomes including cardiovascular disease, type 2 diabetes, cancer, and obesity. Short sleep duration combined with disruptions to the circadian system may alter factors involved with the behavioral regulation of
energy intake and expenditure. We aimed to determine how shift work affects sleep, food intake, and physical activity.

Methods: This was a field-based observational study using objective assessments of sleep and physical activity and a 24-hour dietary recall in shift workers. Day (n = 12) and night (n = 12) hospital shift workers (nurses and technicians) who were women had their free-living sleep and physical activity tracked via accelerometry, and completed a computer-assisted 24-hour food recall, during a series of work shifts.

Results: Compared to day workers, night workers had significantly shorter sleep duration and reported more premature awakenings and feeling less refreshed upon awakening. Daily self-reported energy and macronutrient intakes were not different between groups, although the night shift workers reported a significantly longer total daily eating duration window than day workers. Objectively recorded physical activity levels were not different between groups.

Conclusions: The present findings confirm that sleep is disturbed in women night workers, while there are relatively less effects on objectively recorded physical activity and self-reported food intake. We also observed a prolonged daily eating duration in night vs. day workers. These observations can help inform the design of novel behavioral interventions, including, potentially, time restricted feeding approaches (e.g., by limiting daily eating episodes to within a 10-12 h window), to optimize weight management in shift workers.

Database: Medline

12. Fatigue and nurses' work patterns: An online questionnaire survey.

Author(s): Gander, Philippa; O'Keeffe, Karyn; Santos-Fernandez, Edgar; Huntington, Annette; Walker, Leonie; Willis, Jinny

Source: International Journal of Nursing Studies; Oct 2019; vol. 98 ; p. 67-74

Publication Date: Oct 2019

Publication Type(s): Academic Journal

Abstract: Fatigue resulting from shift work and extended hours can compromise patient care and the safety and health of nurses, as well as increasing nursing turnover and health care costs. This research aimed to identify aspects of nurses' work patterns associated with increased risk of reporting fatigue-related outcomes. A national survey of work patterns and fatigue-related outcomes in 6 practice areas expected to have high fatigue risk (child health including neonatology, cardiac care/intensive care, emergency and trauma, in-patient mental health, medical, and surgical nursing). The 5-page online questionnaire included questions addressing: demographics, usual work patterns, work in the previous two weeks, choice about shifts, and four fatigue-related outcomes – having a sleep problem for at least 6 months, sleepiness (Epworth Sleepiness Scale), recalling a fatigue-related error in clinical practice in the last 6 months, and feeling close to falling asleep at the wheel in the last 12 months. The target population was all registered and enrolled nurses employed to work in public hospitals at least 30 h/week in one of the 6 practice areas. Participation was voluntary and anonymous. Respondents (n = 3133) were 89.8% women and 8% Māori (indigenous New Zealanders), median age 40 years, range 21–71 years (response rate 42.6%). Nurses were more likely than New Zealand adults in general to report chronic sleep problems (37.73% vs 25.09%, p < 0.0001) and excessive sleepiness (33.75% vs 14.9%, p < 0.0001). Fatigue-related error(s) in the last 6 months were recalled by 30.80% and 64.50% reported having felt sleepy at the wheel in the last 12 months. The target population was all registered and enrolled nurses employed to work in public hospitals at least 30 h/week in one of the 6 practice areas. Participation was voluntary and anonymous. Respondents (n = 3133) were 89.8% women and 8% Māori (indigenous New Zealanders), median age 40 years, range 21–71 years (response rate 42.6%). Nurses were more likely than New Zealand adults in general to report chronic sleep problems (37.73% vs 25.09%, p < 0.0001) and excessive sleepiness (33.75% vs 14.9%, p < 0.0001). Fatigue-related error(s) in the last 6 months were recalled by 30.80% and 64.50% reported having felt sleepy at the wheel in the last 12 months. Logistic regression analyses indicated that fatigue-related outcomes were most consistently associated with shift timing and sleep. Risk increased with more night shifts and decreased with more nights with sleep between 11 p.m. and 7 a.m. and on which nurses had enough sleep to feel fully rested. Risk also increased with roster changes and more shift extensions greater than 30 min and decreased with more choice about shifts. Comparisons between intensive care/cardiac care and in-patient mental health nursing highlight that fatigue has different causes and consequences in different practice areas. Findings confirm the need for a more comprehensive and adaptable
approach to managing fatigue. We advocate an approach that integrates safety management and scientific principles with nursing and management expertise. It should be data-driven, risk-focused, adaptable, and resilient in the face of changes in the services required, the resources available, and the overall goals of the healthcare system.

Database: CINAHL


Author(s): Webster, Joan; McLeod, Kerri; O'Sullivan, Judy; Bird, Laura

Source: Australian Critical Care; Sep 2019; vol. 32 (no. 5); p. 391-396

Publication Date: Sep 2019

Publication Type(s): Academic Journal

Abstract: Controversy remains about the impact of 12-h shift patterns on staff satisfaction and health and on patient outcomes. Consequently, the objective of the study was to investigate the effect on nurses and patients of 8-h rostering compared with 12-h rostering. We conducted a two-phase survey. Intensive care nurses completed a purposefully designed 49-item questionnaire, which included open- and closed-ended questions. Phase 1 was conducted during 2015, while the 8-h shift pattern was in place. Data for phase 2 were collected in 2017, approximately 6 months after the trial of 12-h shifts began. We extracted data from the hospital's adverse event register to compare patient outcomes between the two phases. A total of 152/193 (78.8%) surveys were returned in phase 1. In phase 2, the response rate was 114/188 (60.6%). The proportion of nurses satisfied with the roster increased 3-fold after the introduction of 12-h shifts; risk ratios 3.36 (95% confidence intervals 2.62 to 4.28). Communication with all levels of senior staff improved, and the number of hours of professional development leave increased with the 12-h roster phase 1, 358 h versus 538 h in phase 2 (p = <0.0001). Most respondents believed that 12-h shifts would be beneficial for their health, and this belief was validated by official leave records; there was a reduction of 69 days for sick leave and 216 days for family leave. Adverse outcomes for patients were similar in the two periods. Twelve-hour shifts are popular with ICU nurses, days lost to sick and family leave are reduced, and patient outcomes are not compromised.

Database: CINAHL


Author(s): Min, Ari; Min, Haeyoung; Hong, Hye Chong

Source: Journal of Nursing Management (John Wiley & Sons, Inc.); Jul 2019; vol. 27 (no. 5); p. 884-895

Publication Date: Jul 2019

Publication Type(s): Academic Journal

Abstract: Aim: To systematically evaluate the effect of work schedule characteristics on fatigue among shift nurses in hospital settings. Background: The complexity and multidimensional nature of nursing work may lead to fatigue. This review mainly focused on work schedule characteristics that may mitigate the fatigue in nurses. Evaluation: Six databases were searched, and eight relevant research articles published between 2000 and 2018 were identified. Key issues: The reviewed articles provided evidence supporting the association of work schedule characteristics such as total working hours, overtime, shift length and number of monthly night and evening shifts with fatigue. In addition, studies provided evidence for the positive association between insufficient rest period
between shifts and fatigue among shift nurses in hospital settings. Conclusion: The reviewed studies provided mixed results regarding the associations between work schedule characteristics and nurse fatigue. However, quick returns and days called to work on days off were consistent factors contributing to nurse fatigue. More evidence is needed to arrive at a definitive conclusion about such relationships. Implication for nursing management: Nursing managers and administrators need to carefully review current rotating shift system and examine its impact on nurse fatigue as well as ensure enough resting time when developing nurse schedules.

**Database:** CINAHL

15. The Impact of Shift Length on Mood and Fatigue in Pediatric Registered Nurses.

**Author(s):** Ungard, Wendy; Kroger-Jarvis, Melanie; Davis, Linda Sue

**Source:** Journal of Pediatric Nursing; Jul 2019; vol. 47 ; p. 167-170

**Publication Date:** Jul 2019

**Publication Type(s):** Academic Journal

Available at Journal of Pediatric Nursing - from Unpaywall

**Database:** CINAHL


**Author(s):** Ose, Solveig Osborg; Tjønnås, Maria Suong; Kaspersen, Silje Lill; Færevik, Hilde

**Source:** BMJ open; Jul 2019; vol. 9 (no. 7); p. e024292

**Publication Date:** Jul 2019

**Publication Type(s):** Research Support, Non-u.s. Gov't Journal Article

**PubMedID:** 31289050

Available at BMJ Open - from Europe PubMed Central - Open Access

**Abstract:** OBJECTIVESThe aim of this study was to provide recommendations to hospital owners and employee unions about developing efficient, sustainable and safe work-hour agreements. Employees at two clinics of a hospital, one a non-intensive care and the other a newborn intensive care unit (ICU), trialled 12-hour shifts on weekends for 1 year. METHODSWe systematically recorded the experiences of 24 nurses' working 12-hour shifts, 16 in the medical unit and 8 in the ICU for 1 year. All were interviewed before, during and at the end of the trial period. The interview material was recorded, transcribed to text and coded systematically. RESULTSThe experiences of working 12-hour shifts differed considerably between participants, especially those in the ICU. Their individual experiences differed in terms of health consequences, effects on their family, appreciation of extra weekends off, perceived effects on patients and perceived work task flexibility. CONCLUSIONSThe results indicate that individual preference for working 12-hour shifts is a function of own health situation, family situation, work load tolerance, degree of sleep problems, personality and other factors. If the goal is to recruit and retain nurses, nurses should be free to choose to work 12-hour shifts.

**Database:** Medline

17. Shift-work nurses' work environments and health-promoting behaviours in relation to sleep disturbance: A cross-sectional secondary data analysis.
**Author(s):** Lim, Sungju; Han, Kihye; Cho, Hyeonmi; Baek, Hyang  
**Source:** Journal of Clinical Nursing (John Wiley & Sons, Inc.); May 2019; vol. 28 (no. 9/10); p. 1538-1545  
**Publication Date:** May 2019  
**Publication Type(s):** Academic Journal  
Available at [Journal of Clinical Nursing](https://onlinelibrary.wiley.com/journal/10.1111) - from Unpaywall  

**Abstract:** Aims and objectives: To examine the association of nursing work environments and health-promoting behaviours with shift-work nurses’ sleep disturbance. Background: Shift-work nurses reportedly have sleep problems, which affect their sleep quality and quantity. Given the high risk of developing performance decrements and medication errors in sleep-disturbed nurses, factors related to sleep disturbance among shift-work nurses should be investigated. Design: A cross-sectional secondary data analysis. Methods: Our study analysed data from 339 nurses who had been involved in rotating shift work including night shifts for more than 6 months. To examine associations of nursing work environments and health-promoting behaviours with sleep disturbance, multiple linear regression models were generated. This study is reported in accordance with the STrengthening the Reporting of OBservational studies in Epidemiology guideline. Results: Nurses with more collegial relations with physicians were significantly less likely to have high levels of sleep disturbance ($B = -4.01$, $p = 0.04$). Those with higher levels of sleep disturbance were significantly more likely to report less stress management ($B = -9.56$, $p < 0.01$) and higher health responsibility ($B = 9.30$, $p < 0.01$). Conclusions: To alleviate shift-work nurses’ sleep disturbance, organisational supports for collaborative relations with physician and increased healthcare accessibility are needed. Individual nurses should develop healthy lifestyles to reduce occupational stress and alleviate sleep disorders. Relevance to clinical practice: To improve shift-work nurses’ sleep, collegial relations with physicians and healthy lifestyles should be promoted.  

**Database:** CINAHL

18. The effects of amplitude and stability of circadian rhythm and occupational stress on burnout syndrome and job dissatisfaction among irregular shift working nurses.  
**Author(s):** Bagheri Hosseinabadi, Majid; Ebrahimi, Mohammad Hossein; Khanjani, Narges; Biganeh, Jamal; Mohammadi, Somaye; Abdolahfard, Mazaher  
**Source:** Journal of Clinical Nursing (John Wiley & Sons, Inc.); May 2019; vol. 28 (no. 9/10); p. 1868-1878  
**Publication Date:** May 2019  
**Publication Type(s):** Academic Journal  
Available at [Journal of Clinical Nursing](https://onlinelibrary.wiley.com/journal/10.1111) - from Unpaywall  

**Abstract:** Aim: To investigate the relation between the circadian rhythm amplitude and stability, and occupational stress with burnout syndrome and job dissatisfaction among shift working nurses. Background: Irregular shift working nurses are prone to burnout syndrome (BS) and job dissatisfaction (JD). circadian rhythm difference and occupational stress might be effective in causing burnout syndrome and dissatisfaction. Design: In total, 684 nurses who worked in four teaching hospitals were selected by stratified random sampling in a cross-sectional design based on STROBE guidelines. Methods: The data were collected by the Circadian Type Inventory, Job Content Questionnaire, Minnesota Satisfaction Questionnaire and the Maslach Burnout Inventory. Multiple linear regression, one-way ANOVA and independent t test were used for statistical analysis by SPSS v24. Results: About 15% of the nurses suffered from high levels of burnout syndrome. Psychological demand ($\beta = 0.022$, CI 95% = 0.003–0.047 and $\beta = 0.016$, CI 95% = 0.001–0.032) and workplace support ($\beta = -0.043$, CI 95% = -0.097–0.003 and $\beta = -0.025$, CI 95% = -0.046–0.006) were significant
predictors of BS and JD. Male nurses reported lower BS and higher JD compared to female nurses. Irregular shift working schedule was also related to a significantly higher odds of BS (p = 0.009) and JD (p = 0.011). Nurses classified as languid experienced significantly more BS and JD than vigorous nurses. Conclusion: This study shows that BS and JD were strongly associated with psychological demand and workplace support; and vigorous nurses were less prone to BS and JD, and were more suitable for irregular shift work. Relevance to clinical practice: In order to reduce burnout syndrome and job dissatisfaction among irregular shift working nurses, we need to identify the effect of risk factors such as individual differences on the circadian rhythm and job demand which can affect nurses who work in irregular schedules.

Database: CINAHL

Author(s): Imes, Christopher C.; Chasens, Eileen R.
Source: Workplace Health & Safety; May 2019; vol. 67 (no. 5); p. 241-249
Publication Date: May 2019
Publication Type(s): Academic Journal
Abstract: The impact of shift work on sleep and health has been examined in the past, but most studies utilized cross-sectional designs relying on between-subject differences. The purpose of this study was to examine the within-subject differences in self-report measures of health and wellness among a group of nurses engaged in rotating shifts. Patient-Reported Outcomes Measurement Information System (PROMIS) measures, collected post-day and post-night shift, were used to assess health, sleep disturbances and sleep-related impairment, fatigue, emotional distress (anger), satisfaction with social roles outside of work, and applied cognitive abilities. Among the sample of 23 White, mostly female (91.3%) nurses, all PROMIS measures were worse indicating lower health and wellness after working night shifts compared to after working day shifts (p values from.167 to <.001). During both time points of assessment, sleep-related impairment was highly correlated with greater emotional distress, greater fatigue, and worse memory and concentration. Study findings support prior studies that shift work can negatively impact health and wellness.
Database: CINAHL

20. Long working hours are inversely related to sick leave in the following 3 months: a 4-year registry study
Author(s): Vedaa O.; Sivertsen B.; Pallesen S.; Erevik E.K.; Harris A.; Waage S.; Bjorvatn B.; Svensen E.
Source: International Archives of Occupational and Environmental Health; May 2019; vol. 92 (no. 4); p. 457-466
Publication Date: May 2019
Publication Type(s): Article
Available at International Archives of Occupational and Environmental Health - from Unpaywall
Abstract: Purpose: The aim of this study was to investigate the effects of long working hours (>= 12 h shifts) on sick leave using objective records of shift work exposure and of sick leave. Method(s): A total of 1538 nurses (mean age 42.5, SD 12.0; response rate 42%) participated. Payroll and archival sick leave data over a 4-year period were retrieved from employers’ records and aggregated over every third calendar month. A multilevel negative binomial model was used to investigate the effects of exposure to long working hours, on subsequent sick leave rates the following 3 months. Covariates included prior sick leave, number of shifts worked, night and evening shifts, personality,
and demographic characteristics. Result(s): Exposure to long working hours was associated with fewer sick leave days in the subsequent 3 months [adjusted model, incidence rate ratio (IRR) = 0.946, 95% CI 0.919-0.973, p < 0.001]. The interaction long working hours by a number of work days showed that sick leave days the subsequent 3 months was higher by long shifts when number of shifts was high compared to when number of shifts was low [adjusted model, IRR 1.002, 95% CI 1.000-1.004, p < 0.05]. Discussion(s): Long working hours was associated with fewer sick leave days. The restorative effects of extra days off with long working hours are discussed as possible explanations to this relationship. Copyright © 2018, Springer-Verlag GmbH Germany, part of Springer Nature.

Database: EMCARE

21. Performance and sleepiness in nurses working 12-h day shifts or night shifts in a community hospital.

Author(s): Wilson, Marian; Permito, Regan; English, Ashley; Albritton, Sandra; Coogle, Carlana; Van Dongen, Hans P A

Source: Accident; analysis and prevention; May 2019; vol. 126 ; p. 43-46

Publication Date: May 2019

Publication Type(s): Journal Article

PubMedID: 28987265

Abstract: Hospitals are around-the-clock operations and nurses are required to care for patients night and day. The nursing shortage and desire for a more balanced work-to-home life has popularized 12-h shifts for nurses. The present study investigated sleep/wake cycles and fatigue levels in 22 nurses working 12-h shifts, comparing day versus night shifts. Nurses (11 day shift and 11 night shift) were recruited from a suburban acute-care medical center. Participants wore a wrist activity monitor and kept a diary to track their sleep/wake cycles for 2 weeks. They also completed a fatigue test battery, which included the Psychomotor Vigilance Test (PVT) and the Karolinska Sleepiness Scale (KSS), at the beginning, middle and end of 4 duty shifts. Daily sleep duration was 7.1h on average. No overall difference in mean daily sleep duration was found between nurses working day shifts versus night shifts. Objective performance on the PVT remained relatively good and stable at the start, middle, and end of duty shifts in day shift workers, but gradually degraded across duty time in night shift workers. Compared to day shift workers, night shift workers also exhibited more performance variability among measurement days and between participants at each testing time point. The same pattern was observed for subjective sleepiness on the KSS. However, congruence between objective and subjective measures of fatigue was poor. Our findings suggest a need for organizations to evaluate practices and policies to mitigate the inevitable fatigue that occurs during long night shifts, in order to improve patient and healthcare worker safety. Examination of alternative shift lengths or sanctioned workplace napping may be strategies to consider.

Database: Medline

22. Misaligned core body temperature rhythms impact cognitive performance of hospital shift work nurses.

Author(s): Molzof, Hylton E; Prapanjaroenensin, Aoyjai; Patel, Vivek H; Mokashi, Mugdha V; Gamble, Karen L; Patrician, Patricia A

Source: Neurobiology of learning and memory; Apr 2019; vol. 160 ; p. 151-159

Publication Date: Apr 2019
Publication Type(s): Research Support, N.i.h., Extramural Research Support, Non-u.s. Gov't Journal Article
PubMedID: 30611883

Abstract:Circadian rhythms greatly influence 24-h variation in cognition in nearly all organisms, including humans. Circadian clock impairment and sleep disruption are detrimental to hippocampus-dependent memory and negatively influence the acquisition and recall of learned behaviors. The circadian clock can become out of sync with the environment during circadian misalignment. Shift work represents a real-world model of circadian misalignment that can be studied for its physiological implications. The present study aimed to test the hypothesis that circadian misalignment disrupts vigilance and cognitive performance on occupationally relevant tasks using shift work as a model. As such, we sought to (1) explore the general effects of night- and day-shift worker schedules on sleep-wake parameters and core body temperature (CBT) phase, and (2) determine whether shift-type and CBT phase impact cognitive performance and vigilance at the end of a 12-h shift. We observed a sample of day-shift and night-shift hospital nurses over a 10-day period. At the end of three, consecutive, 12-h shifts (7 pm-7am or 7am-7 pm), participants completed a cognitive battery assessing vigilance, cognitive throughput, and medication calculation fluency (via an investigator developed and tested metric). Night-shift nurses exhibited significantly greater sleep fragmentation as well as a greater disparity between their wake-time and time of CBT minimum compared to day-shift nurses. Night-shift nurses exhibited significantly slower cognitive proficiency at the end of their shifts, even after adjustment for CBT phase. These results suggest that circadian disruption and reduced sleep quality both contribute to cognitive functioning and performance.

Database: Medline

23. Working hour characteristics and schedules among nurses in three Nordic countries – a comparative study using payroll data.
Author(s): Garde, Anne Helene; Harris, Anette; Vedaa, Øystein; Bjorvatn, Bjørn; Hansen, Johnni; Hansen, Åse Marie; Kolstad, Henrik A.; Koskinen, Aki; Pallesen, Ståle; Ropponen, Annina; Härmä, Mikko I.
Source: BMC Nursing; Mar 2019; vol. 18 (no. 1)
Publication Date: Mar 2019
Publication Type(s): Academic Journal
Available at BMC Nursing - from Europe PubMed Central - Open Access

Abstract:Background: Organisation of working hour schedules in the Northern European countries are rather similar. EU countries are obliged to adopt national legislation regarding duration of weekly working hours and rest periods. Yet, working hour characteristics and schedules are likely to differ with respect to starting times and duration depending e.g. on culture and tradition. Yet, very little is known about potential differences between shifts and schedules across countries among nursing personnel. This knowledge is relevant, since the potential differences in working hour characteristics may influence and possibly explain some of the differences observed in studies of health and safety. The aim of the study was to compare characteristics of working hours and work schedules among nursing personnel in three Nordic countries: Denmark, Finland and Norway. Methods: The study populations included nursing personnel holding a ≥ 50% position at public hospitals in Denmark (n = 63,678), Finland (n = 18,257) or Norway (n = 1538) in 2013. Objective payroll based registry data with information on daily starting and ending times were used to compare working hour characteristics e.g. starting time, duration of shift, and quick returns (13/year) quick returns in Norway (64%) and Finland (47%) compared to Denmark (16%). The frequency of 3-shift rotation workers was highest in Norway (41%) and lower in Denmark (22%) and
Finland (22%). There were few differences across the countries in terms of early morning shifts and (very) long weekly working hours. Conclusion: Despite similar distribution of operational hours among nurses in the three countries, there were differences in working hour characteristics and the use of different types of work schedules. The observed differences may affect health and safety.

Database: CINAHL


Author(s): Hammer, Paula Edeusa Cristina; Garde, Anne Helene; Begtrup, Luise Moelenberg; Flachs, Esben Meulengracht; Hansen, Johnni; Hansen, Åse Marie; Hougaard, Karin Sørig; Kolstad, Henrik A; Larsen, Ann Dyreborg; Pinborg, Anja Bisgaard; Specht, Ina Olmer; Bonde, Jens Peter

Source: Occupational and environmental medicine; Mar 2019; vol. 76 (no. 3); p. 163-168

Publication Date: Mar 2019

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article

PubMedID: 30661025

Available at Occupational and environmental medicine from BMJ Journals - NHS

Available at Occupational and environmental medicine from ProQuest (Health Research Premium) - NHS Version

Abstract: OBJECTIVE The aim of our study was to investigate the acute effect of night work during pregnancy on the risk of calling in sick the following day using register-based information and the workers as their own controls. METHODS Using the payroll-based national Danish Working Hour Database, including all public hospital employees in Denmark, we identified 9799 pregnant women with ≥1 day shift and ≥1 night shift and ≥1 day of sick leave during the first 32 pregnancy weeks from January 2007 to December 2013. We performed fixed effects logistic regression, that is, within-worker comparisons, of the risk of sick leave of any duration starting within 24 hours after night shifts of different length versus day shifts. RESULTS Most of the participants were nurses (64%) or physicians (16%). We found an increased relative risk of sick leave following night shifts compared with day shifts during all pregnancy trimesters. The risk was highest for night shifts lasting >12 hours (OR 1.37, 95% CI 1.15 to 1.63 for nurses; OR 1.87, 95% CI 1.69 to 2.08 for physicians) and among women aged >35 years (OR 1.42, 95% CI 1.24 to 1.63). CONCLUSION Among Danish public hospital employees night shifts during pregnancy, especially shifts longer than 12 hours, increased the risk of calling in sick the following day independent of personal factors and time-invariant confounders in all pregnancy trimesters.

Database: Medline

25. Factors That Contribute to Excessive Sleepiness in Midwives Practicing in the United States.

Author(s): Arbour, Megan; Tanner, Tanya; Hensley, Jennifer; Beardsley, Janet; Wika, Judie; Garvan, Cynthia

Source: Journal of midwifery & women’s health; Mar 2019; vol. 64 (no. 2); p. 179-185

Publication Date: Mar 2019

Publication Type(s): Journal Article

PubMedID: 30806490

Abstract: INTRODUCTION Excessive daytime sleepiness is defined as difficulty maintaining wakefulness and alertness during normal waking hours. Excessive daytime sleepiness can lead to
clinical errors in health care workers and is associated with dangerous driving. Little is known about the level of daytime sleepiness in midwives in the United States. The purposes of this study, conducted by the American College of Nurse-Midwives (ACNM) Sleep and Safety Taskforce, were first to identify the sleepiness level of US certified nurse-midwives (CNMs) and certified midwives (CMs) by calculating Epworth Sleepiness Scale scores for CNM/CMs in full-scope practice, and then to determine factors that significantly contribute to elevated Epworth Sleepiness Scale scores (>10). METHODS Participants in this descriptive, correlational survey study were active ACNM members in full-scope midwifery practice. Descriptive statistics, bivariate analysis, and logistic regression were used for data analysis. Surveys were emailed to all active members of ACNM (N = 4358). RESULT A total of 753 (17.3%) survey responses were returned, of which 639 (14.7%) were eligible for analysis. Within this group, 639 (84.9%) self-identified as being in full-scope midwifery practice, and one-fourth (n = 164; 25.7%) had elevated Epworth Sleepiness Scale scores. Duration of work shifts was the only variable found to significantly contribute to differences in Epworth Sleepiness Scale scores, with midwives working shifts longer than 12 hours having higher rates of excessive daytime sleepiness compared with midwives who worked shifts of 12 hours or less. DISCUSSION Midwives, midwifery services, and maternity care centers can work together to ensure that clinicians obtain adequate sleep. Reducing excessive sleepiness will contribute to increased safety for midwives, women, newborns, and the general public.

Database: Medline

Author(s): Li, Huanhuan; Shao, Yanping; Xing, Zhuangjie; Li, Yuan; Wang, Shouqi; Zhang, Meiling; Ying, Jie; Shi, Ying; Sun, Jiao
Source: Journal of Advanced Nursing (John Wiley & Sons, Inc.); Feb 2019; vol. 75 (no. 2); p. 291-312
Publication Date: Feb 2019
Publication Type(s): Academic Journal
Abstract: Aims: To synthesize research on the influence of night-shift napping on nurses. Background: Shift work is common for hospital nurses. Various studies corroborate that shift work causes adverse health consequences for nurses. Night-shift napping is a countermeasure to address the adverse outcomes of shift work. Design: A mixed-methods systematic review. Data sources: The literature search included the PubMed, Web of Science, Embase, PsycINFO and Cochrane Library electronic databases from inception to December 2017. Reference lists were hand searched. Only English articles were chosen. Review methods: A sequential explanatory design and Cochrane’s methods for integrating qualitative and implementation evidence in intervention effectiveness reviews. The Mixed Methods Assessment Tool and Cochrane Risk of Bias Tool were applied to assess the methodological quality of included studies. Results: Twenty-two studies met our inclusion criteria. Many nurses experienced napping during their night-shift although no clear policy emerged. Napping is beneficial to the well-being of nurses and could improve their psychomotor vigilance and performance. However, the related studies are limited. The evidence on reducing sleepiness and fatigue was also insufficient and napping in nursing still faces challenges.
Database: CINAHL

27. Standardization of the duty shift in a General Adult Intensive Care Unit.
Author(s): Campos Corpolato, Roselene; de Fátima Mantovani, Maria; Hauisch Willig, Mariluci; Soares de Andrade, Luciana Aparecida; Tais Mattei, Ângela; Arthur, Perez
Source: Revista Brasileira de Enfermagem; Jan 2019; vol. 72 (no. Suppl. 1); p. 88-95
Abstract: Objective: To standardize the duty shift in a General Adult Intensive Care Unit. Method: Multi-method research, which used action research, descriptive study and content validation. Participants included 11 care nurses and 4 intensive care nurses. For the data collection, a semi-structured questionnaire was used, meetings with participants and validation with specialists. In this step, the modified online Delphi Technique was used. For data treatment, the Discourse of the Collective Subject (DCS) was used, descriptive analysis and Content Validity Index. Results: Three DCS on duty change, a Standard Operating Procedure (SOP) and an information registration instrument, validated in appearance, clarity, suitability and content. Final considerations: The instrument assists in the transmission of information, strengthening patient safety and SOP will outline the shift, these tools can improve ICU shift, minimizing the risks of communication failure.

Database: CINAHL

28. Changing from 12-hr to 8-hr day shifts: A qualitative exploration of effects on organising nursing care and staffing.

Author(s): Baillie, Lesley; Thomas, Nicola

Source: Journal of Clinical Nursing (John Wiley & Sons, Inc.); Jan 2019; vol. 28 (no. 1/2); p. 148-158

Abstract:Aims and objectives: To investigate (a) How nursing care is organised on wards where nursing staff work different lengths of day shifts, and (b) How length of day shift affects the staffing of wards. Background: Twelve-hour shifts have become increasingly common worldwide but there are concerns about impact on care quality and safety. Eight-hour shifts, and how day shift length affects how nurses organise their work, and staffing, have been little studied. Design: Case study. Methods: The setting was two older people’s wards in an acute hospital in England. Nursing staff on one ward continued to work 12-hr day shifts; staff on the other ward worked 8 hr late and early day shifts, with an afternoon overlap, for 6 months. Qualitative interviews were conducted with 22 nursing staff. Semi-structured observations were conducted from 12–15.00 (5 × 3 hr episodes on each ward). Data analysis was conducted using the Framework approach. Results: Theme 1: Organising nursing care and staff activities, (sub-themes: Care delivery across a 12 hr shift; Care delivery on early and late 8 hr shifts; Staff communication and documentation; Staff breaks; Teaching, supervision and staff development); Theme 2: Staffing wards with different length of day shift (sub-themes:: Adequacy of staffing and use of temporary staff; Recruitment and retention of staff after introducing 8 hr shifts). Conclusion: Nursing staff organised care on 8-hr shifts similarly to 12-hr shifts but then felt dissatisfied with their care delivery and handovers. Nursing staff on both wards approached care in a task-focused way. There were concerns that adopting an 8-hr shift pattern negatively affected recruitment and retention. Relevance to clinical practice: Changing from 12 hr to 8 hr day shifts may affect nursing staff satisfaction with their care delivery and handovers, and have a negative effect on staffing wards.

Database: CINAHL
29. Sleep problems in shift nurses: A brief review and recommendations at both individual and institutional levels.

**Author(s):** Sun, Qiuzi; Ji, Xiaopeng; Zhou, Wenqin; Liu, Jianghong

**Source:** Journal of Nursing Management (John Wiley & Sons, Inc.); Jan 2019; vol. 27 (no. 1); p. 10-18

**Publication Date:** Jan 2019

**Publication Type(s):** Academic Journal

**Abstract:** Aims: The purposes of this article are (a) to review briefly the current literature on shift nurses' sleep patterns, sleep quality, and the existing interventions implemented in nursing settings; and (b) to propose solutions that target individual nurses, nurse managers, and health care organisations to improve sleep health in shift nurses. Background: Sleep problems among shift nurses have been recognized increasingly as a significant issue at both the individual and organisational levels. However, the solutions are not well known. Design: Narrative review. Methods: A literature search was conducted using the following databases: CINAHL, PubMed, Embase, and Google Scholar from 1986 to 2016, to include original papers that reported studies on shift nurses' sleep problems and interventions. Results: Thirteen papers were included in this review, which all indicated associations between shift nurses' sleep problems and current intervention practices. Despite the higher prevalence of sleep problems in shift nurses compared to the general population, current interventional practices only focus on bright-light exposure, nap breaks, shift schedule rearrangement, and behavioural interventions. Conclusions: To address shift nurses' poor sleep quality, we proposed two levels of approach for consideration—the individual level and the management/institutional level. The recommendations include: improving sleep hygiene; providing a low-stimulation sleep environment; conducting rigorous intervention studies to evaluate the effectiveness of a variety of therapies to deal with shift nurses' sleep disturbances; increasing awareness of sleep health of shift nurses; establishing a flexible rotating work schedule; and putting in place policies such as a 15–30 min nap break, social support, and a suitable working environment. Implications for Nursing Management: With better awareness and understanding of shift nurses' sleep behaviours, effective interventions can be employed to improve shift nurses' sleep patterns and sleep quality to promote better emotional and health outcomes.

**Database:** CINAHL


**Author(s):** Dall'Ora, Chiara; Ball, Jane; Redfern, Oliver; Recio-Saucedo, Alejandra; Maruotti, Antonello; Meredith, Paul; Griffiths, Peter

**Source:** Journal of Nursing Management (John Wiley & Sons, Inc.); Jan 2019; vol. 27 (no. 1); p. 19-26

**Publication Date:** Jan 2019

**Publication Type(s):** Academic Journal

**Abstract:** Objective: To investigate whether working 12 hr shifts is associated with increased sickness absence among registered nurses and health care assistants. Background: Previous studies reported negative impacts on nurses' 12 hr shifts; however, these studies used cross-sectional techniques and subjective nurse-reported data. Methods: A retrospective longitudinal study using routinely collected data across 32 general inpatient wards at an acute hospital in England. We used generalized linear mixed models to explore the association between shift patterns and the subsequent occurrence of short (<7 days) or long-term (≥7 days) sickness absence. Results: We
analysed 601,282 shifts and 8,090 distinct episodes of sickness absence. When more than 75% of shifts worked in the past 7 days were 12 hr in length, the odds of both a short-term (adjusted odds ratio = 1.28; 95% confidence index: 1.18–1.39) and long-term sickness episode (adjusted odds ratio = 1.22; 95% confidence index: 1.08–1.37) were increased compared with working none. Conclusion: Working long shifts on hospital wards is associated with a higher risk of sickness absence for registered nurses and health care assistants. Implications for Nursing Management: The higher sickness absence rates associated with long shifts could result in additional costs or loss of productivity for hospitals. The routine implementation of long shifts should be avoided.

Database: CINAHL

31. Association of Nurse Workload with Missed Nursing Care in the Neonatal Intensive Care Unit

Author(s): Tubbs-Cooley H.L.; Mara C.A.; Carle A.C.; Mark B.A.; Pickler R.H.

Source: JAMA Pediatrics; Jan 2019; vol. 173 (no. 1); p. 44-51

Publication Date: Jan 2019

Publication Type(s): Article

Available at JAMA Pediatrics - from Unpaywall

Abstract: Importance: Quality improvement initiatives demonstrate the contribution of reliable nursing care to gains in clinical and safety outcomes in neonatal intensive care units (NICUs); when core care is missed, outcomes can worsen. Objective(s): To evaluate the association of NICU nurse workload with missed nursing care. Design, Setting, and Participant(s): A prospective design was used to evaluate associations between shift-level workload of individual nurses and missed care for assigned infants from March 1, 2013, through January 31, 2014, at a 52-bed level IV NICU in a Midwestern academic medical center. A convenience sample of registered nurses who provided direct patient care and completed unit orientation were enrolled. Nurses reported care during each shift for individual infants whose clinical data were extracted from the electronic health record. Data were analyzed from January 1, 2015, through August 13, 2018. Exposures: Workload was assessed each shift with objective measures (infant-to-nurse staffing ratio and infant acuity scores) and a subjective measure (the National Aeronautics and Space Administration Task Load Index [NASA-TLX]). Main Outcomes and Measures: Missed nursing care was measured by self-report of omission of 11 essential care practices. Cross-classified, multilevel logistic regression models were used to estimate associations of workload with missed care. Result(s): A total of 136 nurses provided reports of shift-level workload and missed nursing care for 418 infants during 332 shifts of 12 hours each. When workload variables were modeled independently, 7 of 12 models demonstrated a significant worsening association of increased infant-to-nurse ratio with odds of missed care (eg, nurses caring for >=3 infants were 2.51 times more likely to report missing any care during the shift [95% credible interval, 1.81-3.47]), and all 12 models demonstrated a significant worsening association of increased NASA-TLX subjective workload ratings with odds of missed care (eg, each 5-point increase in a nurse’s NASA-TLX rating during a shift was associated with a 34% increase in the likelihood of missing a nursing assessment for his or her assigned infant[s] during the same shift [95% credible interval, 1.30-1.39]). When modeling all workload variables jointly, only 4 of 12 models demonstrated significant association of staffing ratios with odds of missed care, whereas the association with NASA-TLX ratings remained significant in all models. Few associations of acuity scores were observed across modeling strategies. Conclusions and Relevance: The workload of NICU nurses is significantly associated with missed nursing care, and subjective workload ratings are particularly important. Subjective workload represents an important aspect of nurse workload that remains largely unmeasured despite high potential for intervention.

Database: EMCARE
32. Hospital nurse shift length, patient-centered care, and the perceived quality and patient safety.

**Author(s):** Jarrar, Mu'taman; Minai, Mohd Sobri; Al-Bsheish, Mohammad; Meri, Ahmed; Jaber, Mustafa  
**Source:** The International journal of health planning and management; Jan 2019; vol. 34 (no. 1); p. e387

**Publication Date:** Jan 2019  
**Publication Type(s):** Journal Article  
**PubMedID:** 30221794  

Available at [The International journal of health planning and management](https://www.healthplanning.org/) from Unpaywall

**Abstract:** BACKGROUND There is no clear evidence that can guide decision makers regarding the appropriate shift length in the hospitals in Malaysia. Further, there is no study that explored the value of patient-centered care of nurses working longer shifts and its impact on the care outcomes. OBJECTIVE The study aims to investigate the effect of the hospital nurse shift length and patient-centered care on the perceived quality and safety of nurses in the medical-surgical and multidisciplinary wards in Malaysia. METHODS A cross-sectional survey has been conducted on 12 hospitals in Malaysia. Data have been collected via a questionnaire. A stratified sampling has been used. The Hayes macro regression analyses have been used to examine the mediating effects of patient-centered care between the effect of working long shifts on the perceived quality (F = 42.90, P < 0.001) and patient safety (F = 25.12, P < 0.001). CONCLUSION Patient-centered care mitigates the effect of the shift length on the care outcomes. The study provides an input for the policymakers that patient-centered care and restructuring duty hours are important to provide high-quality patient care.

**Database:** Medline

33. Time course of recovery after two successive night shifts: A diary study among Austrian nurses.

**Author(s):** Haluza, Daniela; Schmidt, Verena-Maria; Blasche, Gerhard  
**Source:** Journal of nursing management; Jan 2019; vol. 27 (no. 1); p. 190-196

**Publication Date:** Jan 2019  
**Publication Type(s):** Journal Article  
**PubMedID:** 30178495  

Available at [Journal of nursing management](https://www.journals.elsevier.com/journal-of-nursing-management) from Unpaywall

**Abstract:** AIM To explore how nurses recover from night shift work during periods off duty. BACKGROUND Given the large number of affected individuals globally, detrimental health outcomes of night shift work are an important public health issue. Sufficient recovery opportunities are essential to prevent prolonged fatigue associated with demanding tasks and high workload as experienced in nurses working long shifts during the night. METHODS Nurses (n = 53, 96% females) who worked in two public nursing homes in Austria completed a 5-day diary to collect data on well-being conceptualized by fatigue, distress and vigour. RESULTS Nurses experienced worse well-being post night shift days than during rest days. Well-being improved from post night shift day 2 to the following rest day 1 and continued improvement from rest day 1 to rest day 2. CONCLUSION Nurses who work at nights are at risk for experiencing prolonged fatigue. Our results suggest that after two consecutive 12-hr night shifts full recovery needs at least three days off work. IMPLICATIONS FOR
NURSING MANAGEMENT Strategies for maintaining nurses’ good health and caring attitudes as well as vigilance for patient safety should include fatigue management plans and optimised schedules for night shift work.

Database: Medline

34. Acute low back pain among registered nurses. Organizational implications for practice management.

Author(s): d’Ettorre, G; Vullo, A; Pellicani, V; Ceccarelli, G

Source: Annali di igiene : medicina preventiva e di comunita; 2018; vol. 30 (no. 6); p. 482-489

Publication Date: 2018

Publication Type(s): Multicenter Study Journal Article

PubMedID: 30614497

Abstract: BACKGROUND To date there is a lack of evidence about the impact of shiftwork on the occurrence of acute low back pain among registered nurses working non-traditional shifts, including nights and 12-hour shifts. The objectives of the present study were: 1) to investigate the impact of shiftwork, physical activity and body mass index on the occurrence of acute low back pain among female shift-registered nurses; 2) to suggest preventive interventions. METHODS The author conducted a cross-sectional nested case-control analysis of data concerning acute low back pain and staffing data for female registered nurses employed in hospital wards. RESULTS The analysis found a relationship between acute low back pain and nightshift, extended shifts, obesity; the adoption of forward rotating schedules proved to be effective in minimizing the frequency of acute low back pain. CONCLUSION The findings showed that the prevention of acute low back pain should consider interventions aimed at minimizing not only physical ergonomic factors, but also organizational risks and lifestyle factors.

Database: Medline

35. Is it shift length or working practices that most affect midwives’ wellbeing and ability to safely deliver care?

Author(s): Dent, Jackie

Source: British Journal of Midwifery; Dec 2018; vol. 26 (no. 12); p. 812-817

Publication Date: Dec 2018

Publication Type(s): Academic Journal

Available at British Journal of Midwifery - from MAG Online Library

Abstract: Midwives continue to experience high levels of work-related stress. Challenges in staffing and demands on services may contribute, but there are also indications that shift length or working practices may also be a factor, especially if midwives regularly work beyond their contracted hours or miss rest breaks. In the nursing literature, longer shifts have been associated with higher levels of fatigue, yet this has also been found in nurses working 8-hour shifts, due to the high number of consecutive shifts worked, suggesting that working practices also contribute to fatigue. Longer shifts have also been linked to poorer quality of care, yet this only appears significant when shifts exceed 12 hours. There are mixed views on job satisfaction, which may be due to personal preferences or the availability of flexible working. However, the findings of many studies are often limited by poor quality designs and cannot easily be applied to midwifery settings, where there continues to be a lack of research in this area. Further research is therefore required to understand the impact of shift length and working practices on the wellbeing of midwives and their ability to safely deliver care.
36. Work-Related Fatigue Factors among Hospital Nurses: An Integrative Literature Review.

**Author(s):** Alahmadi, Bader Abdullah; Alharbi, Manal Fehade

**Source:** Nurse Media Journal of Nursing; Dec 2018; vol. 8 (no. 2); p. 113-133

**Publication Date:** Dec 2018

**Publication Type(s):** Academic Journal

**Abstract:**

**Background:** Due to the demanding nature of nurses' work and the current shortage of nurses, hospital nurses often find themselves working extra shifts, extended hours, and taking on more responsibilities. However, this added pressure on the body and mind results in fatigue which adversely affects nurses' health status as well as their ability to provide optimal health care procedures. Preventing fatigue and reducing its adverse consequences require comprehensive awareness about its diverse contributing factors.

**Purpose:** This study aimed to examine factors which influence fatigue among nurses employed in a hospital setting.

**Methods:** An integrative review was conducted to assess the quality of the research evidence, to find minor and major gaps in current research and the main issues in the area of the research and finally to bridge the research gaps. This integrative review identified a total of 12 relevant research studies from Cumulative Index to Nursing and Allied Health Literature (CINAHL), Medline, Embase, PsycINFO, and a manual search. Data were reviewed in May 2017, using an integrative review, and then interpreted, analyzed and synthesized to identify the key contributing factors that influence fatigue among hospital nurses.

**Results:** The review revealed that significant factors such as organizational factors, nursing work characteristics, psychosocial factors as well as individual characteristics and demand, influenced the nurse fatigue. Work shifts, specifically night shifts and extended work shifts without sufficient inter-shift recovery were linked to higher levels of fatigue.

**Conclusion:** This review identified the significant factors affecting fatigue among nurses in hospital settings in various countries all around the world. Findings from this study may help healthcare organizations and policymaker to introduce strategies that mitigate fatigue among nurses.

**Database:** CINAHL

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**Author(s):** Forsyth, Katherine L; Hawthorne, Hunter J; El-Sherif, Nibras; Varghese, Rachelen S; Ernste, Vickie K; Koenig, Jordyn; Blocker, Renaldo C

**Source:** Journal of emergency nursing: JEN : official publication of the Emergency Department Nurses Association; Nov 2018; vol. 44 (no. 6); p. 614-623

**Publication Date:** Nov 2018

**Publication Type(s):** Journal Article

**PubMedID:** 29655927

**Available at:** Journal of emergency nursing: JEN : official publication of the Emergency Department Nurses Association - from ProQuest (Health Research Premium) - NHS Version

**Abstract:**

**INTRODUCTION**
This study aimed to describe interruptions experienced by emergency nurses and establish convergence validity of 1 objective workload measure by linking interruption characteristics to objective and subjective measures of workload.

**METHODS**
Interruptions were captured in real time across 8- or 12-hour shifts using a previously validated Workflow Interruptions Tool (WIT). Data collected on each interruption included type, priority, and location where the
interruption occurred. At mid- and end-shift, the Surgery Task Load Index (SURG-TLX) and the Rapid Cognitive Assessment Tool (RCAT) were administered to participating nurses to measure workload subjectively and objectively.

RESULTS

Thirty-eight emergency nurse shifts were observed. A total of 3,229 interruptions were recorded across 372.5 clinical hours and 38 shifts (means [M] = 85.0 interruptions per shift, standard deviation [SD] = 34.9; M = 8.7 interruptions per hour, SD = 3.36). The median duration per interruption was 13.0 seconds. A moderate positive association was identified between the number of interruptions experienced during a shift and the increased overall SURG-TLX workload reported at end-shift, r(36) = 0.323, P = 0.048. Also, a moderate positive association was identified between increased reaction times during the RCAT task and increased mental demand experienced at end of shift, r(36) = 0.460, P < 0.001.

DISCUSSION

This study observed interruptions throughout the entirety of a nursing shift and found that the majority of interruptions caused by the environment were low priority. Targeting interventions to reduce low-priority and environmental interruptions may aid in alleviating the impact of interruptions on clinical staff and patient care. Furthermore, results demonstrate that the frequency of interruptions was perceived to increase the nursing staff workload overall.

Database: Medline

38. The effect of quality of overtime work on nurses’ mental health and work engagement.

Author(s): Watanabe, Mayumi; Yamauchi, Keita

Source: Journal of Nursing Management (John Wiley & Sons, Inc.); Sep 2018; vol. 26 (no. 6); p. 679-688

Publication Date: Sep 2018

Publication Type(s): Academic Journal

Abstract: Aim and Background: Recent research has suggested that the reasons why nurses work overtime hours exert differential effects on the overall impact of the work. This study aimed to clarify why nurses work overtime, and whether well-being effects differed by reason, at both the ward and individual level. Methods: Participants were 1,075 permanent nurses from 54 wards. Overtime reasons’ distribution and impact on nurses were examined by a multilevel structural equation modelling approach. Results: Nurses typically worked overtime due to a pressure to conform, high workload and to enhance self-development. Involuntary overtime work demonstrated a detrimental effect on mental health and work engagement at both the ward and individual level, whereas voluntary overtime work exerted a beneficial effect on well-being. Conclusions: The distribution and impact of overtime work differed by the reasons for working the overtime. Implications for Nursing Management: These results suggest the importance of assessing the reasons for overtime, aside from the length of overtime hours. When trying to reduce overtime work, hospital managers and nurse managers need to advance the plan by ward as a whole, and also carefully assess the reasons for overtime.

Database: CINAHL

39. 12-Hour nursing shifts in critical care: A service evaluation

Author(s): Battle C.; Temblett P.

Source: Journal of the Intensive Care Society; Aug 2018; vol. 19 (no. 3); p. 214-218

Publication Date: Aug 2018

Publication Type(s): Article

Available at Journal of the Intensive Care Society - from Unpaywall
Abstract: The aim of this single-centre study was to investigate the impact of the introduction of 12-h critical care nursing shifts on healthcare provider and patient care outcomes. A single-centre, prospective service evaluation was completed over a two-year period, comparing the 8-h and 12-h shifts. Outcomes included number of clinical incidents, levels of burn-out, sick rates, personal injuries and training. There were no significant differences between the clinical incidents, sickness rates, personal injuries and staff training between the two data collection periods. The results of the burn-out analysis demonstrate that emotional exhaustion and depersonalisation improved, from the 8-h to 12-h shifts (both p < 0.05). In conclusion, the results of this service evaluation have demonstrated that 12-h nursing shifts can be introduced safely into the critical care environment, without any detriment to patient or healthcare provider outcomes. Copyright © The Intensive Care Society 2018.

Database: EMCARE

40. The Association Between Nurse Shift Patterns and Nurse-Nurse and Nurse-Physician Collaboration in Acute Care Hospital Units.

Author(s): Ma, Chenjuan; Stimpfel, Amy Witkoski

Source: Journal of Nursing Administration; Jun 2018; vol. 48 (no. 6); p. 335-341

Publication Date: Jun 2018

Publication Type(s): Academic Journal

Abstract: OBJECTIVE: The aim of this study was to examine the impact of nurse shift patterns on nurses' collaboration with nurses and physicians in US acute care hospital units. BACKGROUND: Collaboration between nurses and other healthcare providers is critical for ensuring quality patient care. Nurses perform collaboration during their shift work; thus, nurse shift patterns may influence collaboration. However, there is a dearth of empirical evidence of the relationship between nurse shift patterns and collaboration of nurses with other healthcare providers. METHODS: This is a cross-sectional study using data from 957 units in 168 acute care hospitals. Measures of collaboration include nurse-nurse collaboration and nurse-physician collaboration. Measures of shift patterns included shift length and overtime. Multilevel linear regressions were conducted at the unit level, controlling unit and hospital characteristics. RESULTS: Overtime (more nurses working overtime or longer overtime hours) was associated with lower collaboration at the unit level; however, shift length was not. CONCLUSIONS: Working overtime may negatively influence nurses' collaboration with other healthcare providers.

Database: CINAHL

41. Shift work in hospitals: what are the effects on patients and staff?

Author(s): Dall'Ora, Chiara; Griffiths, Peter

Source: Nursing Times; Jun 2018; vol. 114 (no. 6); p. 55-56

Publication Date: Jun 2018

Publication Type(s): Periodical

Available at Nursing Times - from Exeter Health Library print Local Print Collection [location]: Exeter Health Library - PRINT COPY ONLY. [title_notes]: incomplete - some issues missing. [coverage_notes]: incomplete - some issues missing.

Abstract: Hospitals work around the clock, which means that they need staff to work shifts. Concerns have been raised about the consequences of some shift patterns, in particular 12-hour shifts, for both patients and staff. This article provides an overview of the evidence on the effects on patient
and staff outcomes, of shift length and other factors such as overtime, weekly work hours, night work/rotating shifts and rest opportunities.

**Database:** CINAHL

### 42. Nurse managers' perception of night-shift napping: A cross-sectional survey.

**Author(s):** Dalky, Heyam F.; Raeda, AbuAlRub F.; Esraa, Aldalqamouni A.

**Source:** Nursing Forum; Apr 2018; vol. 53 (no. 2); p. 173-178

**Publication Date:** Apr 2018

**Publication Type(s):** Academic Journal

**Abstract:** Background: Night-shift work often results in sleep deprivation, and this in turn results in fatigue that jeopardizes both nurse and patient safety. Napping is considered a viable deterrent to fatigue, yet hospital administration has been slow to adopt napping. Objectives: To identify nurse managers' knowledge and approval of napping practices for nurses on night shifts. Methodology: Nurse managers at nine Jordanian hospitals (n = 129) were surveyed using an Arabic version of a questionnaire previously used in a Canadian study. Descriptive statistics were used to describe results, and a one-way ANOVA was used to determine if relationships existed among nurse manager's approval of napping and nurse demographic characteristics. Results: The majority of nurse managers (61%) knew nurses were napping during breaks. However, the managers reported there was no written policy for napping. A majority thought there were more benefits to napping than drawbacks. Some 55% of nurse managers recognized fatigue as a cause of errors or incidents regarding patient safety, and 40% perceived fatigue to be a factor in staff injuries. Conclusion: This study supports an urgent need for shared responsibility among nursing administration, and bedside nurses to develop evidence-based programs to counteract the effects of nurse fatigue.

**Database:** CINAHL

### 43. Night shift naps improve patient and workforce safety.

**Author(s):** Halm, Margo

**Source:** American Journal of Critical Care; Mar 2018; vol. 27 (no. 2); p. 157-160

**Publication Date:** Mar 2018

**Publication Type(s):** Academic Journal

Available at [American Journal of Critical Care](https://www.highwire.org) - from HighWire - Free Full Text

**Abstract:** The article looks at a study about the impact of strategic naps on sleep and cognitive/psychomotor outcomes of nurses. Topics covered include factors that contribute to fatigue, physiological signs of reduced tension from sleeping, and a table that outlines evidence summary for effects of strategic naps.

**Database:** CINAHL

### 44. Can sleep quality and burnout affect the job performance of shift-work nurses? A hospital cross-sectional study.

**Author(s):** Giorgi, Fabio; Mattei, Antonella; Notarnicola, Ippolito; Petrucci, Cristina; Lancia, Loreto

**Source:** Journal of Advanced Nursing (John Wiley & Sons, Inc.); Mar 2018; vol. 74 (no. 3); p. 698-708

**Publication Date:** Mar 2018

**Publication Type(s):** Academic Journal
Abstract: The aim of this study was to investigate any possible relationship between sleep disorders, burnout and job performance in a shift-work population of nurses. Background: Sleep disorders and burnout can affect the job performance of nurses in terms of efficiency, productivity, task execution speed and supervision, which can be compromised when work shifts are organized on a 24-hour schedule and when the shift itself is irregular. Design: A cross-sectional observational study was conducted from August 2014 - January 2015 on a sample of 315 shift-work nurses across 39 wards in seven central Italian hospitals. Methods: The Pittsburgh Sleep Quality Index was used to detect the presence of sleep disorders, the Copenhagen Burnout Inventory was used to detect the presence of any possible type of burnout and the Job Performance Scale was used to measure job performance. Data analysis was mainly based on a multivariate logistic regression to identify variables significantly associated with investigated outcomes. Results: On shift-work nurses' sleep quality and burnout correlated positively. The female gender and personal burnout were significantly associated with impaired sleep quality, while working in the psychiatric setting, working a long cycle shift pattern and experiencing daytime dysfunction were significantly associated with burnout. A significant negative association between patient-related burnout and job performance was observed. Conclusion: Specific characteristics of shift-work nurses can directly affect sleep quality and burnout and indirectly job performance. This evidence offers healthcare administrators opportunities to intervene with measures to promote nurse's health, well-being and safety.

Database: CINAHL

45. The impact of shift work on intensive care nurses’ lives outside work: A cross-sectional study.

Author(s): Jensen, Hanne Irene; Larsen, Jette West; Thomsen, Tina Damgaard

Source: Journal of Clinical Nursing (John Wiley & Sons, Inc.); Feb 2018; vol. 27 (no. 3-4)

Publication Date: Feb 2018

Publication Type(s): Academic Journal

Available at Journal of Clinical Nursing - from Unpaywall

Abstract: Aims and objectives: To examine how shift work affects intensive care nurses’ lives outside work. Background: Shift work is unavoidable for many nurses. When attempting to minimise negative effects of shift work, it is important to identify areas which affect nurses working shifts. Design: A cross-sectional study. Methods: A questionnaire survey among Danish intensive care nurses concerning experiences with shift work and family life, spare time activities, sleep and health. Results: A total of 114 nurses (88%) participated. Shift work was found to influence the opportunities for spare time activities, and about 25% of both evening- and night-shift groups found that working shifts sometimes led to social isolation. A total of 58% of nurses working evening shifts sometimes to very often experienced having trouble falling asleep when working shifts. Night-shift workers had a higher percentage of physical and mental symptoms when working shifts compared with evening-shift workers, with mood swings and headaches being the most common. The median score for thriving on working shifts was 8 (IQR 5–9) for evening-shift workers and 8 (IQR 7–9) for night-shift workers (scale 0–10 with 10 being the highest level of thriving). Conclusion: Shift workers reported that working shifts had a negative impact on life outside work. Opportunities for participating in spare time activities and difficulties falling asleep after shifts were the main issues for evening-shift workers. Night-shift workers, whereas physical symptoms such as headaches and mood swings were more dominant among night-shift workers. Despite the negative effects, the participants generally thrived on working shifts. Relevance to clinical practice: By identifying modifiable areas which negatively influence life outside work when working shifts, it will be possible subsequently to plan interventions aimed at decreasing the negative effects. Interventions may include nurses having increased influence on their work schedules and education in sleep hygiene and dietary habits.

Database: CINAHL
46. A pilot study exploring rehabilitation nurses' perceptions of 12-hour shifts

Author(s): Parkinson J.; Arcamone A.; Mariani B.

Source: Nursing; Feb 2018; vol. 48 (no. 2); p. 60-65

Publication Date: Feb 2018

Publication Type(s): Article

Abstract: Background. Understanding nurses' perceptions of shifts, especially 12-hour shifts, can help facilities to retain their nurses. Literature review. Limited studies of nurses' perceptions of the 12-hour shift have produced varying conclusions about what nurses perceive as its benefits. Purpose. The purpose of this study was to explore the perceptions of rehabilitation nurses who are working in or who have worked 12-hour shifts in an acute rehabilitation hospital and to identify the advantages and disadvantages of 12-hour shifts. Setting. The study was conducted at a suburban acute rehabilitation hospital that uses a team model of nursing care. Methods. This descriptive mixed-method study design used both quantitative and qualitative methods. The questionnaire took participants about 30 minutes to complete. Instrument. The instrument for this study consisted of a research questionnaire and a demographic survey. Sample. Convenience sampling was used to recruit the participants. Inclusion criteria included nurses who were employed at the rehabilitation hospital and are currently working 12-hour shifts, or have worked 12-hour shifts in a rehabilitation setting during their past 10 years of employment. Results. Family life, communication with nurses, patient care, continuity of care, time off, and job satisfaction received the highest scores in the survey, indicating that 12-hour shifts allowed greater satisfaction in these areas. Disadvantages were greater fatigue and lack of continuity of care when patient assignments changed during the shift. Discussion. Key findings warranting further discussion included communication between nurses, physicians, and the interdisciplinary team; increased fatigue; and nursing assignment changes in the middle of a shift. Limitations. The small sample size, the study being conducted in only one facility, day and night shifts not being compared, and the question about fatigue/freshness, which are opposite concepts, were the limitations. Conclusion. Working 12-hour shifts may have a positive effect on job satisfaction and allow rehabilitation nurses to have more flexibility to further their education. Facilities should avoid changing patient assignments in the middle of a shift and avoid scheduling nurses for shifts longer than 12 hours to lessen fatigue.

Database: EMCARE

47. The impact of long work hours and shift work on cognitive errors in nurses.

Author(s): Rhéaume, Ann; Mullen, Jane

Source: Journal of Nursing Management (John Wiley & Sons, Inc.); Jan 2018; vol. 26 (no. 1); p. 26-32

Publication Date: Jan 2018

Publication Type(s): Academic Journal

Abstract: Aim Pilot study to examine the impact of long work hours and shift work on cognitive errors in nurses. Background Twelve-hour shifts are more commonly used in hospital settings and there is growing concern over the impact that extended and irregular work hours have on nurses' well-being and performance. Method Twenty-eight nurses working different shifts (8-hr days and 12-hr rotation) participated in this study. Nurses were assessed at the beginning of four consecutive shifts using actigraphy, a sleep diary and an after work questionnaire. Results Nurses working 12-hr rotations had less total sleep time and less sleep efficiency than 8-hr day nurses. Twelve-hour rotation nurses also napped more than their counterparts. There were no differences between the two groups with respect to cognitive errors. Conclusions Twelve-hour rotations have a negative effect on nurses' sleep patterns. There is no evidence indicating 12-hr rotations increased errors. Implications for nursing management Nurse managers can implement specific strategies, such as
greater shift work flexibility and designated quiet time, to reduce the effects of disturbed sleep patterns in nurses.

**Database:** CINAHL

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**48. Measuring Fatigue in Triage: A Pilot Study**

*Author(s):* McMahon B.; Hudson J.; Prewitt J.; Carman M.J.; Engleson M.

*Source:* Advanced Emergency Nursing Journal; 2017; vol. 39 (no. 2); p. 114-122

*Publication Date:* 2017

*Publication Type(s):* Article

*Abstract:* Given the critical nature of triage in facilitating emergency department (ED) functions, an understanding of the factors that impact triage nurses' ability to accurately assign triage scores and the ways in which these factors may affect various patient outcomes is extremely important; yet, there exists a paucity of such research in the literature. To further develop this knowledge base, an investigation of triage nurse fatigue and the role it may play in the ability to accurately assign triage scores was developed. The purpose of this pilot study was to determine how the length of a triage shift affects perceived fatigue levels among triage nurses. This pilot study was conducted using a prospective, descriptive cohort design with 28 registered nurses at a university-affiliated community hospital in the southeastern United States. Fatigue data were collected every 2 hr while the subject was in triage over the course of eighteen 24-hr periods between November 2015 and April 2016. Fatigue was measured using a self-reported fatigue questionnaire that included 2 validated fatigue scales: Karolinska Sleepiness Scale and Samn-Perelli Seven-Point Fatigue Scale. Data were analyzed using SPSS and Microsoft Excel. Results indicate a strong correlation between the amount of time spent in triage and fatigue scores, with average fatigue scores increasing by 64.4%-75.2% over the course of a 12-hr shift. Findings suggest that there was a positive correlation between the length of a triage shift and perceived fatigue levels among triage nurses in the ED. The biggest percent increase in fatigue scores is between hours 4 and 8. Further studies are needed to determine optimal triage shift length as well as the effect of nursing fatigue on triage accuracy. 

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*Database:* EMCARE

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**49. Effects of rest-break intention on rest-break frequency and work-related fatigue**

*Author(s):* Blasche G.; Pasalic S.; Baubock V.-M.; Haluza D.; Schoberberger R.

*Source:* Human Factors; 2017; vol. 59 (no. 2); p. 289-298

*Publication Date:* 2017

*Publication Type(s):* Article

*Abstract:* Objectives: The present paper presents findings from two studies addressing the effects of the employee's intention to have rest breaks on rest-break frequency and the change of well-being during a workday. Background(s): Rest breaks are effective in avoiding an accumulation of fatigue during work. However, little is known about individual differences in rest-break behavior. Method(s): In Study 1, the association between restbreak intention and the daily number of rest breaks recorded over 4 consecutive workdays was determined by generalized linear model in a sample of employees (n = 111, 59% females). In Study 2, professional geriatric nurses (n = 95 females) who worked over two consecutive 12-hour day shifts recorded well-being (fatigue, distress, effort motivation) at the beginning and the end of their shifts. The effect of rest-break intention on the change of well-being was determined by multilevel modeling. Result(s): Rest-break intention was positively associated with the frequency of rest breaks (Study 1) and reduced the increase of fatigue.
and distress over the workday (Study 2). Conclusion(s): The results indicate that individual differences account for the number of breaks an employee takes and, as a consequence, for variations in the work-related fatigue and distress. Application: Strengthening rest-break intentions may help to increase rest-break behavior to avoid the buildup of fatigue and distress over a workday.

**Database:** EMCARE

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50. **Coping strategies and social support needs of experienced and inexperienced nurses performing shiftwork.**

**Author(s):** Gifkins, Jane; Loudoun, Rebecca; Johnston, Amy

**Source:** Journal of Advanced Nursing (John Wiley & Sons, Inc.); Dec 2017; vol. 73 (no. 12); p. 3079-3089

**Publication Date:** Dec 2017

**Publication Type(s):** Academic Journal

**Available at** Journal of advanced nursing - from Un paywall

**Abstract:** Aim The aim of this investigation was to compare perceptions of nurses exposed to short or longer term shift work and their experiences working under this type of scheduling. Background: Shift work is a crucial component of nurses’ working lives, ensuring continuous care for patients. This study fills a research gap around the personal experiences of shift working nurses and the strategies used to manage the impacts of shift work. Design: Qualitative case study design. Methods: Constructivist methodology, including in-depth semi-structured interviews conducted in 2015, was used for the study. Iterative review and inductive analysis of transcripts from nine recently graduated nurses and twelve experienced nurses enabled identification and verification of key themes. Findings: Three main areas of difference between new and experienced nurses relating to shift work challenges in a nursing environment emerged: perceptions about the utility of working in shifts, coping strategies and social support at home and work. Most experienced nurses found shift work advantageous, especially those with dependents. Coping strategies included flexible shift arrangements in both groups. Experienced nurses detailed the importance of support from family and friends while inexperienced nurses described feeling disconnected from social supports. Experienced nurses cited a lack of support from nursing managers as problematic. Conclusions: Findings suggest shift selection mitigated challenges of shift work for both inexperienced and experienced nurses, indicating autonomous roster selection is critical. Similarly, social support at work from senior nurses and management and at home played an important role in nurses’ coping.

**Database:** CINAHL

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51. **Nurses split over benefits of 12-hour shifts, survey reveals.**

**Author(s):** Mckew, Matthew

**Source:** Nursing Standard; Nov 2017; vol. 32 (no. 14); p. 7-8

**Publication Date:** Nov 2017

**Publication Type(s):** Trade Publication

**Abstract:** The article focuses on a straw poll by Nursing Standard which revealed that opinion remains divided over the effect of 12-hour shifts. Topics discussed include percentage of respondents who favor the longer work patterns, negative impact of 12-hour shifts on staff and patients, according to a National Institute for Health Research study in 2015, and remarks from
52. Nursing Students' Perceptions of the Transition to Shift Work: A Total Worker Health Perspective.

**Author(s):** Postma, Julie; Tuell, Erica; James, Lois; Graves, Janessa M.; Butterfield, Patricia

**Source:** Workplace Health & Safety; Nov 2017; vol. 65 (no. 11); p. 533-538

**Publication Date:** Nov 2017

**Publication Type(s):** Academic Journal

**Abstract:** Nursing students make an abrupt transition from traditional classes to clinical rotations and shift work. Little is known about students' sleep, sleep disturbances, and safe practice behaviors during this critical phase of professional development. The purpose of this study was to identify nursing students' perceptions of problems and potential solutions related to shift work and long work hours. This qualitative, descriptive study used two nursing student focus groups which engaged in a two-round participatory process aimed at framing future interventions. Participants identified problems and solutions related to personal and workplace well-being. Findings will inform undergraduate curricular revisions, and hospital hiring and managerial practices.

**Database:** CINAHL

53. Evaluation of nurses' workload in intensive care unit of a tertiary care university hospital in relation to the patients' severity of illness: A prospective study

**Author(s):** Kraljic S.; Zuvic M.; Desa K.; Blagaic A.; Sotosek V.; Antoncic D.; Likic R.

**Source:** International Journal of Nursing Studies; Nov 2017; vol. 76 ; p. 100-105

**Publication Date:** Nov 2017

**Publication Type(s):** Article

**Abstract:** Backgrounds Costs of intensive care reach up to 30% of the hospital budget with workforce expenses being substantial. Determining proper nurse-patient ratio is necessary for optimizing patients' health related outcomes and hospitals' cost effective functioning. Objectives To evaluate nurses' workload using Nine Equivalents of Nursing Manpower Use Score and Nursing Activities Score scoring systems while assessing correlation between both scores and the severity of illness measured by Simplified Acute Physiology Score II. Design A Prospective study Settings Cardiac Surgery Intensive Care Unit of the Clinical Hospital Centre Rijeka, Croatia, from October 2014 to February 2015. This Intensive Care Unit has 3 beds that can be expanded upon need. Participants The study included 99 patients treated at this Unit during the study's period. The scores were obtained by 6 nurses, working in 12 h shifts. Methods Measurements were obtained for each patient 24 h after admission and subsequently twice a day, at the end of the day shift (7 pm) and at the end of the night shift (7 am). The necessary data were obtained from the patient's medical records. Results Nursing Activities Score showed significantly higher number of nurses are required for one 12 h shift ($Z = 3.76, p < 0.001$). Higher scores were obtained on day shifts vs. night shifts. (Nursing Manpower Use Score, $z = 3.25, p < 0.001$; Nursing Activities Score, $z = 4.16, p < 0.001$). When comparing Nursing Activities Score and Nursing Manpower Use Score during the week, we calculated higher required number of nurses on weekdays than on weekends and holidays, (Nursing...
Manpower Use Score, \( p < 0.001 \); Nursing Activities Score, \( p < 0.001 \). Correlation analysis of Nursing Activities Score and Nursing Manpower Use Score with Simplified Acute Physiology Score II has shown that Nursing Manpower Use Score positively associated with severity of disease, while Nursing Activities Score shows no association. Conclusion Both scores can be used to estimate required number of nurses in 12-h shifts, although Nursing Activities Score seems more suitable for units with prolonged length of stay, while Nursing Manpower Use Score appears better for units with shorter duration of stay (up to four days). Higher workload measured by Nursing Manpower Use Score scale can be predicted with higher Simplified Acute Physiology Score II. However, with low Simplified Acute Physiology Score II scores it cannot be assumed that the nursing workload will also be low. Further research is needed to determine the best tool to assess nursing workload in intensive care units.

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Database: EMCARE

54. How does the length of day shift affect patient care on older people’s wards? A mixed method study.

Author(s): Baillie, Lesley; Thomas, Nicola

Source: International Journal of Nursing Studies; Oct 2017; vol. 75 ; p. 154-162

Publication Date: Oct 2017

Publication Type(s): Academic Journal

Available at International journal of nursing studies - from Unpaywall

Abstract: Background Internationally, studies have focused on whether shift length impacts on patient care. There are also ongoing concerns about patient care for older people in hospital. The study aim was to investigate how length of day shift affects patient care in older people’s hospital wards. Objectives 1) To explore how length of day shift affects patient care in older people’s wards; 2) To explore how length of day shift affects the quality of communication between nursing staff and patients/families on older people’s wards Design A mixed method case study. Settings The study was based on two older people’s wards in an acute hospital in England. One ward was piloting two, overlapping 8 h day shifts for 6 months while the other ward continued with 12 h day shifts. Participants and methods Qualitative interviews were conducted with 22 purposively recruited nursing staff (17 registered nurses; 5 nursing assistants). An analysis of patient discharge survey data was conducted (n = 279). Twenty hours of observation of nursing staff’s interactions with patients and families was conducted, using an adapted version of the Quality of Interaction Schedule (301 interactions observed), with open fieldnotes recorded, to contextualise the observations. Results There were no statistically significant differences in patient survey results, or quality of interactions, between the two wards. There were three overall themes: Effects of day shift length on patient care; Effects of day shift length on continuity of care and relationships; Effects of day shift length on communication with patients and families. Nursing staff believed that tiredness could affect care and communication but had varied views about which shift pattern was most tiring. They considered continuity of care was important, especially for older people, but had mixed views about which shift pattern best promoted care continuity. The difficulties in staffing a ward with an 8 h day shift pattern, in a hospital that had a 12 h day shift pattern were highlighted. Other factors that could affect patient care were noted including: ward leadership, ward acuity, use of temporary staff and their characteristics, number of consecutive shifts, skillmix and staff experience. Conclusions There was no conclusive evidence that length of day shift affected patient care or nursing staff communication with patients and families. Nursing staff held varied views about the effects of day shift length on patient care. There were many other factors identified that could affect patient care in older people’s wards.

Database: CINAHL
55. Unregistered health care staff’s perceptions of 12 hour shifts: an interview study.

**Author(s):** Thomson, Louise; Schneider, Justine; Hare Duke, Laurie

**Source:** Journal of Nursing Management (John Wiley & Sons, Inc.); Oct 2017; vol. 25 (no. 7); p. 531-538

**Publication Date:** Oct 2017

**Publication Type(s):** Academic Journal

**Abstract:**
Aim The purpose of the study was to explore unregistered health care staff’s perceptions of 12 hour shifts on work performance and patient care. Background Many unregistered health care staff work 12 hour shifts, but it is unclear whether these are compatible with good quality care or work performance. Method Twenty five health care assistants from a range of care settings with experience of working 12 hour shifts took part in interviews or focus groups. Results A wide range of views emerged on the perceived impact of 12 hour shifts in different settings. Negative outcomes were perceived to occur when 12 hour shifts were combined with short-staffing, consecutive long shifts, high work demands, insufficient breaks and working with unfamiliar colleagues. Positive outcomes were perceived to be more likely in a context of control over shift patterns, sufficient staffing levels, and a supportive team climate. Conclusion The perceived relationship between 12 hour shifts and patient care and work performance varies by patient context and wider workplace factors, but largely focuses on the ability to deliver relational aspects of care. Implications for nursing management Nursing managers need to consider the role of other workplace factors, such as shift patterns and breaks, when implementing 12 hour shifts with unregistered health care staff.

**Database:** CINAHL

56. What is the impact of shift work on the psychological functioning and resilience of nurses? An integrative review.

**Author(s):** Tahghighi, Mozhdeh; Rees, Clare S.; Brown, Janie A.; Breen, Lauren J.; Hegney, Desley

**Source:** Journal of Advanced Nursing (John Wiley & Sons, Inc.); Sep 2017; vol. 73 (no. 9); p. 2065-2083

**Publication Date:** Sep 2017

**Publication Type(s):** Academic Journal

**Abstract:**
Aim To synthesize existing research to determine if nurses who work shifts have poorer psychological functioning and resilience than nurses who do not work shifts. Background Research exploring the impact of shift work on the psychological functioning and resilience of nurses is limited compared with research investigating the impact of shifts on physical outcomes. Design Integrative literature review. Data Sources Relevant databases were searched from January 1995-August 2016 using the combination of keywords: nurse, shift work; rotating roster; night shift; resilient; hardiness; coping; well-being; burnout; mental health; occupational stress; compassion fatigue; compassion satisfaction; stress; anxiety; depression. Review Methods Two authors independently performed the integrative review processes proposed by Whittemore and Knaff and a quality assessment using the mixed-methods appraisal tool by Pluye et al. Results A total of 37 articles were included in the review (32 quantitative, 4 qualitative and 1 mixed-methods). Approximately half of the studies directly compared nurse shift workers with non-shift workers. Findings were grouped according to the following main outcomes: (1) general psychological well-being/quality of life; (2) Job satisfaction/burnout; (3) Depression, anxiety and stress; and (4) Resilience/coping. We did not find
definitive evidence that shift work is associated with poorer psychological functioning in nurses. Overall, the findings suggest that the impact of shift work on nurse psychological functioning is dependent on several contextual and individual factors. Conclusion More studies are required which directly compare the psychological outcomes and resilience of nurse shift workers with non-shift workers.

Database: CINAHL

57. Nursing Overtime: Should It Be Regulated?

Author(s): Wheatley, Cathleen

Source: Nursing Economic$; Jul 2017; vol. 35 (no. 4); p. 213-217

Publication Date: Jul 2017

Publication Type(s): Academic Journal

Available at Nursing Economics - from ProQuest (Health Research Premium) - NHS Version

Abstract: The article discusses the negative impact of overtime on nurses and patients due to nurse fatigue from long work hours, inadequate sleep, and inadequate recovery time between shifts. Topics covered include prevalence of nursing overtime in the U.S. and Europe, an overview of published literature on nurse overtime, and the association between overtime and nurse outcomes such as needlestick and musculoskeletal injuries.

Database: CINAHL

58. The Impact of Shift Work on Nurses’ Quality of Sleep.

Author(s): Owens, Bethany

Source: ABNF Journal; Jun 2017; vol. 28 (no. 3); p. 59-63

Publication Date: Jun 2017

Publication Type(s): Academic Journal

Available at ABNF Journal - from ProQuest (Health Research Premium) - NHS Version

Abstract: Sleep and sleep quality are important to maintaining a healthy quality of life. Nurses that work long hour shifts, more importantly, consecutive shifts, often feel the effects of not acquiring enough sleep or enough quality sleep. This descriptive study explores shift work effects on sleeping patterns among nurses. In addition, this study examines whether the lack of sleep related to shift hours effect overall quality of life. The results of this study may encourage nurses to employ health promotion strategies in their own personal lives and not just in their patient’s lives.

Database: CINAHL

59. Sleep Detriments Associated With Quick Returns in Rotating Shift Work: A Diary Study.

Author(s): Vedaa, Øystein; Mørland, Erik; Larsen, Marit; Harris, Anette; Erevik, Eilin; Sivertsen, Børge; Bjorvatn, Bjørn; Waage, Siri; Pallesen, Såtle

Source: Journal of Occupational & Environmental Medicine; Jun 2017; vol. 59 (no. 6); p. 522-527

Publication Date: Jun 2017

Publication Type(s): Academic Journal

Abstract: Objective: We aimed to compared sleep characteristics associated with quick returns (QRs, <11 hours between shift intervals) with those associated with other common shift transitions.
Methods: Sixty-seven nurses completed a 2-week work and sleep diary (94.0% female, mean age 47.7 years). A multilevel fixed effects model was used to examine the sleep in QRs compared with two consecutive night shifts, two consecutive evening shifts, and two consecutive day shifts, respectively. Results: None of the other shift transitions studied encumbered as many detriments as QRs, which included short sleep duration (5.6 hours), slightly prolonged sleep onset latency, more abrupt ending of main sleep period, increased sleepiness, and higher level of perceived stress on the following shift. Conclusion: The study emphasizes the need for sufficient time for rest and recuperation between shifts.

Database: CINAHL

60. Cross-sectional examination of the association between shift length and hospital nurses job satisfaction and nurse reported quality measures.

Author(s): Ball, Jane; Day, Tina; Murrells, Trevor; Dall’Ora, Chiara; Rafferty, Anne Marie; Griffiths, Peter; Maben, Jill

Source: BMC Nursing; May 2017; vol. 16 ; p. 1-7

Publication Date: May 2017

Publication Type(s): Academic Journal

Abstract: Background: Twenty-four hour nursing care involves shift work including 12-h shifts. England is unusual in deploying a mix of shift patterns. International evidence on the effects of such shifts is growing. A secondary analysis of data collected in England exploring outcomes with 12-h shifts examined the association between shift length, job satisfaction, scheduling flexibility, care quality, patient safety, and care left undone. Methods: Data were collected from a questionnaire survey of nurses in a sample of English hospitals, conducted as part of the RN4CAST study, an EU 7th Framework funded study. The sample comprised 31 NHS acute hospital Trusts from 401 wards, in 46 acute hospital sites. Descriptive analysis included frequencies, percentages and mean scores by shift length, working beyond contracted hours and day or night shift. Multi-level regression models established statistical associations between shift length and nurse self-reported measures. Results: Seventy-four percent (1898) of nurses worked a day shift and 26% (670) a night shift. Most Trusts had a mixture of shifts lengths. Self-reported quality of care was higher amongst nurses working ≤8 h (15.9%) compared to those working longer hours (20.0 to 21.1%). The odds of poor quality care were 1.64 times higher for nurses working ≥12 h (OR = 1.64, 95% CI 1.18-2.28, p = 0.003). Mean 'care left undone' scores varied by shift length: 3.85 (≤8 h), 3.72 (8.01-10.00 h), 3.80 (10.01-11.99 h) and were highest amongst those working ≥12 h (4.23) (p < 0.001). The rate of care left undone was 1.13 times higher for nurses working ≥12 h (RR = 1.13, 95% CI 1.06-1.20, p < 0.001). Job dissatisfaction was higher the longer the shift length: 42.9% (≥12 h (OR =1.51, 95% CI 1.17-1.95, p = .001); 35.1% (≤8 h) 45.0% (8.01-10.00 h), 39.5% (10.01-11.99 h). Conclusions: Our findings add to the growing international body of evidence reporting that ≥12 shifts are associated with poor ratings of quality of care and higher rates of care left undone. Future research should focus on how 12-h shifts can be optimised to minimise potential risks.

Database: CINAHL

61. Effects of Accumulating Work Shifts on Performance-Based Fatigue Using Multiple Strength Measurements in Day and Night Shift Nurses and Aides.

Author(s): Thompson, Brennan J.; Stock, Matt S.; Banuelas, Victoria K.

Source: Human Factors; May 2017; vol. 59 (no. 3); p. 346-356
Objective: This study aimed to examine the effects of accumulating nursing work on maximal and rapid strength characteristics in female nurses and compare these effects in day versus night shift workers. Nurses exhibit among the highest nonfatal injury rates of all occupations, which may be a consequence of long, cumulative work shift schedules. Fatigue may accumulate across multiple shifts and lead to performance impairments, which in turn may be linked to injury risks. Method: Thirty-seven nurses and aides performed isometric strength-based performance testing of three muscle groups, including the knee extensors, knee flexors, and wrist flexors (hand grip), as well as countermovement jumps, at baseline and following exposure to three 12-hour work shifts in a four-day period. Variables included peak torque (PT) and rate of torque development (RTD) from isometric strength testing and jump height and power output. Results: The rigorous work period resulted in significant decreases (-7.2% to -19.2%) in a large majority (8/9) of the isometric strength-based measurements. No differences were noted for the day versus night shift workers except for the RTD at 200 millisecond variable, for which the night shift had greater work-induced decreases than the day shift workers. No changes were observed for jump height or power output. Conclusions: A compressed nursing work schedule resulted in decreases in strength-based performance abilities, being indicative of performance fatigue. Application: Compressed work schedules involving long shifts lead to functional declines in nurse performance capacities that may pose risks for both the nurse and patient quality of care. Fatigue management plans are needed to monitor and regulate increased levels of fatigue.

Database: CINAHL

62. Work-related self-assessed fatigue and recovery among nurses.

Author(s): Blasche, Gerhard; Bauböck, Verena-Maria; Haluza, Daniela

Source: International archives of occupational and environmental health; Feb 2017; vol. 90 (no. 2); p. 197-205

Publication Date: Feb 2017

Publication Type(s): Journal Article

PubMedID: 27838889

Available at International archives of occupational and environmental health - from ProQuest (Health Research Premium) - NHS Version

Abstract: PURPOSE: Adequate recovery opportunities are crucial for preventing long-term health effects of acute load reactions in response to stressful work. However, little is known about the time course of recovery from work during non-working days. Thus, the present study assessed recovery from two consecutive 12-hours day shifts during a period of three rest days among nurses.

METHODS: In total, 48 nurses (89.6% females) working in three public Austrian nursing homes completed 5-day self-reporting diaries prior to a work phase consisting of two consecutive 12-hours day shifts followed by three consecutive rest days. Therefore, morning and evening fatigue, distress, vigor and sleep were self-assessed by standardized questionnaires. We analyzed the data using multivariate analysis of variance for repeated measures.

RESULTS: Study participants experienced worse well-being and a greater decline in well-being on working days compared to rest days. Well-being increased from rest day 1 to rest day 2 in fatigue, vigor and distress. Rest day 2 to rest day 3 showed a further improvement in fatigue and vigor.

CONCLUSIONS: Understanding the concepts of allostatic load, need for recovery and fatigue is essential to develop personalized working schedules. The results suggest that at least three rest days are necessary for full recovery after two consecutive...
12-hours day shifts. Thus, adequate time for recovery enables nurses to maintain caring attitudes with patients, thus contributing to patient safety.

Database: Medline

63. Effects of a 12-hour shift on mood states and sleepiness of Neonatal Intensive Care Unit nurses.

Author(s): Ferreira, Tadeu Sartini; Moreira, Clarice Zinato; Guo, James; Noce, Franco

Source: Revista da Escola de Enfermagem da USP; Jan 2017; vol. 51; p. 1-7

Publication Date: Jan 2017

Publication Type(s): Academic Journal

Abstract: Objective: To assess the effect of a 12-hour shift on mood states and sleepiness at the beginning and end of the shift. Method: Quantitative, cross-sectional and descriptive study. It was conducted with 70 neonatal intensive care unit nurses. The Brunel Mood Scale (BRUMS), Karolinska Sleepiness Scale (KSS), and a socio-demographic profile questionnaire were administered. Results: When the KSS and BRUMS scores were compared at the beginning of the shift associations were found with previous sleep quality (p ≤ 0.01), and quality of life (p ≤ 0.05). Statistical significant effects on BRUMS scores were also associated with previous sleep quality, quality of life, liquid ingestion, healthy diet, marital status, and shift work stress. When the beginning and end of the shift were compared, different KSS scores were seen in the group of all nurses and in the night shift one. Significant vigor and fatigue scores were observed within shift groups. Conclusion: A good night's sleep has positive effects on the individual's mood states both at the beginning and the end of the shift. The self-perception of a good quality of life also positively influenced KSS and BRUMS scores at the beginning and end of the shift. Proper liquid ingestion led to better KSS and BRUMS scores.

Database: CINAHL

64. Validation of the Nurses’ Perception of Patient Rounding Scale: An Exploratory Study of the Influence of Shift Work on Nurses’ Perception of Patient Rounding

Author(s): Neville K.; Dibona C.; Mahler M.

Source: Orthopaedic Nursing; 2016; vol. 35 (no. 2); p. 84-91

Publication Date: 2016

Publication Type(s): Article

Abstract: Hourly rounds have re-emerged as standard practice among nurses in acute care settings, and there is the need to identify nurses' perceptions regarding this practice. Further use of the Nurses’ Perception of Patient Rounding Scale (NPPRS) is needed to further validate this new instrument. In addition, there exists a dearth of literature that examines the impact of hours worked and shift on nurses’ perceptions of patient rounding. The purpose of this descriptive study was to explore nurses’ perception of the required practice of patient rounding, to examine the influence of nurses’ shift on nurses’ perception of rounding practice, and to provide additional psychometric support for the NPPRS. The NPPRS, a 42-item scale in 5-point Likert format, and a demographic information sheet were used in the study. The NPPRS yields three subscales: communication, patient benefits, and nurse benefits. Using a convenience sample of anonymous nurse participants, 76 nurses from five medical-surgical units at a medical center in the northeast corridor of the United States participated in the study. Further psychometric support for the NPPRS was demonstrated.
Excellent reliability coefficients via Cronbach’s alpha for the total scale (0.91) and each of the subscales were obtained. A statistically significant difference was noted among nurses working 8 hours versus 12 hours or combined 8- and 12-hour workloads. Perceptions of nurse benefits were statistically significantly higher for nurses working 8 hours. In addition, results indicated that nurses perceived rounding to be more beneficial to their own practice than to patients. Analyses revealed that leadership support was instrumental in successful rounding practice. Further support for the NPPRS was obtained through this study. Strong nursing leadership, supportive of rounding, is essential for successful rounding. Further research should examine the efficacy of nurse rounding-developed protocols specific to the shift and unit of nursing practice.

Database: EMCARE

65. Impact of shift work on critical care nurses.

Author(s): Pryce, Cheryl
Source: Canadian Journal of Critical Care Nursing; Dec 2016; vol. 27 (no. 4); p. 17-21
Publication Date: Dec 2016
Publication Type(s): Academic Journal
Available at The Canadian journal of critical care nursing - from ProQuest (Health Research Premium) - NHS Version

Abstract: Shift work is a common practice in the health care field to maintain 24-hour patient care. The purpose of this article is to recognize the negative impact of shift work on critical care nurses, and identify strategies to mitigate these effects. A review of the literature was completed, using the search terms: ‘shift work’, ‘critical care’, impact, and health. The literature revealed that shift work has an adverse effect on the health of a nurse. Some of the health implications include stress, sleep deprivation, cardiovascular disease, gastrointestinal symptoms, and mental health illnesses. Furthermore, shift work impacts a nurse’s social life and may result in patient harm. Strategies to reduce the negative impact of shift work will be focused on educating critical care nurses and managers. These strategies include frontline staff maintaining a moderate amount of exercise, sustaining a well-balanced diet, using relaxation techniques, reducing the use of cigarettes, working an eight-hour work day, and napping during scheduled breaks. Recommendations for managers include implementing quiet time at the workplace, providing a safe space for staff to nap during breaks, facilitating an eight-hour work day, and encouraging a multidisciplinary team approach when managing workload.

Database: CINAHL

66. Double work shift: implications on nurses' health.

Author(s): Alencar Albuquerque, Grayce; Cavalcanti Nunes, Jeane Fonsêca; Moreira Belém, Jameson; Fonseca Leite, Mônica; da Silva Quirino, Glauberto
Source: Journal of Nursing UFPE / Revista de Enfermagem UFPE; Sep 2016; vol. 10 (no. 9); p. 3401-3410
Publication Date: Sep 2016
Publication Type(s): Academic Journal

Abstract: Objective: to analyze the double shifts and health impacts of female nurses working in the Family Health Strategy. Method: descriptive qualitative study, carried out with 13 nurses through semi-structured interview. Data were analyzed according to the thematic analysis technique. Results: four categories emerged: 1. Conceptualizing health: nurses' perception about care of
themselves; 2. Health practices and their relationship with public and domestic work: impacts on physical and mental health; 3. Being woman, mother and nurse: contextualization from gender perspective; and 4. Concern/negative perception of body self-image front to gender stereotypes. Conclusion: the study may contribute to reflection in face of the gender issues that are implicit in the daily lives of women/nurses; it is important to understand them as determinants of the health-disease process.

Database: CINAHL

67. The impact of a rigorous multiple work shift schedule and day versus night shift work on reaction time and balance performance in female nurses: A repeated measures study

Author(s): Thompson B.J.; Stock M.S.; Banuelas V.K.; Akalonu C.C.

Source: Journal of Occupational and Environmental Medicine; Aug 2016; vol. 58 (no. 7); p. 737-743

Publication Date: Aug 2016

Publication Type(s): Article

Abstract:Objective: The aim of this study was to determine the impact of a demanding work schedule involving long, cumulative work shifts on response time and balance-related performance outcomes and to evaluate the prevalence of musculoskeletal disorders between day and night shift working nurses. Method(s): A questionnaire was used to identify the prevalence of past (12-month) and current (7-day) musculoskeletal disorders. Nurses worked three 12-hour work shifts in a 4-day period. Reaction time and balance tests were conducted before and after the work period. Result(s): The work period induced impairments for reaction time, errors on reaction time tasks, and balance performance, independent of shift type. Musculoskeletal symptom prevalence was high in workers of both work shifts. Conclusion(s): Compressed work shifts caused performance-based fatigue in nurses. Reaction time and balance tests may be sensitive fatigue identification markers in nurses. Copyright © 2016 American College of Occupational and Environmental Medicine.

Database: EMCARE

68. Which resources moderate the effects of demanding work schedules on nurses working in residential elder care? A longitudinal study.

Author(s): Peters, Velibor; Houkes, Inge; de Rijk, Angelique E.; Bohle, Philip L.; Engels, Josephine A.; Nijhuis, Frans J.N.

Source: International Journal of Nursing Studies; Jun 2016; vol. 58 ; p. 31-46

Publication Date: Jun 2016

Publication Type(s): Academic Journal

Abstract:Background Shiftwork is a major job demand for nurses and has been related to various negative consequences. Research suggests that personal and job resources moderate the impact of work schedules on stress, health and well-being. Objectives This longitudinal study examined whether the interactions of personal and job resources with work schedule demands predicted work engagement and emotional exhaustion in nursing. Design This longitudinal study included two waves of data collection with a one year follow-up using self-report questionnaires among 247 nurses working shifts or irregular working hours in residential care for the elderly in the Netherlands. Methods Moderated structural equation modelling was conducted to examine the interactions between personal and job resources and work schedule demands. Two work schedule demands were assessed: type of work schedule (demanding vs. less demanding) and average weekly working hours. Two personal resources, active coping and healthy lifestyle, and two job resources, work schedule control and the work schedule fit with nurses’ private life, were assessed. Results Results
showed that the work schedule fit with nurses’ private life buffered the relationship between work schedule demands and emotional exhaustion one year later. Furthermore, the work schedule fit with nurses’ private life increased work engagement one year later when work schedule demands were high. Work schedule control strengthened the positive relationship between work schedule demands and emotional exhaustion one year later. The personal resources, active coping and healthy lifestyle were no moderators in this model. Conclusion Nurses suffer less from decreasing work engagement and emotional exhaustion due to work schedule demands when their work schedules fit with their private lives. Work schedule control did not buffer, but strengthened the positive relationship between weekly working hours and emotional exhaustion one year later. Job resources appeared to be more important for nurses’ well-being than personal resources. These findings highlight the importance of the fit of a work schedule with nurse’s private life, if the work schedule is demanding.

Database: CINAHL

69. Quality and Continuity of Care: Shorter or Longer Shifts?
Author(s): Kenner C.; Boykova M.
Source: Newborn and Infant Nursing Reviews; Jun 2016; vol. 16 (no. 2); p. 42
Publication Date: Jun 2016
Publication Type(s): Article
Abstract: Neonatal care is a highly complex specialized area in medicine and nursing. While evidence is growing to support our interventions, there are still a lot of gray areas. This column "Point - Counterpoint" is meant to evoke more questions than answers, to debate topics from both sides-not suggesting one is right, the other wrong. This issue's topic is: 12-h shifts and the impact on quality and continuity of care. We invite your thoughts. Copyright © 2016 Elsevier Inc.

Database: EMCARE

70. Napping on the Night Shift: A Two-Hospital Implementation Project.
Author(s): Geiger-Brown, Jeanne; Sagherian, Knar; Shijun Zhu; Wieroniey, Margaret Ann; Blair, Lori; Warren, Joan; Hinds, Pamela S.; Szeles, Rose
Source: AJN American Journal of Nursing; May 2016; vol. 116 (no. 5); p. 26-34
Publication Date: May 2016
Publication Type(s): Academic Journal
Available at The American journal of nursing - from PubMed
Abstract: Background: Nurses who work the night shift often experience high levels of sleepiness. Napping has been adopted as an effective countermeasure to sleepiness and fatigue in other safety-sensitive industries, but has not had widespread acceptance in nursing. Purpose: To assess the barriers to successful implementation of night-shift naps and to describe the nap experiences of night-shift nurses who took naps. Methods: In this two-hospital pilot implementation project, napping on the night shift was offered to six nursing units for which the executive nursing leadership had given approval. Unit nurse managers' approval was sought, and where granted, further explanation was given to the unit's staff nurses. A nap experience form, which included the Karolinska Sleepiness Scale, was used to assess pre-nap sleepiness level, nap duration and perceived sleep experience, post-nap sleep inertia, and the perceived helpfulness of the nap. Nurse managers and staff nurses were also interviewed at the end of the three-month study period. Results: Successful implementation occurred on only one of the six units, with partial success seen on a
second unit. Barriers primarily occurred at the point of seeking the unit nurse managers' approval. On the successful unit, 153 30-minutes naps were taken during the study period. A high level of sleepiness was present at the beginning of 44% of the naps. For more than half the naps, nurses reported achieving either light (43%) or deep (14%) sleep. Sleep inertia was rare. The average score of helpfulness of napping was high (7.3 on a 1-to-10 scale). Nurses who napped reported being less drowsy while driving home after their shift. Conclusion: These data suggest that when barriers to napping are overcome, napping on the night shift is feasible and can reduce nurses' workplace sleepiness and drowsy driving on the way home. Addressing nurse managers' perceptions of and concerns about napping may be essential to successful implementation.

Database: CINAHL

71. Twelve-hour shifts: burnout or job satisfaction?
Author(s): Dall'Ora, Chiara; Griffiths, Peter; Ball, Jane
Source: Nursing Times; Mar 2016; vol. 112 (no. 12/13); p. 22-23
Publication Date: Mar 2016
Publication Type(s): Periodical
Available at Nursing Times - from Exeter Health Library print Local Print Collection [location] :
[coverage_notes] : incomplete - some issues missing.
Abstract: Job satisfaction and burnout in the nursing workforce are global concerns. Not only do job satisfaction and burnout affect the quality and safety of care, but job satisfaction is also a factor in nurses' decisions to stay or leave their jobs. Shift patterns may be an important aspect influencing wellbeing and satisfaction among nurses. Many hospitals worldwide are moving to 12-hour shifts in an effort to improve efficiency and cope with nursing shortages. But what is the effect of these work patterns on the wellbeing of nurses working on hospital wards? This article reports on the results of a study performed in 12 European countries exploring whether 12-hour shifts are associated with burnout, job satisfaction and intention to leave the job.
Database: CINAHL

72. Sleep quality, but not quantity, is associated with self-perceived minor error rates among emergency department nurses
Author(s): Weaver A.L.; Stutzman S.E.; Supnet C.; Olson D.M.
Source: International Emergency Nursing; Mar 2016; vol. 25 ; p. 48-52
Publication Date: Mar 2016
Publication Type(s): Article
Abstract: Introduction: The emergency department (ED) is demanding and high risk. The impact of sleep quantity has been hypothesized to impact patient care. This study investigated the hypothesis that fatigue and impaired mentation, due to sleep disturbance and shortened overall sleeping hours, would lead to increased nursing errors. Method(s): This is a prospective observational study of 30 ED nurses using self-administered survey and sleep architecture measured by wrist actigraphy as predictors of self-reported error rates. An actigraphy device was worn prior to working a 12-hour shift and nurses completed the Pittsburgh Sleep Quality Index (PSQI)). Error rates were reported on a visual analog scale at the end of a 12-hour shift. Result(s): The PSQI responses indicated that 73.3% of subjects had poor sleep quality. Lower sleep quality measured by actigraphy (hours asleep/hours in bed) was associated with higher self-perceived minor errors. Sleep quantity (total hours slept) was
not associated with minor, moderate, nor severe errors. Discussion(s): Our study found that ED nurses’ sleep quality, immediately prior to a working 12-hour shift, is more predictive of error than sleep quantity. These results present evidence that a “good night’s sleep” prior to working a nursing shift in the ED is beneficial for reducing minor errors. Copyright © 2016 Elsevier Ltd.

**Database:** EMCARE

### 73. Light at Night and Measures of Alertness and Performance: Implications for Shift Workers.

**Author(s):** Figueiro, Mariana G.; Sahin, Levent; Wood, Brittany; Plitnick, Barbara

**Source:** Biological Research for Nursing; Jan 2016; vol. 18 (no. 1); p. 90-100

**Publication Date:** Jan 2016

**Publication Type(s):** Academic Journal

**Abstract:** Rotating-shift workers, particularly those working at night, are likely to experience sleepiness, decreased productivity, and impaired safety while on the job. Light at night has been shown to have acute alerting effects, reduce sleepiness, and improve performance. However, light at night can also suppress melatonin and induce circadian disruption, both of which have been linked to increased health risks. Previous studies have shown that long-wavelength (red) light exposure increases objective and subjective measures of alertness at night, without suppressing nocturnal melatonin. This study investigated whether exposure to red light at night would not only increase measures of alertness but also improve performance. It was hypothesized that exposure to both red (630 nm) and white (2,568 K) lights would improve performance but that only white light would significantly affect melatonin levels. Seventeen individuals participated in a 3-week, within-subjects, nighttime laboratory study. Compared to remaining in dim light, participants had significantly faster reaction times in the GO/NOGO test after exposure to both red light and white light. Compared to dim light exposure, power in the alpha and alpha-theta regions was significantly decreased after exposure to red light. Melatonin levels were significantly suppressed by white light only. Results show that not only can red light improve measures of alertness, but it can also improve certain types of performance at night without affecting melatonin levels. These findings could have significant practical applications for nurses; red light could help nurses working rotating shifts maintain nighttime alertness, without suppressing melatonin or changing their circadian phase.

**Database:** CINAHL

### 74. Sleep quality and vigilance differ among inpatient nurses based on the unit setting and shift worked

**Author(s):** Surani S.; Hesselbacher S.; Guntupalli B.; Subramanian S.

**Source:** Journal of Patient Safety; 2015; vol. 11 (no. 4); p. 215-220

**Publication Date:** 2015

**Publication Type(s):** Article

**Abstract:** Objectives: Sleepiness in nurses has been shown to impact patient care and safety. The objectives of this study are to measure sleep quality, sleepiness, fatigue, and vigilance in inpatient nurses and to assess how setting (intensive care unit versus the general floor) and shift worked (day versus night) affect these measures. Method(s): Nurses from both the ICU and floor were included in the study. Participants completed questionnaires assessing self-reported sleep quality (Pittsburgh Sleep Quality Index, PSQI), sleepiness (Stanford Sleepiness Scale and Epworth Sleepiness Scale, ESS), and fatigue (Fatigue Severity Scale, FSS). Vigilance was measured by means of the psychomotor vigilance test (PVT), before and after a 12-hour duty shift. Result(s): The ESS was abnormal in 22% of all nurses, the FSS was abnormal in 33%, and the global PSQI was abnormal in 63%. More ICU nurses...
than floor nurses reported abnormal sleep quality (component 5) on the PSQI. Sleep medication use (PSQI component 6) was higher in night shift nurses. The FSS was greater in night shift nurses. On preshift PVT testing, day-shift nurses overall provided faster mean reaction time (RT) than night-shift nurses. ICU nurses working the day shift made more than twice as many total errors and false starts than day shift floor nurses. Floor nurses demonstrated a significant decrease from preshift to postshift in the mean of the fastest 10% RT. Conclusion(s): Our data indicate that a significant number of inpatient nurses have impaired sleep quality, excessive sleepiness, and abnormal fatigue, which may place them at a greater risk of making medical errors and harming patients; these problems are especially pronounced in night shift workers. PVT results were inconsistent, but floor and day shift nurses performed better on some tasks than ICU and night shift nurses. Copyright © 2014 Wolters Kluwer Health, Inc. All rights reserved.

**Database**: EMCARE

**75. Association of 12 h shifts and nurses’ job satisfaction, burnout and intention to leave: Findings from a cross-sectional study of 12 European countries**

**Author(s)**: Dall’Ora C.; Griffiths P.; Ball J.; Simon M.; Aiken L.H.

**Source**: BMJ Open; 2015; vol. 5 (no. 9)

**Publication Date**: 2015

**Publications Type(s)**: Article

Available at [BMJ open - from Europe PubMed Central - Open Access](http://www.bmj.com)

**Abstract**: Objectives: 12 h shifts are becoming increasingly common for hospital nurses but there is concern that long shifts adversely affect nurses' well-being, job satisfaction and intention to leave their job. The aim of this study is to examine the association between working long shifts and burnout, job dissatisfaction, dissatisfaction with work schedule flexibility and intention to leave current job among hospital nurses. Method(s): Cross-sectional survey of 31,627 registered nurses in 2170 general medical/surgical units within 488 hospitals across 12 European countries. Result(s): Nurses working shifts of >=12 h were more likely than nurses working shorter hours (<=8) to experience burnout, in terms of emotional exhaustion (adjusted OR (aOR)=1.26; 95% CI 1.09 to 1.46), depersonalisation (aOR=1.21; 95% CI 1.01 to 1.47) and low personal accomplishment (aOR=1.39; 95% CI 1.20 to 1.62). Nurses working shifts of >=12 h were more likely to experience job dissatisfaction (aOR=1.40; 95% CI 1.20 to 1.62), dissatisfaction with work schedule flexibility (aOR=1.15; 95% CI 1.00 to 1.35) and report intention to leave their job due to dissatisfaction (aOR=1.29; 95% CI 1.12 to 1.48). Conclusion(s): Longer working hours for hospital nurses are associated with adverse outcomes for nurses. Some of these adverse outcomes, such as high burnout, may pose safety risks for patients as well as nurses.

**Database**: EMCARE

**76. Scheduling and shift work characteristics associated with risk for occupational injury in newly licensed registered nurses: An observational study.**

**Author(s)**: Stimpfel, Amy Witkoski; Brewer, Carol S.; Kovner, Christine T.

**Source**: International Journal of Nursing Studies; Nov 2015; vol. 52 (no. 11); p. 1686-1693

**Publication Date**: Nov 2015

**Publication Type(s)**: Academic Journal

**PubMedID**: NLM26169450
Abstract: Background Registered nurses across the globe bear a heavy injury burden. Every shift, nurses are exposed to a variety of hazards that can jeopardize their health, which negatively impacts their ability to provide high-quality patient care. Previous research suggests that inexperienced, or newly licensed nurses, may have an increased risk for certain occupational injuries. However, the current knowledge base is insufficient to fully understand how work hours influence newly licensed nurses’ occupational injury, given the significant variation in hospital organization and work characteristics. Objective To describe newly licensed nurses’ shift work characteristics and determine the association between shift type and scheduling characteristics and nurse injury, before and after adjusting for individual and combined effects of demographics, external context, organizational context, and work context, following the Organization of Work model. Design This study is a secondary analysis of a nationally representative survey of newly licensed registered nurses using a cross-sectional design. Participants The analytic sample includes 1744 newly licensed registered nurses from 34 states and the District of Columbia who reported working in a hospital and were within 6–18 months of passing their state licensure exam at the time of survey administration. Methods Descriptive statistics were calculated, followed by bivariate and multivariate Poisson regression models to assess the relationship between shift type and scheduling characteristics and nurse injury. Lastly, full models with the addition of demographics, external context, organizational context, and work context variables were calculated. Results The majority (79%) of newly licensed nurses worked 12-h shifts, a near majority worked night shift (44%), and over half (61%) worked overtime (mandatory or voluntary) weekly. Nurses working weekly overtime were associated with a 32% [incidence rate ratio (IRR) 1.32, CI 1.07–1.62] increase in the risk of a needle stick and nurses working night shift were associated with a 16% [IRR 1.16, CI 1.02–1.33] increase in the risk of a sprain or strain injury. Conclusions Overtime and night shift work were significantly associated with increased injury risk in newly licensed nurses independent of other work factors and demographic characteristics. The findings warrant further study given the long-term consequences of these injuries, costs associated with treatment, and loss of worker productivity.

Database: CINAHL

77. A UK review corroborates the negative consequences of 12-hour workdays: In a practice unlikely to disappear, nurses and hospitals could better promote safety

Author(s): Wallis L.

Source: American Journal of Nursing; Nov 2015; vol. 115 (no. 11); p. 14

Publication Date: Nov 2015

Publication Type(s): Note

Available at AJN, American Journal of Nursing - from Ovid (Journals @ Ovid) - Remote Access

Database: EMCARE

78. Effects of Psychological and Social Factors in Shiftwork on Symptoms of Anxiety and Depression in Nurses.

Author(s): Berthelsen, Mona; Pallesen, Ståle; Magerøy, Nils; Tyssen, Reidar; Bjorvatn, Bjørn; Moen, Bente Elisabeth; Knardahl, Stein

Source: Journal of Occupational & Environmental Medicine; Oct 2015; vol. 57 (no. 10); p. 1127-1137

Publication Date: Oct 2015

Publication Type(s): Academic Journal

PubMedID: NLM26461869
Abstract: Objectives: The aim of the current study was to elucidate prospective effects of both shift schedules and work environment on mental distress. Methods: A total of 2059 nurses participated at baseline (38.1%), and 1582 nurses completed wave 2 of the survey (76.8%). Psychosocial work factors were measured by the General Nordic Questionnaire for Psychological and Social factors at work and the Swedish Demand-Control-Support Questionnaire. Mental distress was measured by Hospital Anxiety and Depression Scale. Results: Shiftwork was not associated with "caseness" anxiety or depression. Effects of shiftwork on mental distress were not moderated by psychosocial work factors. Mental distress predicted role clarity, role conflict, fair leadership, and social support. Job demands predicted symptoms of depression. Conclusions: Whether psychosocial working conditions buffer mental health effects of shiftwork remains undecided. Prospective studies with multiple measurement points are needed to elucidate potential mutual relationships between work factors and mental distress.

Database: CINAHL

79. What is the extent, range and nature of evidence available around the impact of 12-hour nursing shift patterns?
Author(s): Harris R.
Source: BMC Nursing; Oct 2015; vol. 14 (no. 1)
Publication Date: Oct 2015
Publication Type(s): Article
Available at BMC Nursing - from Europe PubMed Central - Open Access
Database: EMCARE

80. Staff may prefer 12-hour shifts, but longer hours lead to burnout.
Author(s): Griffin, Mary
Source: Nursing Standard; Sep 2015; vol. 30 (no. 3); p. 8-8
Publication Date: Sep 2015
Publication Type(s): Trade Publication
PubMedID: NLM26373481
Abstract: The article focuses on a research conducted by the National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care (CLAHRC), Wessex, England in which it analyzed that nurses working in 12 hour shifts suffers from emotional exhaustion and job dissatisfaction. It further presents views of Chiara Dall’Ora, research associate of the University of Southampton, on the affect of nurses health on the care they gives to patients.
Database: CINAHL

Author(s): Bailey, S.; Wilson, G.; Yoong, W.
Source: Midwifery; Aug 2015; vol. 31 (no. 8); p. 787-792
Publication Date: Aug 2015
Publication Type(s): Academic Journal
Abstract:Objective: The objective of this study was to assess the association between the quality of basic note keeping and partogram documentation with progression of shift and workload on labour ward. Design: This was a prospective observational study. Setting: The setting of this study was a labour ward of a teaching district hospital in an inner city London hospital. Methods: Intrapartum notes and partograms of 61 consecutive labouring women were assessed for quality of midwifery documentation at the beginning, middle and end of a 12-h shift. Measurements: The measurements of this study were a basic note-keeping composite score based on validated criteria by the Nursing and Midwifery Record Keeping Guidance 2010 and a partogram completion score based on the National Institute for Clinical Excellence (NICE) Guidelines for Intrapartum Care 2007. Findings: The basic note keeping deteriorated between the middle and the end of the 12-h shift, but it appeared unaffected by workload, with no statistically significant difference between day and night shifts. Partogram documentation was poorer in the middle compared to the beginning of the shift, and there was no statistical difference between day and night shifts. Partogram completion appeared to be influenced by women: midwife ratio as well as progression through a shift. Key conclusions: The basic note keeping and partogram documentation were best at the beginning of the shift, and fatigue may play a role in poorer documentation towards the middle and the end of the shifts. Implication for practice: Appropriately scheduled breaks especially during the final third of the shifts may help improve the quality of documentation.

Database: CINAHL

82. 12 h shifts and rates of error among nurses: A systematic review.

Author(s): Clendon, Jill; Gibbons, Veronique

Source: International Journal of Nursing Studies; Jul 2015; vol. 52 (no. 7); p. 1231-1242

Publication Date: Jul 2015

Publication Type(s): Academic Journal

Abstract:Objective: To determine the effect of working 12 h or more on a single shift in an acute care hospital setting compared with working less than 12 h on rates of error among nurses. Design: Systematic review. Method: A three-step search strategy was utilised. An initial search of Cochrane, the Joanna Briggs Institute (JBI), MEDLINE and CINAHL was undertaken. A second search using all identified keywords and index terms was then undertaken across all included databases (Embase, Current contents, Proquest Nursing and Allied Health Source, Proquest Theses and Dissertations, Dissertation Abstracts International). Thirdly, reference lists of identified reports and articles were searched for additional studies. Studies published in English before August 2014 were included. Findings: Following review of title and abstract of 5429 publications, 26 studies were identified as meeting the inclusion criteria and selected for full retrieval and assessment for methodological quality. Of these, 13 were of sufficient quality to be included for review. Six studies reported higher rates of error for nurses working greater than 12 h on a single shift, four reported higher rates of error on shifts of up to 8 h, and three reported no difference. The six studies reporting significant rises in error rates among nurses working 12 h or more on a single shift comprised 89% of the total sample size (N = 60,780 with the total sample size N = 67,967).

Database: CINAHL

83. Experts urge caution over 12-hour shifts amid doubts about safety.

Author(s): Dean, Erin

Source: Nursing Standard; Mar 2015; vol. 29 (no. 27); p. 10-10
84. Five rules for scheduling 12-hour night shifts

Author(s): O'Brien, Rebecca

Source: Nursing Management (USA); Mar 2015; vol. 46 (no. 3); p. 12-13

Abstract: The five rules outlined here provide a guide to safely scheduling 12-hour night shifts. One of the biggest keys to surviving on night shift is having the correct schedule. This will vary for each nurse, which creates a challenge for the scheduler. However, working with staff to create a schedule that fits how each individual works nights is worth the challenge. Staff moral improves, along with patient care and satisfaction.

Database: BNI

85. The 12-hour shift: Friend or foe?

Author(s): Griffiths P.; Ball J.; Dall'Ora C.

Source: Nursing Times; Feb 2015; vol. 111 (no. 6); p. 12-14

Abstract: In recent years the number of hours worked by nurses in hospital per shift has started to change and it is becoming more common for organisations to implement longer, 12-hour shifts, that are done over fewer days a week. Some nurses may prefer this way of working as it improves their work-life balance but others may prefer to work shorter shifts more days a week. Along with staff wellbeing, patient outcomes can also be affected. This article outlines the benefits and concerns of working 12-hour shifts and discusses what can be done to ensure that nurse wellbeing is maximised without compromising patient safety. Copyright © 2015, Emap Ltd. All rights reserved.

Database: EMCARE

86. Impact of 12h shift patterns in nursing: A scoping review

Author(s): Harris R.; Sims S.; Davies N.; Parr J.

Source: International Journal of Nursing Studies; Feb 2015; vol. 52 (no. 2); p. 605-634
Objectives: To provide a comprehensive scoping review of evidence of the impact and effectiveness of 12-hour shifts in the international nursing literature, supplemented by a review of evidence in other, non-nursing related industries. Data sources: A search of the academic literature was undertaken in electronic databases (AMED, MEDLINE, CINAHL, PsychInfo, Scopus, HMIC, the Cochrane Library, Business Source Premier, Econ Lit, ASSIA and Social Policy and Practice). Review methods: A total of 158 potentially relevant nursing research papers and reviews were published between 1973 and 2014. Two reviewers independently reviewed the articles, leaving 85 primary research studies and 10 review papers in the nursing field to be included in the scoping review. Thirty-one relevant primary research papers and reviews were also identified in the non-nursing related industries literature. Result(s): Research into 12-hour shifts fell within five broad themes: 'risks to patients', 'patient experience', 'risks to staff', 'staff experience' and 'impact on the organisation of work'. There was inconclusive evidence of the effects of 12-hour shift patterns in all five themes, with some studies demonstrating positive impacts and others negative or no impacts. This also mirrors the evidence in other, non-nursing related industries. The quality of research reviewed is generally weak and most studies focus on the risks, experience and work/life balance for staff, with few addressing the impact on patient outcomes and experience of care or work productivity. Conclusion(s): There is insufficient evidence to justify the widespread implementation or withdrawal of 12-hour shifts in nursing. It is not clearly understood where there are real benefits and where there are real and unacceptable risks to patients and staff. More research focusing on the impact of 12-hour shifts on patient safety and experience of care and on the long term impact on staff and work organisation is required.

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87. An evaluation of fatigue management strategies implemented on hospital nursing units.

Author(s): Seaman, Christa W

Source: Evaluation of Fatigue Management Strategies Implemented on Hospital Nursing Units; Jan 2015; p. 70 p

Publication Date: Jan 2015

Publication Type(s): Dissertation

Abstract: Nursing staff are often scheduled to work long shifts, rotate between day and night shifts, and work overtime to help hospitals ensure delivery of care to patients around the clock, as well as provide nurses work-life balance by giving them more 'leisure' or free time away from work. These schedules, now commonplace in hospitals, may unfortunately result in fatigue and sleep deprivation among nurses, negatively affect their work performance by decreasing productivity at work, and, more importantly, make them prone to errors that negatively impact the delivery of safe, quality patient care. This project used a pretest-posttest design to evaluate the effects of fatigue management strategies (namely, duty free breaks, limiting consecutive hours worked, and limiting consecutive shifts) implemented on four adult medical or surgical units at one large academic medical center. Measures used in evaluating the strategies implemented included the Occupational Fatigue Exhaustion Recovery (OFER15) instrument (Winwood et al., 2006), the Pittsburgh Sleep Quality Index (PSQI) instrument (Buysse et al., 1989), medication administration record near miss alerts, absenteeism, and overtime. The major project findings included a significant decrease in reported acute fatigue and an increase in sleep quality among the nursing assistive personnel following the implementation of fatigue management strategies. Additionally, staff on one of the four intervention units reported a significant increase in inter-shift recovery and an improvement in sleep quality following the implementation of fatigue management strategies.
88. Using simulation to investigate the impact of hours worked on task performance in an intensive care unit

Author(s): Calhoun A.W.; Montgomery V.L.; Boone M.C.; Dauer A.K.; Campbell D.R.

Source: American Journal of Critical Care; 2014; vol. 23 (no. 5); p. 387-395

Publication Date: 2014

Abstract: Background Past studies have indicated a positive correlation between shift length and the rate of medical errors. In situ simulation is an innovative way to study issues in quality of care. Objectives: To explore the use of in situ simulation as an investigative method by using it to examine the effects of work length on completion rate of and accuracy at critical care nursing tasks. Methods: Participants were drawn from the nursing staff in the pediatric intensive care unit and were assessed by using a high-fidelity pediatric simulator 3 times during a 12-hour shift. Data recorded included demographic information, time to task completion, and number of steps correctly performed per task. Results: Twenty-eight nurses with a mean of 5.5 years of experience participated. Each nurse cared for a mean of 1.4 patients per shift. A significant decrease (P < .001) of 5.5 minutes was noted in mean completion time across assessment intervals (from 17.9 to 13.3, to 12.4 min). No significant changes in accuracy were noted. Some accuracy issues seemed attributable to simulation artifact, whereas the use of simulation enabled greater standardization in other aspects of the study. Conclusion: Critical care nurses take significantly less time to complete tasks at the end of their shift than at the beginning. This, coupled with a lack of change in accuracy of task completion over time, suggests that nursing performance of simple tasks may improve over the course of a 12-hour shift. Simulation can be an effective means to address some quality improvement issues. © American Association of Critical-Care Nurses.

Database: EMBASE

89. An integrative review: Fatigue among nurses in acute care settings

Author(s): Smith-Miller C.A.; Shaw-Kokot J.; Curro B.; Jones C.B.

Source: Journal of Nursing Administration; 2014; vol. 44 (no. 9); p. 487-494

Publication Date: 2014

Abstract: OBJECTIVE: The aim of this study was to examine current research related to nurse fatigue and identify effective prevention strategies. BACKGROUND: Work-related fatigue negatively affects patient safety and nurses' well-being and increases employer costs. Preventing fatigue and minimizing its negative consequences require knowledge of the contributing factors if effective interventions are to be designed and implemented. METHOD(S): This review targeted original research (2002-2013) examining fatigue among nurses working in acute care settings. RESULT(S): Nurses experience high rates of fatigue. Shifts longer than 12 hours contribute to increased fatigue and errors, but the evidence was inconsistent with regard to age and fatigue level. Individual lifestyle, unit culture, and organization policies influence the prevalence and intensity of work-related fatigue. CONCLUSION(S): Preventing work-related fatigue requires multifaceted approaches...
involving the organization, the clinical unit, and the individual. Copyright © 2014 Wolters Kluwer Health Lippincott Williams & Wilkins.

Database: EM CARE

90. Student midwives’ duty hours: Risks, standards, and recommendations
Author(s): Lawrence R.; Kantrowitz-Gordon I.; Landis A.
Source: Journal of Midwifery and Women's Health; 2014; vol. 59 (no. 2); p. 127-140
Publication Date: 2014
Publication Type(s): Article
Abstract: Introduction: A growing body of literature has emerged describing the risks of extended-duty shifts and sleep deprivation. Worldwide, midwifery organizations have not adopted standards for practitioner or student duty shifts. This project reviews the literature related to extended-duty shifts in an effort to develop evidence-based recommendations for student nurse-midwives/student midwives (SNMs/SMs). Method(s): A comprehensive literature search was conducted through electronic databases, major journals, and reference lists published in English since January 2001. Primary research studies evaluating sleep deprivation and shift duration were included. Studies that did not include the target population (shift workers) and those that formed conclusions related to extended-duty shifts greater than 30 hours were excluded. In addition, an extensive worldwide review of duty-hour recommendations from more than 300 health care organizations was conducted. Result(s): A total of 40 studies met the inclusion criteria. Extended-duty shifts (those greater than 12 hours) increased the risk for cognitive and physical functional errors, safety concerns, and decreased quality of life from sleep deprivation. Cognitive function errors included attention lapses, visual tracking errors, decreased mentation and immediate recall, and decreased learning capacity. Physical errors included decreased motor skills and slowed reaction times in clinical simulations. These deficits led to an increased risk of motor vehicle accidents, needle sticks, and performance equivalent to unsafe blood alcohol concentrations. An overall decrease in quality of life and job satisfaction was linked to extended-duty shifts. Seven organizations for medical residents or advanced practice nurses have developed policy statements on duty shifts, with extended-duty shift limitations between 12 and 24 hours. Discussion(s): The risks associated with extended-duty shifts may inhibit the development of SNMs/SMs into competent practitioners and place patients at risk. It is recommended that midwifery education programs adopt evidence-based limitations for the duty shifts of SNMs/SMs. © 2014 by the American College of Nurse-Midwives.

Database: EM CARE

91. The Hospital Work Environment And Job Satisfaction of Newly Licensed Registered Nurses
Author(s): Unruh, Lynn; Zhang, Ning Jackie
Source: Nursing Economics; 2014; vol. 32 (no. 6); p. 296-306
Publication Date: 2014
Publication Type(s): Article
Available at Nursing economic$ - from ProQuest (Health Research Premium) - NHS Version
Abstract: In prior studies, newly licensed registered nurses (NLRNs) described their job as being stressful. Little is known about how the hospital work environment affects their job satisfaction. A random sample of NLRNs were surveyed to assess the influence of hospital work environment on job satisfaction. Perceptions of job difficulty, job demands, and patient load were significantly related to lower job satisfaction. In contrast, being White, working 12-hour shifts, working more hours, and
having more job control, greater professional tenure, and a perception of a better initial orientation were significantly related to higher job satisfaction. 55 references

Database: BNI

92. The impact of shiftwork on health: a literature review.
Author(s): Matheson, Annabel; O'Brien, Louise; Reid, Jo-Anne
Source: Journal of Clinical Nursing (John Wiley & Sons, Inc.); Dec 2014; vol. 23 (no. 23-24); p. 3309-3320
Publication Date: Dec 2014
Publication Type(s): Academic Journal
Abstract:Aims and objectives To identify the impact of shiftwork on individuals and their lives and to discuss the implications this has for nurses and nursing. Background The context of shiftwork in the early 21st century is changing rapidly, and those involved in or required to work shiftwork are now spread over many different sectors of the community. In the Australian community, 16% of workers regularly work shiftwork. Most nurses undertake shiftwork at some time in their career, and health services could not operate without a shiftworking nursing workforce. Design Narrative literature review. Methods A narrative review of journal articles was conducted. Databases searched were CINAHL, EBSCO Host, JSTOR, Medline/PubMed and Google Scholar. Search terms used were 'shiftwork' and 'shift work'. Limitations included 'English language', 'published between 1980-2013' and 'human'. Results Reviewed for this paper were 118 studies that met the inclusion criteria. Results were categorised using thematic analysis. Themes that emerged were physical and psychosocial health, and sleep. Findings will be explored under these themes. Conclusions Shiftwork research has mainly focussed on the physiologic and psychosocial health and sleep effects. Absent from the literature are studies focussing on the personal experience of the shiftworker and how workers mediate the effects of shiftwork and how shiftwork fits into the rest of their lives. Therefore, it is difficult to draw conclusions about how people 'manage' their shiftwork, and further research needs to be undertaken in this area. Relevance to clinical practice Working shifts for nurses is a reality that comes with the profession. While there is a significant body of research on shiftwork, little of this has been specifically applied to nursing, and the implications for individual nurses needing to care for their own health have not been drawn.
Database: CINAHL

93. 12-hour shifts may undermine quality of care
Author(s): Anonymous
Source: Nursing; Dec 2014; vol. 44 (no. 12); p. 33
Publication Date: Dec 2014
Publication Type(s): News
Abstract: Based on a cross-sectional survey of over 31,627 European medical/surgical nurses, researchers warn that "policies to adopt a 12-hour nursing shift pattern should proceed with caution." Their results show that nurses who work these longer shifts were 30% more likely to report poor quality of care compared with nurses working 8-hour shifts. These nurses were also 41% more likely to report failure to meet safety standards and reported omitting more nursing care than colleagues working 8-hour shifts.
Database: BNI
94. Nurses' shift length and overtime working in 12 European countries: The association with perceived quality of care and patient safety


Source: Medical Care; Nov 2014; vol. 52 (no. 11); p. 975-981

Abstract: Background: Despite concerns as to whether nurses can perform reliably and effectively when working longer shifts, a pattern of two 12-to 13-hour shifts per day is becoming common in many hospitals to reduce shift to shift handovers, staffing overlap, and hence costs. Objectives: To describe shift patterns of European nurses and investigate whether shift length and working beyond contracted hours (overtime) is associated with nurse-reported care quality, safety, and care left undone. Methods: Cross-sectional survey of 31,627 registered nurses in general medical/surgical units within 488 hospitals across 12 European countries. Results: A total of 50% of nurses worked shifts of ≥ 8 hours, but 15% worked ≥ 12 hours. Typical shift length varied between countries and within some countries. Nurses working for ≥ 12 hours were more likely to report poor or failing patient safety [odds ratio (OR) = 1.41; 95% confidence interval (CI), 1.13-1.76], poor/fair quality of care (OR=1.30; 95% CI, 1.10-1.53), and more care activities left undone (RR = 1.13; 95% CI, 1.09-1.16). Working overtime was also associated with reports of poor or failing patient safety (OR = 1.67; 95% CI, 1.51-1.86), poor/fair quality of care (OR=1.32; 95% CI, 1.23-1.42), and more care left undone (RR=1.29; 95% CI, 1.27-1.31). Conclusions: European registered nurses working shifts of ≥ 12 hours and those working overtime report lower quality and safety and more care left undone. Policies to adopt a 12-hour nursing shift pattern should proceed with caution. Use of overtime working to mitigate staffing shortages or increase flexibility may also incur additional risk to quality.

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Database: EMCARE

95. Factors Associated with Work-Related Fatigue and Recovery in Hospital Nurses Working 12-Hour Shifts.

Author(s): Han, Kihye; Trinkoff, Alison M.; Geiger-Brown, Jeanne

Source: Workplace Health & Safety; Oct 2014; vol. 62 (no. 10); p. 409-414

Publication Date: Oct 2014

Publication Type(s): Academic Journal

PubMedID: NLM25199168

Available at Workplace health & safety - from ProQuest (Health Research Premium) - NHS Version

Abstract: Nurse fatigue threatens both nurse and patient safety; fatigue affects nurses’ neurocognitive functioning and hinders their work performance. The authors assessed the association of work and non-work factors with acute and chronic fatigue and intershift recovery among hospital nurses working 12-hour shifts. This study used survey data from 80 nurses who provided full-time direct patient care on medical-surgical and critical care units in a large teaching hospital. Psychological job demands (e.g., work load and social support from supervisor or coworker)
were significantly associated with acute and chronic fatigue and intershift recovery. Rotating shifts were significantly related to acute fatigue. Findings suggest the need for a comprehensive approach to fatigue management, including organizational support to provide healthful work schedules and favorable nursing work environments, fewer psychological and physical demands, and assistance to improve nurses' sleep quality and quantity.

**Database:** CINAHL

96. Long shifts may suit some staff, but patient care is suffering.
**Author(s):** Dean, Erin
**Source:** Nursing management (Harrow, London, England : 1994); Oct 2014; vol. 21 (no. 7); p. 8-9
**Publication Date:** Oct 2014
**Publication Type(s):** Journal Article
**PubMedID:** 25355107
**Abstract:** THE IMPACT of 12-hour nursing shifts needs to be considered carefully after a major study has suggested they can affect patient safety and quality of care, nursing managers have warned.
**Database:** Medline

97. The impact of shift work on nurses' job stress, sleep quality and self-perceived health status.
**Author(s):** Lin, Shu-Hui; Liao, Wen-Chun; Chen, Mei-Yen; Fan, Jun-Yu
**Source:** Journal of Nursing Management (John Wiley & Sons, Inc.); Jul 2014; vol. 22 (no. 5); p. 604-612
**Publication Date:** Jul 2014
**Publication Type(s):** Academic Journal
**Abstract:** Aim The aim of this study was to describe the current state of nurses' shift work in Taiwan and how it affects nurses' stress, sleep quality and self-perceived health status. Background To enable the provision of 24-hour patient care, nurses need to work various shifts. Long-term shift work significantly affects nurses' overall physical and mental health. Method Nurses from four Chiayi County district hospitals in Taiwan (n = 266) participated in this cross-sectional study from August to September 2010. Demographics, work schedule forms, a stress checklist, a sleep-quality measure and a health-status measure were used to collect data. Independent t-test, one-way anova, Pearson's r, and hierarchical regression were applied for analysis. Results The results showed that regardless of the amount of shift work they performed, nurses reported moderate job stress, poor sleep quality and moderate self-perceived health. The following significant relationships were observed: job stress was inversely related to sleep quality, which was directly related to self-perceived health status. Conclusion and implications for nursing management Hospital managers need to ensure more healthy shift work scheduling in order to improve nurses' clinical performance and personal health status, thereby also improving the quality of patient care.
**Database:** CINAHL

98. Impact of work schedules on sleep duration of critical care nurses
**Author(s):** Hirsch Allen A.J.; Park J.E.; Adhami N.; Sirounis D.; Dodek P.; Tholin H.; Rogers A.E.; Ayas N.
**Source:** American Journal of Critical Care; Jul 2014; vol. 23 (no. 4); p. 290-295
Abstract: Background Sleep deprivation leads to reduced vigilance and potentially impairs work performance. Nurses may work long shifts that may contribute to sleep deprivation. Objective To assess how nurses' sleep patterns are affected by work schedules and other factors. Methods Between October 2009 and June 2010, a total of 20 critical care nurses completed daily sleep and activity logs and a demographic survey and wore an actigraph to objectively measure sleep time for 14 days. Results In a multivariate model with controls for repeated measures, mean sleep time between consecutive work shifts was short: 6.79 hours between 2 day shifts and 5.68 hours between 2 night shifts (P = .01). Sleep time was much greater between days when no shifts were worked (8.53 hours), consistent with catch-up sleep during these times. Every minute of 1-way commuting time was associated with a reduction of sleep time by 0.84 minutes. Conclusion Critical care nurses obtain reduced amounts of sleep between consecutive work shifts, particularly between consecutive night shifts. Whether this degree of sleep deprivation adversely affects patients' safety needs further study. © 2014 American Association of Critical-Care Nurses.

99. 12 hours: the long and the short of it.

Author(s): Moore, Alison

Source: Nursing Standard; Apr 2014; vol. 28 (no. 34); p. 20-22

Abstract: Evidence on the risks of longer shifts is building, but some nurses love them. Alison Moore reports.

Database: CINAHL

100. Overextended: Fighting the fatigue of long shifts

Author(s): Douglass, Jessica A.

Source: Nursing; Mar 2014; vol. 44 (no. 3); p. 67-68

Abstract: Extended work shifts of 12 or more hours are the norm for clinical nurses. Although many nurses report increased satisfaction with extended shifts, nurses must ask themselves if their fatigue may be putting themselves and their patients in harm's way. Because patient safety is nurses' number one goal, this issue impacts every nurse's practice. Here, Douglass provides updates about current trends for combating fatigue and provides useful tips to prevent fatigue. 9 references

Database: BNI

101. Do 12-hour shifts put patients first?
Interest in 12-hour nursing shifts has come via two main routes; staff choice and for improved cost-effectiveness in the National Health Service, however, the effects of this shift on the delivery of patient and family-centered care are unclear. It is generally agreed that some features of shift systems can influence the extent of wellbeing and health problems experienced by the workers involved. Extended working days (9-12 hour shifts) have been found to aggravate some problems associated with shift work, especially when the work is mentally and emotionally demanding. Here, Farrelly compares the health, sleep, psychological and social wellbeing, job satisfaction and burnout of intensive care unit nurses on 12- and 8-hour shifts. 4 references

102. Association of sleep and fatigue with decision regret among critical care nurses

Author(s): Scott L.D.; Arslanian-Engoren C.; Engoren M.C.
Source: American Journal of Critical Care; Jan 2014; vol. 23 (no. 1); p. 13-23
Publication Date: Jan 2014
Publication Type(s): Article
Available at American Journal of Critical Care - from HighWire - Free Full Text
Available at American Journal of Critical Care - from Unpaywall

Abstract: Background The effects of inadequate sleep on clinical decisions may be important for patients in critical care units, who are often more vulnerable than patients in other units. Fatigued nurses are more likely than well-rested nurses to make faulty decisions that lead to decision regret, a negative cognitive emotion that occurs when the actual outcome differs from the desired or expected outcome. Objectives To examine the association between selected sleep variables, impairment due to fatigue, and clinical-decision self-efficacy and regret among critical care nurses. Decision regret was the primary outcome variable. Methods A nonexperimental, descriptive design and extant measures were used to obtain data from a random sample of full-time nurses. Binary logistic regression models were used to examine the association between sleep variables, fatigue, and clinical-decision self-efficacy and regret. The discrimination of the models was compared with the C statistic, the area under the receiver operating characteristic curve. Results A total of 605 nurses returned the questionnaires (17% response rate). Among these, decision regret was reported by 157 of 546 (29%). Nurses with decision regret reported more fatigue, more daytime sleepiness, less intershift recovery, and worse sleep quality than did nurses without decision regret. Being male, working a 12-hour shift, and clinical-decision satisfaction were significantly associated with decision regret (C statistic, 0.719; SE, 0.024). Conclusion Nurses who experience impairments due to fatigue, loss of sleep, and inability to recover between shifts are more likely than unimpaired nurses to report decision regret. © 2014 American Association of Critical-Care Nurses.

Database: EMCARE

103. What are 12-hour shifts good for?

Author(s):
In the UK many hospitals use 12-hour shifts, believing it to be a cost-efficient means of providing 24-hour nursing care on wards. While healthcare organisations need to find ways to deliver nursing care around the clock and efficiency is a key consideration, nurse leaders have raised concerns about whether nurses can function effectively and safely when working long hours (Calkin, 2012; Rogers et al, 2004). In this Policy Plus, we focus specifically on what is known about the impact of shift length on patient safety, employee health and quality of care.

Nursing fatigue and staffing costs: what's the connection?

Nurses have a responsibility to themselves and their patients to ensure they're adequately rested to provide the highest quality care possible. Working long shifts, night shifts, and rotating shifts, as well as mandatory or voluntary overtime, contributes to nurse fatigue, accidents, mistakes, and errors. Patient and nurse safety also decrease as a result of increased errors and injuries due to fatigue. Besides the safety and ethical implications, fatigue can lead to legal consequences, such as loss of license. Although nurses are accountable for their individual practice, employers also have a responsibility to keep nurses, patients, the facility, and the public safe. Key strategies in preventing the costly consequences of fatigue include designing schedules and organizing work to reduce nurse fatigue. By keeping the lines of communication open between management and staff, healthcare organizations can encourage and empower nursing staff to solve fatigue-related issues without fear of reprisal by management. 10 references

How differing shift lengths relate to quality outcomes in pediatrics

The aims of this study were to describe the shift lengths of pediatric nurses and to measure the association of shift length with nurse job outcomes, nurse-reported patient
outcomes, and nurse-assessed safety and quality of care in hospitals. Background(s): Long work hours have been linked with poor patient outcomes in adult patient populations, but little is known about the relationship in pediatric settings. Method(s): A secondary analysis of cross-sectional nurse survey data was conducted. Our analysis focused on 3710 registered nurses who worked in 342 acute care hospitals that treated children. Result(s): Most pediatric nurses worked 12-hour shifts, especially in intensive care settings. Nurses who worked extended shifts of more than 13 hours reported worse job outcomes and lower quality and safety for patients compared with nurses who worked 8-hour shifts. Conclusion(s): Allocating resources to nursing to improve working hours may be a productive strategy for administrators to improve the health and well-being of pediatric patients and nurses. © 2013 Wolters Kluwer Health Lippincott Williams & Wilkins.

Database: EMCARE

**106. Study:** Long nursing shifts linked to burnout, job dissatisfaction, negative patient assessments.

**Author(s):**

**Source:** ED management : the monthly update on emergency department management; Feb 2013; vol. 25 (no. 2); p. 20-23

**Publication Date:** Feb 2013

**Publication Type(s):** Journal Article

**PubMedID:** 23484222

Available at [ED management : the monthly update on emergency department management](https://www.proquest.com) - from ProQuest (Health Research Premium) - NHS Version

**Abstract:** While nurses often choose to work 12-hour shifts, there is new evidence that too many of these longer shifts can lead to burnout and job dissatisfaction. Further, a new study suggests that patients are less satisfied with their care when nurses are working longer shifts, and patient outcomes may suffer as well. Experts recommend education around this issue for both staff nurses and nurse managers, and they urge administrators to devise sensible scheduling solutions.

**Database:** Medline

**107. Changes in nurses' decision making during a 12-h day shift.**

**Author(s):** McClelland, L E; Switzer, F S; Pilcher, J J

**Source:** Occupational medicine (Oxford, England); Jan 2013; vol. 63 (no. 1); p. 60-65

**Publication Date:** Jan 2013

**Publication Type(s):** Journal Article

**PubMedID:** 23117169


Available at [Occupational medicine (Oxford, England)](https://unpaywall.org) - from Unpaywall

**Abstract:** BACKGROUND Although shift work is necessary in many health-care settings, research suggests that it can have detrimental effects on performance in health-care providers. AIMSTo determine if a change in decision-making occurred across a 12-h day shift in a sample of registered nurses. METHODSThe participants were nurses working a 12-h day shift (7 a.m.-7 p.m.) at a large hospital in the south-eastern USA. Participants completed a policy-capturing questionnaire, examining their likelihood of calling a physician in response to specific patient symptoms, at the beginning and end of the shift. They also completed self-report surveys on alertness, stress and
Sixty-five nurses completed the study, an overall response rate of 41%. Participants significantly changed their decision-making policies from the beginning to the end of the work shift and also became significantly less alert and more stressed. However, there was no correlation between decision-making and reported alertness and stress. CONCLUSIONS These results suggest that medical judgment in registered nurses changed from the beginning to the end of a 12-h day shift. One possible underlying mechanism responsible for the changes seen across the shift could be the ability to maintain attention, as suggested by the Controlled Attention Model. The current results expand upon previous research, indicating there are a variety of negative outcomes associated with shift work.

**Database:** Medline

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**108. Promoting healthy work hours for nurses**

**Author(s):** Reed, Kimra

**Source:** Nursing; Jan 2013; vol. 43 (no. 1); p. 64-65

**Publication Date:** Jan 2013

**Publication Type(s):** Article

**Abstract:** Nurse fatigue caused by working long hours can be dangerous for both nurses and patients. Nurses have a responsibility to ensure they’re adequately rested to provide the highest quality care possible. Working long shifts, night shifts, and rotating shifts as well as mandatory or voluntary overtime contributes to nurse fatigue, accidents, and errors and a decrease in patient and nurse safety. Here, Reed outlines the problem of nurse fatigue and practical steps to prevent errors related it. 10 references

**Database:** BNI

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**109. The effect of shift length on fatigue and cognitive performance in air medical providers**

**Author(s):** Guyette F.X.; Weaver M.D.; Patterson P.D.; Hostler D.; Morley J.L.

**Source:** Prehospital Emergency Care; 2012; vol. 17 (no. 1); p. 23-28

**Publication Date:** 2012

**Publication Type(s):** Article

**Abstract:** Objective. To employ a battery of previously validated surveys and neuropsychological tests to compare changes in fatigue and cognitive abilities of air medical providers after 12- and 24-hour shifts. Methods. A convenience sample of 34 flight nurses and flight paramedics employed by one air medical service completed the Pittsburgh Sleep Quality Index (PSQI) and the Chalder Fatigue Questionnaire (CFQ) to determine fatigue before and after 12-hour (n = 16) and 24-hour (n = 19) shifts. A battery of neuropsychological tests, including the University of Southern California Repeatable Episodic Memory Test (USC-REMT), Paced Auditory Serial Addition Test (PASAT), Trail Making Test (TMT), and Stroop Color-Word Test were administered before and after the shift to measure changes in cognition. We compared the change in scores stratified by shift length using t-tests, Wilcoxon signed-rank test, and Fisher’s exact test. Results. Participants in the 12- and 24-hour shift groups were aged 36 +/- 8 years (12-hour shifts) and 39 +/- 6 years (24-hour shifts) (mean +/- standard deviation) and were preponderantly male (62% 12-hour shifts; 63%, 24 hour shifts). The PSQI scores identified 50% of both 12-hour and 24-hour shift subjects as having poor sleep quality. Preshift fatigue was described as a median 2/10 (interquartile range [IQR] = 2-4) and fatigue declined by the end of the shift to a median 1/10 [IQR = 1-2], p = 0.006. Providers averaged 6.8 hours of sleep during 24-hour shifts and 1 hour of sleep during 12-hour shifts. Changes in cognitive scores did not differ between groups. Conclusions. This study identified no changes in cognitive performance.
following 12- and 24-hour shifts in air medical providers. This suggests that 24-hour shifts in an air medical service with low to moderate utilization do not have a detrimental effect on cognition as measured by this test battery, and are comparable to 12-hour shifts in terms of impact on cognitive function.

**Database:** EMCARE

**110. The Longer The Shifts For Hospital Nurses, The Higher The Levels Of Burnout And Patient Dissatisfaction.**

**Author(s):** Witkoski Stimpfel, Amy; Sloane, Douglas M.; Aiken, Linda H.

**Source:** Health Affairs; Nov 2012; vol. 31 (no. 11); p. 2501-2509

**Publication Date:** Nov 2012

**Publication Type(s):** Academic Journal

**PubMedID:** NLM23129681

Available at Health affairs (Project Hope) - from HighWire - Free Full Text

Available at Health affairs (Project Hope) - from ProQuest (Health Research Premium) - NHS Version

Available at Health affairs (Project Hope) - from Unpaywall

**Abstract:** Extended work shifts of twelve hours or longer are common and even popular with hospital staff nurses, but little is known about how such extended hours affect the care that patients receive or the well-being of nurses. Survey data from nurses in four states showed that more than 80 percent of the nurses were satisfied with scheduling practices at their hospital. However, as the proportion of hospital nurses working shifts of more than thirteen hours increased, patients' dissatisfaction with care increased. Furthermore, nurses working shifts of ten hours or longer were up to two and a half times more likely than nurses working shorter shifts to experience burnout and job dissatisfaction and to intend to leave the job. Extended shifts undermine nurses' well-being, may result in expensive job turnover, and can negatively affect patient care. Policies regulating work hours for nurses, similar to those set for resident physicians, may be warranted. Nursing leaders should also encourage workplace cultures that respect nurses' days off and vacation time, promote nurses' prompt departure at the end of a shift, and allow nurses to refuse to work overtime without retribution.

**Database:** CINAHL

**111. Long shifts with insufficient breaks are increasing risk of clinical errors.**

**Author(s):**

**Source:** Nursing Standard; May 2012; vol. 26 (no. 38); p. 7-7

**Publication Date:** May 2012

**Publication Type(s):** Trade Publication

Available at Nursing Standard - from ProQuest (Health Research Premium) - NHS Version

**Abstract:** RCN council has been asked to demand greater action by NHS employers 'to reduce the recognised harmful effects of shift working on staff and patients'.

**Database:** CINAHL

**112. Long Work Hours for Nurses**
Author(s): Nelson, Roxanne

Source: American Journal of Nursing; May 2012; vol. 112 (no. 5); p. 19-20

Publication Date: May 2012

Publication Type(s): Article

Abstract: With 12-hour shifts largely replacing the eight-hour day, most nurses would agree that long hours are a way of life in the profession, especially in the hospital setting. Employers like them because they eliminate the need to staff an evening shift, and many nurses enjoy having more days off per week, even if it means a longer workday. And at least one school has created a program that makes use of 12-hour clinical shifts to help students experience a "real world" schedule. Nelson discusses whether working 12 consecutive hours in a high-stress setting that’s physically, mentally, and emotionally demanding is a good idea; and whether it’s ideal to help students to get used to the idea earlier despite the evidence that long hours affect patient safety and nursing judgment.

Database: BNI

113. Effects of extended work shifts on employee fatigue, health, satisfaction, work/family balance, and patient safety.

Author(s): Estryn-Béhar, Madeleine; Van der Heijden, Beatrice I.J.M.

Source: Work; Feb 2012; vol. 41; p. 4283-4290

Publication Date: Feb 2012

Publication Type(s): Academic Journal

Available at Work - from Unpaywall

Abstract: 12-hour shifts are quickly spreading in Europe. From our multivariate analysis concerning 25,924 European nurses, including twenty explanatory variables simultaneously, we found that work schedule itself is not a major determinant factor. Nurses aim to choose or accept night shifts or 12-hour shift in order to reduce their work/home conflicts, however, at the expense of the patient’s safety, as well as their own health and safety. Therefore, it is important to develop measures, such as extended child care, association of nurses to the elaboration of their rota, 9- or 10-hour shifts in the afternoon, allowing naps during night shifts, and reduction of changing shifts with short notice. Work schedules must be organized in order to allow time for shift handover, social support and team building.

Database: CINAHL

114. Shift working: safety or savings?

Author(s): Peate, Ian

Source: British Journal of Nursing; Feb 2012; vol. 21 (no. 3); p. 143

Publication Date: Feb 2012

Publication Type(s): Editorial

Available at British Journal of Nursing - from MAG Online Library

Abstract: Peate discusses the advantages and disadvantages of the 12-hour shift on the performance of nurses and on patient safety. He points out that nurses have to provide the same high-quality level of care to patients if they have worked 11 hours or just come on duty. The ability of a nurse to perform safely and effectively for the duration of a 12-hour shift has to be questioned. If the airline industry is concerned about pilots flying for 12 hours, health professionals should also consider the
impact a 12-hour shift is having on patient safety and the health of the individual working these long hours.

Database: BNI

115. 13 tips for surviving the 12-hour shift
Author(s): Kolasa, Kathryn M, PhD, RD, LDN; Firnhaber, Gina Cahoon, MSN, MLS, RN
Source: Nursing; Dec 2011; vol. 41 (no. 12); p. 55
Publication Date: Dec 2011
Publication Type(s): Feature
Abstract: Kolasa and Firnhaber review current evidence regarding the impact of shift work on diet and weight status and suggest steps that can take to improve one's well-being. Studies describing the effects of 12-hour shifts on the health and well-being of nurses have focused primarily on fatigue, performance, productivity, or patient safety. There are surprisingly few studies describing how shift work is associated with diet and weight-related conditions. Shift work has been associated with increased body mass index, waist circumference, BP, and low-density lipoprotein—in other words, metabolic syndrome. One of the steps to stay in tip-top shape is by achieving and maintaining a healthy weight.

Database: BNI

116. When time isn't on your side: 12 hour shifts
Author(s): Miller, Jacqueline A, BSN, RN, NE-BC
Source: Nursing Management; Jun 2011; vol. 42 (no. 6); p. 38-43
Publication Date: Jun 2011
Publication Type(s): Feature
Abstract: There are many reasons nurses choose to leave the profession: inadequate staffing, long work hours, and fatigue to name a few. Leadership is now beginning to see the impact of the extended shift and the toll it has on nursing and, ultimately, patients. Recent review of studies between 1970 and 1998 showed 12-hour shift nurses were more fatigued in 5 of 7 studies, and were more fatigued in 10 studies in which the only measurement was based on performance. There’s also research to show the increase in patient care errors when nurses work 12-hour shifts compared with 8 hours. Nursing culture is to work extended shifts and have more days for other jobs or personal time. The nurse executive must be the driver to change the culture of the organization to eliminate nurses working fatigued and putting them and patients at risk. Support of healthy work environments must become the model.

Database: BNI

117. Time to do away with 12-hour shifts?
Author(s):
Source: OR Manager; Sep 2010; vol. 26 (no. 9); p. 15-16
Publication Date: Sep 2010
Publication Type(s): Trade Publication
PubMedID: NLM20879671
118. Is it time to pull the plug on 12-hour shifts? Part 3. Harm reduction strategies if keeping 12-hour shifts

**Author(s):** Geiger-Brown J.; Trinkoff A.M.

**Source:** Journal of Nursing Administration; Sep 2010; vol. 40 (no. 9); p. 357-359

**Publication Date:** Sep 2010

**Publication Type(s):** Article

**Abstract:** This article is part 3 of the series "Pulling the Plug on 12-Hour Shifts." In part 1 (March 2010), the authors provided an update on recent evidence that challenges the current scheduling paradigm and supports the lack of safety of long work hours. Part 2 (April 2010) described the barriers to change and challenges for the nurse executive in moving away from the practice of 12-hour shifts. This article presents strategies for mitigating the effects of 12-hour shifts for nurses who continue to work 12-hour shifts despite the potential risks to their health and to patient safety.

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**Database:** EM CARE

119. Is it time to pull the plug on 12-hour shifts?: Part 2. Barriers to change and executive leadership strategies

**Author(s):** Montgomery K.L.; Geiger-Brown J.

**Source:** Journal of Nursing Administration; Apr 2010; vol. 40 (no. 4); p. 147-149

**Publication Date:** Apr 2010

**Publication Type(s):** Article

**Abstract:** This article is part 2 of the series "Pulling the Plug on 12-Hour Shifts." In part 1 (March 2010), the authors provided an update on recent evidence that challenges the current scheduling paradigm that supports the lack of safety of long work hours. Part 2 describes the barriers to change and challenges for the nurse executive in moving away from the practice of 12-hour shifts. This is an executive-level analysis of barriers and recommends strategies for change. Translation of evidence into administrative practice requires examination of external environmental factors, internal system consequences, organizational culture, and measures of executive performance.

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**Database:** EM CARE

120. Physiological and behavioural response patterns at work among hospital nurses

**Author(s):** Chen J.; Davis L.S.; Davis K.G.; Pan W.; Daraiseh N.M.

**Source:** Journal of Nursing Management; Jan 2010; vol. 19 (no. 1); p. 57-68

**Publication Date:** Jan 2010

**Publication Type(s):** Article

**Abstract:** The aim was to determine whether hospital nurses are experiencing physiological strain at work by examining their physiological and behavioural response patterns over 12-hour shifts. Background Excessive workload for nurses may lead to poor quality of care and high nursing turnover rates. Energy expenditure (EE), heart rate (HR) and work pace (WP) can be used to examine
the physiological impact from the workload. Methods A total of 145 nurses wore monitors for one 12-hour day shift to record HR and WP, which were used to calculate EE. Individual and work-related factors were assessed through questionnaires and work logs. Results Energy expenditure accumulated over the 12-hours reached the EE level of 8-hour shifts in which individuals work at a moderate physical intensity level. The HR data indicated a moderate cardiac stress level throughout the shifts, despite which WP decreased after 15.00-hours. Inadequate work break and sleep, family care-giving responsibility and aging may challenge work recovery. Conclusions Nursing workload of 12-hour shifts has a negative physiological impact on hospital nurses. Implications for nursing management Nurse managers need to be aware of the physiological strain experienced by staff nurses, and focus on ensuring sufficient breaks and proper work accommodations for older nurses. © 2010 The Authors. Journal compilation © 2010 Blackwell Publishing Ltd.

Database: EMCARE

121. Long days come with a high price for staff and patients
Author(s): Maben, Jill
Source: Nursing Times; Jan 2010; vol. 106 (no. 2); p. 25
Publication Date: Jan 2010
Publication Type(s): Journal Article
Abstract: Maben shares her thoughts about the 12 hour day shifts, which have become the norm among nurses. Twelve hour day shifts may have implications for staff wellbeing in terms of stress, burnout and physical injuries. It is known that when staff are tired, their stress and physical injury rates can be higher. Such long days can also have implications for the patient experience. Providing good care across a 12 hour shift requires high levels of resilience in staff; nurses need to be able to pace themselves and to be sure that they can give the same unwearied, dignified and compassionate care after 11.5 hours as they can after just one hour when fresh on duty.
Database: BNI

122. Effects of shift length on quality of patient care and health provider outcomes: systematic review.
Author(s): Estabrooks, C; Cummings, G; Olivo, S
Source: Quality & Safety in Health Care; Jun 2009; vol. 18 (no. 3); p. 181-188
Publication Date: Jun 2009
Publication Type(s): Article
Available at Quality and Safety in Health Care - from ProQuest (Health Research Premium) - NHS Version
Abstract: Systematic review concerning the effect of shift lengths of 8 hours or 12 hours on errors, patient injury, nurse perception of patient care quality and on staff wellbeing, job satisfaction and drug or alcohol use. Studies are described and the evidence they provide is analysed. [(BNI unique abstract)] 58 references
Database: BNI
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