

Sleep Disturbance, Chronic Stress, and Depression in Hospice Nurses: Testing the Feasibility of an Intervention

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Although hospice nurses are trained to assist others in bereavement, they often neglect their own chronic bereavement, leaving them vulnerable to compassion fatigue (Wenzel, Shaha, Klimmek, & Krumm, 2011). Compassion fatigue is chronic stress resulting from caring for someone who is suffering (Sabo, 2006). Chronic stress, such as the bereavement experienced by hospice nurses, has been linked to complaints of insomnia (Singareddy et al., 2012).

During sleep, complex physical and biochemical changes occur in the brain and the body. Hormones are released and cells are nourished and restored (Frank, 2005). Integrative functions, repair, reorganization, and the formation of new connections occur within the neuronal system to support memory and learning. Sleep also mediates stress, anxiety, and tension, and allows the individual to regain energy for concentration, coping, and interest in daily activities (Minarik, 2009; Vandekerckhove & Cluydts, 2010). Quality sleep provides energy to accomplish the tasks of daily living, whereas poor sleep, such as the insomnia experienced by the bereaved, does not restore energy (Frank, 2005).

In a qualitative study of the bereavement process, Steeves (2002) reported that family caregiver sleep quality fluctuated with the rhythm of bereavement. In a quantitative study of 105 bereaved individuals, participants reported poor sleep quality and efficiency; worse sleep was associated with greater depression (Germain, Caroff, Buysse, & Shear, 2005). Monk, Germain, and Buysse (2009) compared sleep in bereaved spouses, age-matched good sleepers, and age-matched people with insomnia and found that bereaved spouses reported significantly more sleep difficulties than good sleepers but better sleep than people with insomnia. Other researchers have found that depression level and number of losses are predictive of negative sleep changes (e.g., increased

Purpose/Objectives: To test the feasibility of a cognitive-behavioral therapy for an insomnia (CBT-I) intervention in chronically bereaved hospice nurses.

Design: Five-week descriptive correlational.

Setting: Nonprofit hospice in central Texas.

Sample: 9 agency nurses providing direct patient and family care.

Methods: Direct care nurses were invited to participate. Two intervention group sessions occurred at the hospice agency and included identification of dysfunctional thoughts and beliefs about sleep, stimulus control, sleep hygiene, and relaxation techniques to promote sleep. Measurements were taken at baseline and three and five weeks postintervention.

Main Research Variables: Sleep quality, depressive symptoms, and narrative reflections on the impact of sleep quality on self-care.

Findings: Participants reported moderate-to-severe sleep disturbances and moderate depressive symptoms. The CBT-I intervention was well accepted by the participants, and on-site delivery increased participation.

Conclusions: Additional longitudinal study is needed to investigate the effectiveness of CBT-I interventions to improve self-care among hospice nurses who are at high risk for compassion fatigue and, subsequently, leaving hospice care.

Implications for Nursing: Hospice nurses are exposed to chronic bereavement that can result in sleep disturbances, which can negatively affect every aspect of hospice nurses' lives. Cognitive-behavioral sleep interventions show promise in teaching hospice nurses how to care for themselves by getting quality sleep.

Knowledge Translation: Identifying the risks for sleep disturbances and depressive symptoms in hospice nurses will allow for effective, individualized interventions to help promote health and well-being. If hospice nurses achieve quality sleep, they may remain in the profession without suffering from chronic bereavement, which can result in compassion fatigue. A CBT-I intervention delivered at the agency and in a group format was feasible and acceptable by study participants.

sleep latency, increased wake-after-sleep-onset times, decreased rapid eye movement sleep) (Pasternak et al., 1992).

Being a hospice nurse ensures exposure to and involvement with the process of dying. In one of the first qualitative studies to explore the impact on oncology nurses of caring for dying patients, nurses described a need to develop a special bond with the patient and made a conscious decision to become involved in the patient's dying process (Rittman, Paige, Rivera, Sutphin, & Godown, 1997). Chronic exposure to the dying process was an experience with both positive and negative outcomes. Wenzel et al. (2011) found oncology nurses who had worked with dying patients reported more sadness, isolation, and somatization; however, Wakefield (2000) found that acute care nurses attempted to deal with chronic losses through relentless self-care and distancing themselves from dying patients. Patient death influences nurses in different ways, but nurses who experienced multiple deaths were at risk for negative health outcomes in all studies reviewed. Despite the evidence, the feasibility of behavioral sleep interventions for hospice nurses is not known. As a result, the current pilot study sought to explore the feasibility of a cognitive-behavioral therapy for insomnia (CBT-I) intervention among hospice nurses.

Methods

Following University of Texas at Austin institutional review board approval, the principal investigator scheduled an educational inservice program with a nonprofit hospice agency in central Texas. All hospice nurses who attended the inservice program were invited to participate in the five-week study for the CBT-I intervention. Seventeen hospice employees participated in the inservice program, and 13 met inclusion criteria and were invited to participate. If nurses chose to participate, informed consent was obtained and baseline data (i.e., demographics, sleep quality, and depressive symptoms) were collected following the inservice program. Educational intervention sessions occurred in a group format at the hospice agency in weeks two and four of the study. Follow-up data collection occurred in weeks three and five; sleep quality and depressive symptom instruments were distributed and collected via secure e-mail. The study was conducted from May to August 2005.

Sample

Thirteen hospice nurses who provided direct patient care to individuals and their families were eligible for participation. Nurses who were not providing direct hospice services to patients and their families (e.g.,

those in administrative positions) were not eligible. The 13 nurses provided baseline information and received the first educational session in week two. Of these, nine completed all three measurement points and received the educational session in week four. Four of the nurses only provided baseline data and did not complete either follow-up session. For statistical analysis, the authors used data from the nine nurses who completed all sessions.

Instruments

The **Pittsburgh Sleep Quality Index (PSQI)** (Buysse, Reynolds, Monk, Berman, & Kupfer, 1989) was used to assess sleep quality. Reliability alphas range from 0.83 to 0.89 in healthy and chronically ill individuals (Buysse et al., 1989; Carpenter & Andrykowski, 1998). Test-retest at one month in healthy adults showed no significant differences between time points ($r = 0.85$; $p < 0.001$) (Buysse et al., 1989). Validity of the PSQI was examined by comparing PSQI estimates of sleep variables with those obtained by polysomnography from healthy adults. T tests showed no significant differences in sleep latency ($r = 0.33$, $p < 0.001$); however, subjects tended to overestimate sleep duration and efficiency as compared with polysomnography ($t = 9.98$ and 4.5 , respectively; both $p < 0.001$) (Buysse et al., 1989). The 19-question PSQI is used to calculate seven sleep component scores (i.e., sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, sleep medications, and daytime dysfunction), with higher scores indicating poorer sleep quality. Component scores range from 0–3 and are summed for global sleep quality. Global scores range from 0–21, and global scores of five or greater indicate moderate sleep problems in at least three sleep component areas or severe sleep problems in two areas. The alpha for this study was 0.89.

The **Center for Epidemiological Studies–Depression (CES-D)** scale (Radloff, 1977) was used to measure depressive symptoms. The CES-D has demonstrated high internal consistency ($\alpha = 0.85$), and test-retest reliability (at two weeks, $r = 0.51$; at eight weeks, $r = 0.59$), supporting the CES-D's ability to measure current and immediate past symptoms (Li, Seltzer, & Greenberg, 1997). Validity of the CES-D is supported by its ability to discriminate between general and diagnosed samples and its significant correlations with other recognized depression scales (Weissman, Sholomskas, Pottenger, Prusoff, & Locke, 1977). For each of the scale's 20 items, participants indicate how often they have experienced a particular symptom during the prior week using a four-point Likert-type scale from 1 (never) to 4 (most of the time). Scores are summed, with higher scores indicating more depressive symptoms. A score of 16 or greater indicates a risk for clinical depression (Radloff, 1977). The alpha for this study was 0.9.

Intervention

The intervention, comprised of two one-hour educational sessions, provided nurses with the information, skills, and support necessary to identify, assess, and change habits, thoughts, and beliefs that negatively affected sleep quality by setting personal goals for change. The first session of the intervention was a facilitated group educational program. In the second session, researchers reviewed and clarified information, and they guided nurses in assessing personal goal attainment.

Both sessions used cognitive therapy, stimulus control, sleep hygiene, and relaxation techniques to promote sleep. All of the topics were based on well-established cognitive-behavioral sleep therapies for treating insomnia and have been shown to result in clinically significant improvements in sleep quality (Morin et al., 2006). Cognitive therapy identifies patient-specific dysfunctional sleep cognitions, challenges their validity, and replaces them with more adaptive substitutes using restructuring techniques (e.g., decatastrophizing, hypothesis testing, reappraisal, attention shifting) (Morin, 1993) (see Figure 1). Stimulus control trains the person to reassociate the bed and bedroom with rapid sleep onset by curtailing overt and covert sleep-incompatible activities (e.g., lying awake in bed thinking about work) that serve as cues for staying awake and by enforcing a consistent sleep-wake schedule. Sleep hygiene targets health practices (e.g., exercise, diet, substance use) and environmental factors (e.g., light, noise, temperature) that may be either detrimental or beneficial to sleep (Lacks & Rotert, 1986). Relaxation techniques are used to deactivate the arousal system, and the selection of specific techniques varies depending on whether treatment targets physiologic or cognitive arousal.

Goal Setting and Monitoring

Research with healthy adults supports the effectiveness of goal setting in facilitating lifestyle change (Shilts, Horowitz, & Townsend, 2004). Goals affect performance by directing attention, mobilizing effort, increasing persistence, and motivating strategy development. In addition, feedback regarding progress helps goal achievement (Koenigsberg, Bartlett, & Cramer, 2004).

The goal-attainment scaling process used in the current study was developed by Kiresuk, Smith, and Cardillo (1994) and involves identifying a goal that is realistic to achieve within a given time period. This goal represents the 0 point on the goal-attainment scale and must be precise and measurable. A somewhat better than expected outcome (+1), a much better than expected outcome (+2), a somewhat less than expected outcome (-1), and a much less than expected outcome (-2) also are identified. Sample goals included not watching television in bed five days per week (+2), practicing

Cognitive Therapy

- Helps nurse explore thoughts and feelings about sleep and sleep performance
- Common issues include unrealistic sleep expectations (e.g., "I must get eight hours of sleep every night."), misconceptions about the causes of insomnia (e.g., "My insomnia is entirely due to a chemical imbalance."), amplifications of the consequences of insomnia (e.g., "I cannot accomplish anything after a poor night's sleep."), and performance anxiety resulting from excessive attempts at controlling the sleep process (e.g., "I just need to try harder to sleep.").

Stimulus Control

- Go to bed only when tired.
- Use the bedroom only for sleep and sex.
- Get out of bed, and go into another room whenever unable to fall asleep or return to sleep within 15–20 minutes. Return to bed only when tired again.
- Maintain a regular rising time regardless of sleep duration the previous night.
- Avoid daytime napping.

Sleep Hygiene

- Discontinue use of caffeine and nicotine four to six hours before bedtime, and avoid use of alcohol as a sleep aid.
- Exercise five to six hours before bedtime but not closer than three hours.
- Minimize noise, light, and excessive temperature during the sleep period.
- Additional recommendations, which tend to overlap with stimulus control and sleep restriction, include curtailing daytime napping and time spent in bed.

Relaxation Techniques

- Use progressive muscle relaxation to reduce somatic arousal (e.g., muscle tension).
- Meditation can be used to lower presleep cognitive arousal (e.g., intrusive thoughts, racing mind).

Figure 1. Intervention Recommendations for Hospice Nurses by Component

Note. Based on information from Morin et al., 2006.

relaxation exercises three days per week (+1), limiting caffeine intake to three servings four days per week (0), walking 15 minutes two days per week (-1), and not watching television in bed three days per week (-2).

Analysis

Questionnaire data were entered into a computer database for analysis using SPSS®, version 19.0. Prior to analysis, data were checked for accuracy and evaluated, and corrections were made as necessary. Descriptive and correlational statistics were used to explore the data. The study's small sample size precluded the use of inferential statistical methods.

Results

Of the nine study participants who completed all three sessions, all were Caucasian, and most were women (see

Table 1. Sample Demographics (N = 9)

Characteristic	\bar{X}	SD	Range
Education (years)	17.4	2.8	15–24
Years in nursing	18.7	11.3	6–33
Years working in hospice	5.3	2.4	2–10
Number of terminal patients in past 12 months	170.7	119.8	40–360
Hours of end-of-life continuing education during nursing career	11.8	8.5	3–30
Age (years)	54	4.4	49–62

Characteristic	n
Gender	
Male	1
Female	8
Ethnicity	
Caucasian	9
Credentials	
Associates degree in nursing	6
Bachelor of science in nursing	2
Licensed vocational nurse	1

Table 1). At baseline, the average PSQI global sleep quality score indicated severe sleep problems ($\bar{X} = 10$, $SD = 5$). The most problematic areas for the nurses were sleep onset latency, total sleep time, and sleep efficiency (see Table 2).

At baseline, 13 participants reported an average CES-D of 17 ($SD = 12$), which indicates increased risk for a major depression diagnosis. At three weeks, the remaining sample ($n = 9$) reported an average CES-D of 12 ($SD = 11$). At the conclusion of the five-week study, nurses reported average CES-D scores of 14 ($SD = 11$).

An exploration of the relationships among sleep components, demographic characteristics, and depressive symptom scores revealed a number of findings. As expected, sleep components were significantly related across time points. Sleep-onset latency correlations ranged from 0.702–0.843, and were significant at less than 0.001. In addition, sleep components were correlated over time. For example, total sleep time was significantly correlated with sleep efficiency at baseline ($r = 0.932$, $p < 0.001$), week three ($r = 0.932$, $p < 0.001$), and week five ($r = 0.876$, $p < 0.001$). However, unexpected findings included the lack of significant correlations between sleep components and depressive symptoms. Demographic data also were correlated with sleep quality and depressive symptoms, although not significantly. For example, the number of deaths experienced in the past 12 months was correlated with sleep efficiency ($r = -0.371$, $p = 0.141$) and total sleep time ($r = -0.462$, $p = 0.231$), and depressive symptoms were correlated with number of years as a nurse ($r = 0.268$, $p = 0.266$).

Goal Attainment

Nurses identified daily habits affecting their sleep quality and, with assistance, constructed personal goals to improve daily habits in four areas (i.e., environment, daily routine, using stimulants wisely, and relaxation to promote sleep). Although nurses were able to identify and set meaningful goals, they were not always successful in meeting those goals. Nurses were most successful with goals that focused on their sleeping environment; 50%–70% met or exceeded that goal at each time point. The second most successful set of goals was using stimulants wisely (e.g., restricting caffeine use to the first half of the day); 50%–60% met or exceeded that goal at each time point. Changes in routine and incorporating relaxation activities to promote sleep were the two areas where nurses were least successful in meeting their goals. Only 10% were able to change their routine, and 20% were able to incorporate relaxation in to their daily activities.

In addition to the quantitative measures of sleep, nurses answered open-ended questions at the end of the week five survey. The survey included questions about sleep quality, how sleep affected work, and how work affected sleep. These reflections offered a glimpse into the relationships between sleep and nurses' personal and work life.

Sleep Quality

On the topic of sleep quality, nurses reported non-restorative and fragmented sleep (e.g., "I never feel rested. I fall asleep, but wake up often."), difficulty falling asleep (e.g., "Lots of mind talk at bedtime."), extended wake after sleep onset (e.g., "I fall asleep easily . . . awake 3 am and cannot get back to sleep until 6 am."), and inadequate total sleep time (e.g., "Sleep is deep; I wish for more of it.").

Sleep Affects Work and Life

The National Sleep Foundation (2011) reported that poor sleep negatively affects productivity and life quality. The nurses in the current study were no different. As one participant said, "If I don't get my eight hours, I pay for it. I am weary all day." Another nurse said, "I have a greater difficulty accomplishing my goals [if I don't sleep well]."

With respect to her personal life, one nurse noted, "Lack of sleep affects all aspects of my life negatively." Another nurse said, "I feel irritable if I don't sleep well, and that makes it hard to be a good nurse, wife, or mother."

Work Affects Sleep

Participants described how their work can negatively affect their ability to obtain good sleep. Several spoke about the effects of irregular or rotating work schedules

on their ability to sleep. One nurse said, "I am an on-call nurse. My schedule is two nights on, two off, three on, two off, two on, three off, then I start over again." Another nurse said, "I was an on-call nurse; now that I am on an 8–5 schedule, I have trouble resetting my clock. I can't get to sleep before 11 pm."

Surprisingly, only two nurses mentioned their feelings associated with providing care to dying patients and patients' families. One said, "My sleep is unaffected by caring for so many dying patients. I seem to be able to compartmentalize many of my feelings." The other said, "Since I am on call, I never developed relationships with the patients."

Discussion

In the current study, hospice nurses reported feeling well prepared to assist their patients' families in their bereavement process but often neglected their own needs. The descriptions that the nurses gave of a typical day indicated chronic high stress, which often carried over to time off and affected the ability to fall asleep or stay asleep. These findings are similar to those in the literature for general populations exposed to chronic stress (Singareddy et al., 2012).

Researchers have explored changes in the sleep patterns of the bereaved as well as the impact those changes have on health outcomes. For example, Monk et al. (2009) found significantly increased sleep latency, decreased sleep maintenance, and decreased total sleep time in bereaved spouses when compared to age-matched controls. The individuals in Monk et al.'s (2009) study were family members of patients. Hospice nurses can become like family to their patients, and the cumulative impact of losing many patients in such a short time can be overwhelming. Two nurses in the current study reported experiencing 40 patient deaths in the prior year, and seven nurses reported more than 100. In the current study, the number of deaths was correlated with nurse sleep efficiency and total sleep

time, although not significantly. Many of the nurses in the current study expressed feelings of deep sorrow after so much loss, but others developed ways to cope.

Earlier work with oncology nurses by Rittman et al. (1997) suggested that nurses bond with the dying patient and family when they decide to become involved in the dying process. Hospice nurses take this a step further. They have made a conscious choice to be involved in the dying process of every patient and family. The burden of helping a patient and family to have a peaceful passing is heavy but in some ways a rewarding responsibility. Hospice nurses embrace that responsibility. However, the chronic stress of multiple losses can erode the energy of even the strongest nurse. Some evidence of the deterioration of energy can be seen in the reflections provided by the nurses in this study. Nurses reported compartmentalizing their feelings to avoid being affected by multiple deaths. Similar findings were reported by Wakefield (2000) in a study with acute care nurses. However, the findings in the current study must be taken with caution, as the reflections on that topic come from only two nurses. Additional research is needed to fully understand the relationship between sleep and hospice nurses' connection with their dying patients.

In the current study, the authors found that hospice nurses experience moderate to severe sleep disturbances and moderate depressive symptoms. The CBT-I intervention is a widely researched and empirically validated treatment approach for insomnia symptoms (Morin et al., 2006). The use of group format education about sleep and goal setting using the CBT-I intervention was well received by hospice nurses and appeared to positively affect sleep onset latency, total sleep time, and sleep efficiency scores at three weeks postintervention. This approach may be a cost-effective way to engage nurses in self-care activities that will decrease sleep disturbances and depressive symptoms.

Limitations

This study was performed in a single nonprofit hospice in central Texas in 2005 with a limited convenience sample. No comparison group was used. Therefore, whether the nurses' sleep quality and depressive symptoms would have improved without the intervention is unknown. The intent of this pilot study was to determine the acceptability of this type of intervention for hospice nurses and, to that end, it was successful. Although the findings must be taken with caution, they do suggest that hospice nurses experience moderately high levels of sleep disturbances and depressive symptoms attributed to chronic bereavement and irregular sleep and work schedules. Although the data were collected some time ago, little

Table 2. Sleep Quality Scores at Baseline and Weeks Three and Five

Variable	Baseline (N = 13)		Week 3 (N = 9)		Week 5 (N = 9)	
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
Global score	10	5	9	5	8	5
Latency (minutes)	30	35	29	36	30	24
Total sleep time (minutes)	354	72	367	87	336	95
Efficiency (percentage)	77	16	80	18	76	21

to no additional work exists in the literature to date. The research findings are the most current available, and the problems still exist based on the authors' experiences and observations, which supports this article's relevance and relative timeliness. The need for additional research in this area remains, as evidenced by the lack of published works.

Implications for Nursing Practice

Clinical emphasis should be placed on continued follow-up on the needs of hospice nurses and the psychological and physical impact that hospice nurses may experience as a result of caring for dying patients and families. These highly specialized nurses are at risk for compassion fatigue and for leaving hospice care (Wenzel et al., 2011). From a research perspective, longitudinal control group studies are needed to study the efficacy of CBT-I interventions over time in hospice nurses.

If researchers can identify the risks and design individualized interventions to help hospice nurses promote health and well-being, hospice nurses may experience less compassion fatigue and remain in the profession longer. Specifically, if hospice nurses are able to sleep better and restore their emotional, physical, and psychological energy, they may be able to work without suffering the negative consequences of chronic bereavement resulting in compassion fatigue.

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Digital Object Identifier: 10.1188/13.ONF.E368-E373

References

- Buysse, D.J., Reynolds, C.F., III, Monk, T.H., Berman, S.R., & Kupfer, D.J. (1989). The Pittsburgh Sleep Quality Index: A new instrument for psychiatric practice and research. *Psychiatry Research, 28*, 193–213. doi:10.1016/0165-1781(89)90047-4
- Carpenter, J., & Andrykowski, M. (1998). Psychometric evaluation of the Pittsburgh Sleep Quality Index. *Journal of Psychosomatic Research, 45*, 5–13. doi:10.1016/S0022-3999(97)00298-5
- Frank, M.G. (2005). The function of sleep. In T.L. Lee-Chiong (Ed.), *Sleep: A comprehensive handbook* (pp. 45–48). Hoboken, NJ: John Wiley and Sons. doi:10.1002/0471751723.ch7
- Germain, A., Caroff, K., Buysse, D.J., & Shear, M.K. (2005). Sleep quality in complicated grief. *Journal of Traumatic Stress, 18*, 343–346. doi:10.1002/jts.20035
- Kiresuk, T.J., Smith, A., & Cardillo, J.E. (Eds.). (1994). *Goal attainment scaling: Applications, theory, and measurement*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Koenigsberg, M.R., Bartlett, D., & Cramer, J.S. (2004). Facilitating treatment adherence with lifestyle changes in diabetes. *American Family Physician, 69*, 309–316.
- Lacks, P., & Rotert, M. (1986). Knowledge and practice of sleep hygiene techniques in insomniacs and good sleepers. *Behaviour Research and Therapy, 24*, 365–368. doi:10.1016/0005-7967(86)90197-X
- Li, L.W., Seltzer, M.M., & Greenberg, J.S. (1997). Social support and depressive symptoms: Differential patterns in wife and daughter caregivers. *Journals of Gerontology. Series B, Psychological Sciences and Social Sciences, 52*, S200–S211. doi:10.1093/geronb/52B.4.S200
- Minarik, P.A. (2009). Sleep disturbance in midlife women. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 38*, 333–343. doi:10.1111/j.1552-6909.2009.01031.x
- Monk, T.H., Germain, A., & Buysse, D.J. (2009). The sleep of the bereaved. *Sleep and Hypnosis, 11*, 18–26.
- Morin, C.M. (1993). *Insomnia: Psychological assessment and management*. New York, NY: Guilford Press.
- Morin, C.M., Bootzin, R.R., Buysse, D.J., Edinger, J.D., Espie, C.A., & Lichstein, K.L. (2006). Psychological and behavioral treatment of insomnia: Update of the recent evidence (1998–2004). *Sleep, 29*, 1398–1414.
- National Sleep Foundation. (2011). *2011 Sleep in America® poll: Communications technology in the bedroom*. Retrieved from http://www.sleepfoundation.org/sites/default/files/sleepinamericapoll/SIAP_2011_Summary_of_Findings.pdf
- Pasternak, R.E., Reynolds, C.F., III, Hoch, C.C., Buysse, D.S., Schlernitzauer, M., Machen, M., & Kupfer, D.J. (1992). Sleep in spousally bereaved elders with subsyndromal depressive symptoms. *Psychiatry Research, 43*, 43–53. doi:10.1016/0165-1781(92)90140-X
- Radloff, L.S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385–401. doi:10.1177/014662167700100306
- Rittman, M., Paige, P., Rivera, J., Sutphin, L., & Godown, I. (1997). Phenomenological study of nurses caring for dying patients. *Cancer Nursing, 20*, 115–119. doi:10.1097/00002820-199704000-00006
- Sabo, B.M. (2006). Compassion fatigue and nursing work: Can we accurately capture the consequences of caring work? *International Journal of Nursing Practice, 12*, 136–142. doi:10.1111/j.1440-172X.2006.00562.x
- Shilts, M.K., Horowitz, M., & Townsend, M.S. (2004). Goal setting as a strategy for dietary and physical activity behavior change: A review of the literature. *American Journal of Health Promotion, 19*, 81–93. doi:10.4278/0890-1171-19.2.81
- Singareddy, R., Vgontzas, A.N., Fernandez-Mendoza, J., Liao, D., Calhoun, S., Shaffer, M.L., & Bixler, E.O. (2012). Risk factors for incident chronic insomnia: A general population prospective study. *Sleep Medicine, 13*, 346–353. doi:10.1016/j.sleep.2011.10.033
- Steeves, R.H. (2002). The rhythms of bereavement. *Family and Community Health, 25*, 1–10. doi:10.1097/00003727-200204000-00004
- Vandekerckhove, M., & Cluydts, R. (2010). The emotional brain and sleep: An intimate relationship. *Sleep Medicine Reviews, 14*, 219–226. doi:10.1016/j.smrv.2010.01.002
- Wakefield, A. (2000). Nurses' responses to death and dying: A need for relentless self-care. *International Journal of Palliative Nursing, 6*, 245–251.
- Weissman, M.M., Sholomskas, D., Pottenger, M., Prusoff, B.A., & Locke, B.Z. (1977). Assessing depressive symptoms in five psychiatric populations: A validation study. *American Journal of Epidemiology, 106*, 203–214.
- Wenzel, J., Shaha, M., Klimmek, R., & Krumm, S. (2011). Working through grief and loss: Oncology nurses' perspectives on professional bereavement [Online exclusive]. *Oncology Nursing Forum, 38*, E272–E282. doi:10.1188/11.ONF.E272-E282