

Examining the Feasibility of Implementing Specific Nursing Interventions to Promote Sleep in Hospitalized Elderly Patients

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Background

Sleep deprivation and subsequent effects on hospitalized older adults have been well documented in the literature. Some research has shown more than 65 percent of older adults ages 65 to 84 report problems with sleep.¹

In addition, sleep problems have been reported in 22 percent to 61 percent of hospitalized older adult patients.¹ Sleep problems can result in adverse effects, including impairment of the healing processes. Use of efficient, evidenced-based nursing assessment tools to evaluate patient preferences to promote sleep and sleep quality are reported less frequently. Some authors suggest the need for pharmacological interventions to improve sleep.

Purpose

An experimental pilot study was conducted to examine the feasibility of implementing specific nursing interventions to promote sleep in hospitalized older adults. An additional objective was to identify sleep interventions that participants felt were the most useful.

- Hypothesis:** By the date of discharge, the use of a protocol to promote sleep will increase ease in falling asleep, sleep quality, ability to remain asleep, and decrease the number of sleep medications used by patients.

Setting

- 343 bed teaching hospital in southwest Michigan
- 35 bed Cardiology Unit and 20 bed, gradually increased to 34 bed, Adult Medical Unit

Sample Characteristics

	Experimental (n = 29)	Control (n = 30)
Age, Mean ± SD	78.6 ± 6.8	80.5 ± 8.7
Gender, n (%)		
Female	16 (55.2)	18 (60.0)
Male	13 (44.8)	12 (40.0)



Materials and Methods

Richards-Campbell Sleep Questionnaire

- The sleep quality of hospitalized older adults was assessed using the Richards-Campbell Sleep Questionnaire (RCSQ).
- The questionnaire is a 5-item, visual analog scale (100 mm) that has been used to assess sleep quality in critically ill patients. Possible scores can range from 0 to 500, with higher scores indicative of poor sleep quality. There is prior evidence of the internal consistency and validity of the RCSQ. In this study, an internal consistency reliability coefficient of 0.82 was obtained.

Benson-LaReau Ranking of Sleep Interventions

- Patient sleep preparation preferences were assessed using the Benson-LaReau Ranking of Sleep Interventions (BRSI).

- The tool was developed for this study.
- Evidenced-based non-pharmacological sleep interventions are listed.

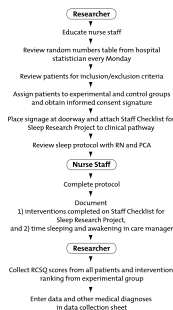
Benson-LaReau Ranking of Sleep Interventions

Please rank the following sleep interventions that you experienced last night. Rank the intervention that you found most useful as 1, the intervention that was the next most useful as 2 and so on. Rank the intervention using the numbers 1 through 10 using each number only once.

- Be aware of normal bedtime
- Assist with personal hygiene (wash hands and face, mouth care, toileting, etc.)
- Provide a five-minute back rub (head-to-toe with patient in a side-lying position)
- Straighten bed lines
- Offer a warm drink and/or snack
- Avoid talking at bedside during potential sleep hours
- Avoid use of the intercom in non-emergent situations after 8 p.m.
- Determine patient preference for radio/TV. If left on, keep volumes low
- Darken light levels in room to patient preference
- Adjust room temperature to patient preference

Sleep Protocol Algorithm

- All patients in the experimental group (n=29) were asked to complete the RCSQ and BRSI in order of effectiveness every morning.
- Patients in the control group (n=30) completed the RCSQ every morning.



Results

- Hypothesis was only partially supported.
- The experimental group used fewer sleep medications (p = .044) than the control group.

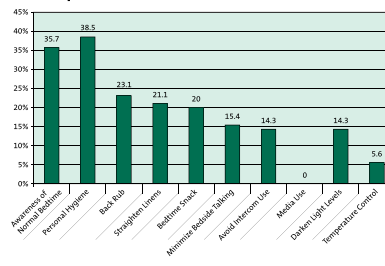
Comparison of Study Variables

Variables	Experimental (n = 29)		Control (n = 30)		P
	Median	Mean ± SD	Median	Mean ± SD	
Sleep hours	6.3	6.5 ± 1.9	6.5	6.6 ± 1.6	0.997*
Number of Awakenings	0.5	0.9 ± 1.0	1.0	1.1 ± 1.2	0.190**
RCSQ Total Scores	120.0	144.3 ± 98.0	137.0	155.2 ± 97.0	0.667*
Number of Sleep Medications	1.0	1.6 ± 0.9	2.0	2.2 ± 1.5	0.044**

*Test p-value; **Mann-Whitney U test revealed p-value; † Significant at 5% level of significance

- The experimental group patients identified preferences such as personal hygiene, awareness of normal bedtime, receiving a back rub, straightening bed linens, and receiving a bedtime snack.

Sleep Intervention Preferences



- Patients in the experimental group showed a significant improvement in sleep quality (p = .001) and ability to remain asleep (p = .018). Therefore, the use of a sleep protocol may have had positive effects on sleep quality.

Analysis Results for Experimental Group

Variables	Min	Max	Mean	SD	Median	P*
RCSQ Q3	2.0	95.0	27.4	29.3	13.0	0.018*
RCSQ Q5	1.0	98.0	22.3	28.8	7.5	0.001*

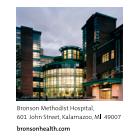
*Repeated measures analysis of variance test p-value; † Significant at 5% level of significance

Intervention Feasibility and Implications

- Use of the BRSI to individualize sleep preferences may be advantageous for use in hospitalized older adults.
- RCSQ is advantageous in assessing sleep quality in hospitalized older adults.
- Used together, these questionnaires have utility for measuring sleep quality in hospitalized older adults.

References

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