Non-pharmacologic interventions for long-term chronic insomnia

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Abstract
Purpose: To systematically review, analyze and synthesize empirical evidence that has been published regarding the effectiveness of non-pharmacological management for patients with chronic insomnia.

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Background and Significance

- The prevalence of insomnia in the general population is estimated to be 29.9% (Chang, Lai, Chen, Hsieh, & Lee, 2012).
- Insomnia is recognized as a significant and growing public health concern (Chang, Lai, Chen, Hsieh, & Lee, 2012).
- The consequences of insomnia are impaired quality of life, increased medical consultation, and hypnotic medication consumption (Chang, Lai, Chen, Hsieh, & Lee, 2012).
- Short-term use of hypnotic medication is useful and especially indicated for acute insomnia, however there is little information on the long-term efficacy of hypnotic medication and its role in the management of chronic insomnia (Wu, Bao, Zhang, Deng, & Long, 2006).
- Pharmacological management can be contraindicated because of the accompanying unwanted side effects, including daytime residual effects, tolerance, dependence, altered sleep stages, and rebound insomnia (Chang, Lai, Chen, Hsieh, & Lee, 2012).
- Various non-pharmacological therapies have been proposed in the literature (Passos et al., 2011).
- Physical exercise as a non-pharmacological, low cost, and easily accessible treatment alternative has been suggested, especially cognitive and behavioral therapies (Passos et al., 2011).
- Research has shown that the clinical effectiveness and cost utility of a sleep clinic offering cognitive behavior therapy to long-term hypnotic users with chronic insomnia (Morgan, Dixon, Mathers, Thompson, & Tomeny, 2003).

Research Question

What are non-pharmacological interventions on the long-term for patients with chronic insomnia?

Methods

- Clearly delineated literature search and inclusion criteria.
- Systematic review, analysis and synthesis of data.

Systematic review, Analysis and Synthesis

- All research checked and determined if applicable based on key words chronic insomnia, non-pharmacological management, pharmacological treatment, and long/short-term effect.
- Systematically reviewed all articles.
- Construction and analysis of literature matrix
- Initial focus on reviewing all complications from insomnia and pharmacological therapy’s side effects in a long-term care
- Subsequent focus on effectiveness of non-pharmacological management

Inclusion Criteria

- Published in the English language
- Full text primary sources
- Inclusion of patients with chronic insomnia as a primary population
- Research done between 1990 – present

Exclusion Criteria

- Not published in the English language
- Full text primary source not obtainable
- Journal not available through University library
- Journal requiring fee for article

Discussion

Conclusion

- Psychological treatment with CBT for Insomnia was significant and sustained improvement in sleep quality.
- CBT has better long-term results than PCT for overall sleep condition and sleep-related psychological activity.
- Even though PCT is effective for short-term management, insomnia symptoms will reoccur when it s withdrawn.
- Mindfulness-based stress reduction (MBSR) improves sleep quality and reduces severity of insomnia problems in long-term period.

Recommendations for future research

- Listening to soothing music at bedtime may facilitate relaxation and improve sleep quality by reducing stress while attempting to sleep.
- Moderate aerobic exercise in the morning or late-afternoon for a long-term period improved sleep quality, mood, and quality of life with chronic primary insomnia.
- In consideration of easily distribution and low in cost, self-help CBT is to help patients with insomnia including those with co-morbid problems.
- Components in the cognitive behavior therapy (Table 2).

Table 2. Outline of the components in the CBT

| Sleep hygiene | Keeping the bedroom cool, quiet, and without nighttime stimuli, and avoiding stimulants, exercise, and large meals before bedtime |
| Stimulus control | Breaking association between the bed and wakefulness by instructing |
| Sleep restriction | Reducing the time in bed to equal that person’s actual sleep time |
| Cognitive therapy | Reducing unnecessary worrying about consequence of sleep loss |
| Muscle relaxation | Relieving muscles voluntarily and systematically |

Implications for nursing practice:

Health care providers should be familiar with the range of non-pharmacologic therapy and consider the CBT, self-help CBT, MBSR, shooting music, aerobic exercise, and meditation technique as a management for chronic insomnia patients.

Limitations

- Sample size
- The homogeneity of participants in terms of educational attainment and race
- Particular patients who were resistant to change in their drug regime and have moderate anxiety

Recommendations for future research

- Recruitment diverse patients to produce more comprehensive results
- A sizable proportion of individuals with chronic insomnia should be randomized to receive different interventions.

Reference

Available upon request