Non-pharmacologic interventions for long-term chronic insomnia

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Non-pharmacologic interventions for long-term chronic insomnia

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.

Document Type
Poster Presentation

Degree Name
M.S. in Advanced Practice Nursing

First Supervisor
Christine Nelson-Tuttle

Subject Categories
Nursing

This poster presentation is available at Fisher Digital Publications: http://fisherpub.sjfc.edu/nursing_etd_masters/25
Non-pharmacologic interventions for long-term chronic insomnia

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).
- Insomnia is recognized as a significant and growing public health concern (Chang, Lai, Chen, Hsieh, & Lee, 2012).

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

Literature Search
- Well-defined comprehensive search strategy (Table 1). Data based used: CINAHL, Medscape, Ovid, PubMed/Fisher, ProQuest nursing journal.
- Key words: chronic insomnia, non-pharmacological management, pharmacological treatment, and long-term/short term effect.
- Hand search of references in addition to database until all salient publications were obtained.

Table 1. Database based on key words

<table>
<thead>
<tr>
<th>Database</th>
<th>Key words</th>
<th>n = number of articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>CINAH with full text</td>
<td>Chronic insomnia, non-pharmacological management</td>
<td>2772</td>
</tr>
<tr>
<td>Medscape</td>
<td>Chronic insomnia management, long-term effect</td>
<td>381</td>
</tr>
<tr>
<td>Ovid</td>
<td>Chronic insomnia, long-term effect</td>
<td>150</td>
</tr>
<tr>
<td>ProQuest nursing journal</td>
<td>Chronic insomnia management</td>
<td>50</td>
</tr>
<tr>
<td>Pubmed@Fisher</td>
<td>Chronic insomnia, non-pharmacological treatment</td>
<td>1500</td>
</tr>
</tbody>
</table>

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

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.

Result
- Final sample (n=8)
- 8 publications, all quantitative studies
- Publications from 2003 to 2012
- No bulk of publications by same authors
- No replication studies
- Various interventions and outcome measures
- Studies were conducted by psychology and health care professionals.
- Publications centered around older population prevention.
- Studies were done in Brazil, China, Norway, Sweden, Taiwan, the United States, and the United Kingdom.
- Studies were conducted by assessments, questionnaires, and polysomnography.
- Most of studies were focused on the elderly.
- Significant improvements with the CBT, the MBSR, the music therapy, and aerobic exercises in sleep efficiency and quality of life.

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 is 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).

Exclusions
- Research was focused on reviewing all complications from insomnia and pharmacological therapy’s side effects in a long-term care.
- Studies were conducted by assessments, questionnaires, and polysomnography.
- More studies were focused on the elderly.
- Significant improvements with the CBT, the MBSR, the music therapy, and aerobic exercises in sleep efficiency and quality of life.

Inclusion
- Studies were conducted by psychology and health care professionals.
- Publications were conducted by assessments, questionnaires, and polysomnography.
- Most of studies were focused on the elderly.
- Significant improvements with the CBT, the MBSR, the music therapy, and aerobic exercises in sleep efficiency and quality of life.

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

References
- Available upon request