INTRODUCTION

- According to the Center for Disease Control (CDC), 50 to 70 million Americans suffer from sleep disorders that cause wakefulness, such as insomnia.

- National Sleep Foundation
  - Almost 50% of the American population experiences insomnia every now and again
  - About 25% of the population suffers from insomnia almost every day of the week
  - Females are 1.3 times more likely to experience insomnia
  - Individuals over the age of 65 – 1.5 times more likely than younger people
  - Divorced, widowed, and separated individuals experience more insomnia symptoms

- Symptomatic spectrum of insomnia effects
  - Difficulty concentrating
  - Memory difficulties
  - Affected driving skills
  - Affected performance of occupational duties

- Other subsequent issues
  - Hypertension
  - Diabetes
  - Depression
  - Cancer
  - Increased mortality
  - Reduced quality of life and productivity

- Economical costs
  - Treatment for insomnia
  - Other related healthcare costs
  - Doctors’ visits
  - Hospital stays
  - Indirect costs of insomnia
    - $35 billion annually
    - Loss of productivity
    - $18 billion annually
INTRODUCTION

Symptom severity, treatment acceptability, & behavior change/motivation

Montserrat Sanchez-Ortuno & Edinger (2010)

Investigated the relationship between:

- Patients’ maladaptive beliefs about insomnia
- Presenting symptoms
- Treatment progression

250 insomnia patients

Completed:

- Dysfunctional Beliefs about Sleep Questionnaire (DBAS-16)
- Stanford Sleepiness Scale (SSS)
- Beck Depression Inventory (BDI)
- State-Trait Anxiety Inventory (STAI)
- Sleep history questionnaire

Montserrat Sanchez-Ortuno & Edinger (2010)

DBAS-16 results were aggregated into four subgroups:

- Worried and medication-biased
- Low endorsement

- Worried and symptom-focused
- Low endorsement group

- Held beliefs about sleep-related symptoms that would constitute an average individual’s beliefs

- Relatively low sleeping problems altogether

Two subgroups demonstrated elevated scores for insomnia

INTRODUCTION

Sidani, et al. (2009)

Analyzed the relationship between:

- Personal beliefs about insomnia
- Treatment acceptability

400 individuals with insomnia

Participated in one of two clinical trials

- Targeted treatment options for insomnia
- Sleep education and hygiene

- Multi-component intervention

- Best primary predictors
- Best secondary predictors

- Most convenient method of treatment was preferable
- Personal beliefs about insomnia were not related to preferences

Vincent, Penney, & Lawrenzky (2006)

Assessed insomnia patients pre- and post-treatment

- Improvement was measured on the Clinical Global Improvement Scale (CGI)
- Perceived levels of improvement

- Best primary predictors
- Best secondary predictors

- Best predictor for perceived lack of improvement: sleep efficiency

- Best primary predictors
- Best predictor for perceived lack of improvement: mood
INTRODUCTION

- Epstein, et al. (2012)
- Assessed treatment preference and acceptability
- Iraq and Afghanistan combat veterans and providers
- Used insomnia and other mental health questionnaires
- Veterans preferred relaxation therapy and pharmacotherapy
- However, felt that pharmacotherapy was just a “quick fix”
- Concerned about dependency
- Veterans suggested a combination of techniques

WHY IS THIS IMPORTANT? - PURPOSE OF THE CURRENT STUDY

- Most studies focus on symptom severity and treatment acceptability separately
- Very few, if any, studies focus on willingness to change
- Few studies assess these variables and how they relate to insomnia severity pre- and post-treatment
- Filling the gaps
- Pre- and post-treatment
- Predicting improvement with multiple measures

HYPOTHESIS

- Hypothesis
  - Symptom severity, treatment acceptability, and motivational outcomes will predict patient improvement.
METHOD

- Archival data was used from Fairview Health Systems
  - Originally collected by Dr. Don Townsend (84 participants)
  - Patients filled out before treatment:
    - Insomnia Outcomes Scale
    - Treatment Acceptability Scale
    - Willingness to Change Scale
- New data was collected post-treatment
  - Insomnia Outcomes Questionnaire
  - 6-month follow-up
  - Standardized procedure was used
  - Phone
DATA ANALYSIS

- Subscales were created
  - Pre-treatment insomnia outcomes scale
  - Treatment Acceptability Scale
  - Medication Treatment
  - Behavior Modification Treatment
  - Willingness to change scale
  - Post-treatment insomnia follow-up questionnaire

- 31 participants
- Multiple linear regression test was conducted using SPSS
- Predictors:
  - Pre-treatment insomnia outcomes scale
  - Treatment acceptability scales
  - Willingness to change scale
  - Criterion:
  - Post-treatment insomnia outcomes scale

RESULTS

- Overall regression model:
  \( F(5, 26) = 1.27, p > .05 \)
- Individual predictors were non-significant
- Pre-treatment Insomnia Outcome Scale was marginally significant
  \( \beta = .42, p = .06 \)

```
Overall Regression Model for Patient Improvement

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<th>Mean Square</th>
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<th>Sig</th>
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Dependent Variable: PostTreatmentOutcomes
- Predictors: (Constant), ChangeScaleBCG, MedicationTreatment, MedicalExpertProfessionalTreatment, PreTreatmentOutcomes, BehaviorModificationTreatment
RESULTS

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<th>Coefficient</th>
<th>Standard Coefficient</th>
<th>Sig.</th>
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</table>

Sample sizes for Patient Improvement

DISCUSSION

- Sample size
- Unknown psychometric properties
- Test construction
- Unknown demographics
- Marginally significant results
- Response bias

RECOMMENDATIONS

- Re-visit test construction
- Develop psychometric studies
- Re-conduct study with greater sample size
- Survey distribution
- Demographic information
- Develop a study that focuses on specific symptoms
- Specific symptoms vs. insomnia outcomes

REFERENCES