

The Effects of Sleep Disturbances on Older Adults Living with Dementia

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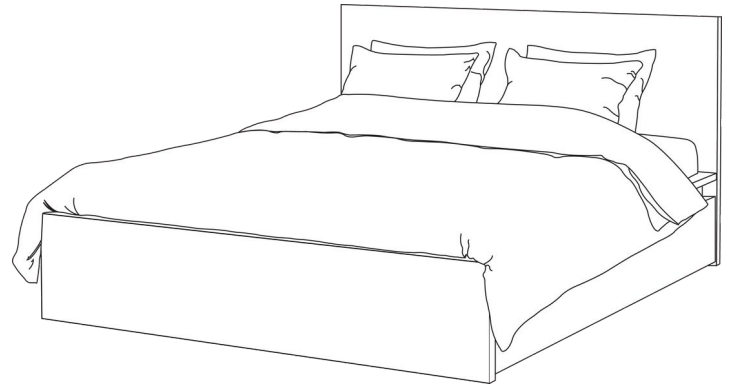
Sleep Disturbances



- A symptom of dementia that is commonly overlooked are sleep disturbances
- A good night's sleep is crucial to our well-being.
- Sleep Disturbances refer to poor sleep efficiency (the actual percentage of time in bed asleep (Cole et al., 2005) and increased night awakenings (Petrovsky et al., 2018)).
- For people with dementia frequent night awakenings and frequent periods of restlessness can have deleterious effects on both the person and their caregivers.

Sleep Disturbances Cont'd

- Common sleep disturbances among people living with dementia:
 - Reversal of day-night sleep pattern
 - Frequent nighttime awakenings
 - Increase in daytime sleep
 - Decrease in REM sleep
 - (important for memory and mood)
 - Sundowning



The Reasons for Sleep Disturbances

- Aside from the changes which occur to age-related sleep patterns; those with Dementia experience further disruptions.
- Degeneration of neural pathways responsible for the sleep/wake cycle (Peter-Derex et al., 2015)
- Physical and Environmental changes (Bloom et al., 2009; Schnelle et al., 1993)
- Increased daytime sleep (Vitiello et al., 2001)

The Effects of Sleep Disturbances



The impacts of sleep disturbances experienced by persons with Dementia are commonly overlooked.

They can include

- Decreased quality of life (McCurry et al., 1999; Petrovsky et al., 2018)
- Poor health (Vitiello, 2001; Goel et al., 2009)
- Institutionalization (Orristein et al., 2012)

The Effects of Sleep Disturbances



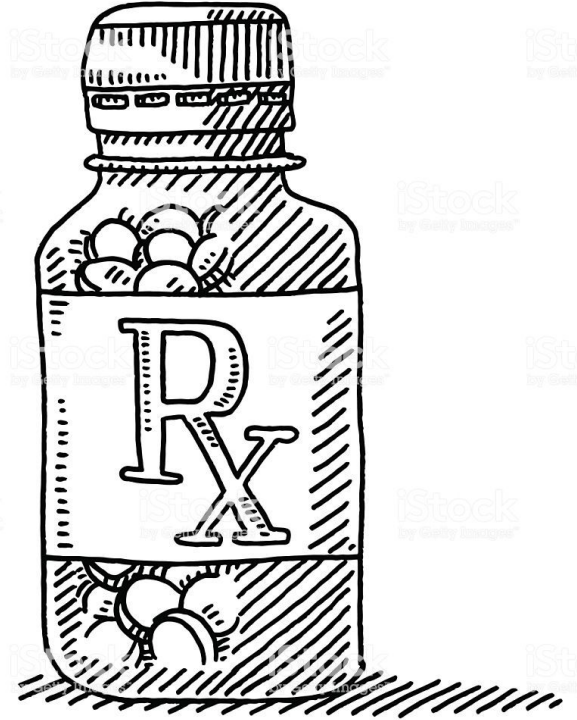
- Sleep disturbances can cause insomnia, snoring, restless legs syndrome, nightmares and daytime drowsiness (Pistacchi et al, 2014)
- Can exacerbate already challenging cognitive and behavioural symptoms (Song, Jung & Richards, 2012)
- This creates added stress both for the individual and their caregivers (Kim et al., 2014)



Existing Treatments



- Exercise
- No caffeine/alcohol
- Light Therapy
- Medications
- Environment (Gloria Donnelly)

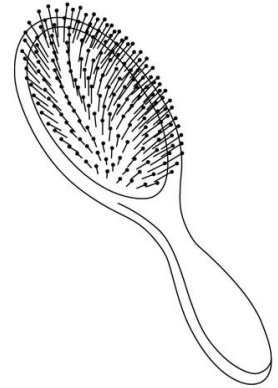


Existing Treatments

- Pharmaceuticals are often the 'go-to' treatment for older adults experiencing sleep disturbances (Pistacchi et al., 2014)
- The most commonly prescribed Benzodiazepines are known to cause increased sedation, confusion, anterograde amnesia, daytime sleepiness and rebound insomnia (Cipriani et al, 2015)
- Non-pharmacological treatments are not readily used for sleep disturbances, particular in the population of persons with dementia (Cipriani et al., 2015)

The Sleep Kit

- A product developed as a tool for caregivers
- St. Thomas University - Dr. Janet Durkee-Lloyd
- Based on the idea of one-on-one social interaction between care partners
- A routine before bed
- 5 senses: touch, smell, sound, sight & taste.
- Using alternative therapies to get into a relaxed state
- Spark Grant



The Sleep Kit Activities

- Hairbrush
- Hand Mirror
- Essential oil
- Lotion
- Playing Cards
- Coloring book & markers
- Book
- Therapeutic CD
- Chamomile Tea
- Herbal pillow
- Sleep Diary
- Reflection Booklet



Hairbrush & Hand Mirror

THE
SLEEP
KIT



Essential Oil



Lotion



Playing Cards

THE
SLEEP
KIT



Coloring Book & Pencil Crayons



Book

THE
SLEEP
KIT



Therapeutic CD



Chamomile Tea



Herbal Pillow



Sleep Diary



Reflection Booklet



The 19 Day Study



- Participants wore a Fitbit Alta HR for 5-day pre-test period - recorded time slept, restlessness and awakenings.
- Additional 14-day period
- Participants administered The Sleep Kit activities with the resident/their carepartner for 30-60 minutes 10 times over the 14-day period
- Carepartners recorded in the sleep diary about their sessions
- Completed a short questionnaire before and after the 14-day period
- Research Question: Does use of the Sleep Kit improve the quality of sleep for older adults diagnosed with dementia?

Recruitment

- Diagnosis of dementia & self-reported sleep disturbances
- Began in June, 2018
- Posters & Social media
- Hospice Fredericton Day Program
- Nursing home sample was recruited from York Care Centre
- Recruited a total of 41 participants



Who participated?

- 16 participants living at home in the community (Fredericton and surrounding areas)
- 25 participants in long-term care (York Care Centre)
- Community sample:
 - The Mini-Mental State Exam (MMSE) was administered. Scores were 44% mild dementia; 12% moderate and 44% severe.
 - Average age: 77 years.
 - 16 total; 7 males, 9 females.
- Long-term care sample:
 - 25 total; 9 males, 16 females.
 - Average age: 83 years.
 - MMSE scores: 4% mild dementia, 24% moderate, 72% severe.



What did we find out?

- In long-term care:
 - A significant decrease was found in the number of restless periods before and after the implementation of The Sleep Kit.
 - 96% reported that using The Sleep Kit activities was an enjoyable experience.
 - 82% would like to continue using the The Sleep Kit.
 - Caregivers reported the most effective items:
 - Hairbrush - 82%
 - Essential Oil - 90%
 - Book - 82%
 - Lotion - 91%



What did we find out?

- In the community:
 - 37.5% agreed or strongly agreed that their partner was more relaxed before sleep and slept better after The Sleep Kit activities.
 - 81% said The Sleep Kit promoted sleep and helped them engage with their partner.
 - 75% would continue to use The Sleep Kit.
 - Caregivers reported the most effective items:
 - Book - 75%
 - Lotion - 69%
 - Hairbrush - 56%



Sleep Diary Entries

- *"The 'calming' activities are wonderful for [my husband] ... and for me. The background music is particularly soothing for both of us. The time we spend together on sleep activities has definitely improved his sleep! I also find that his mood through the day is much better."*

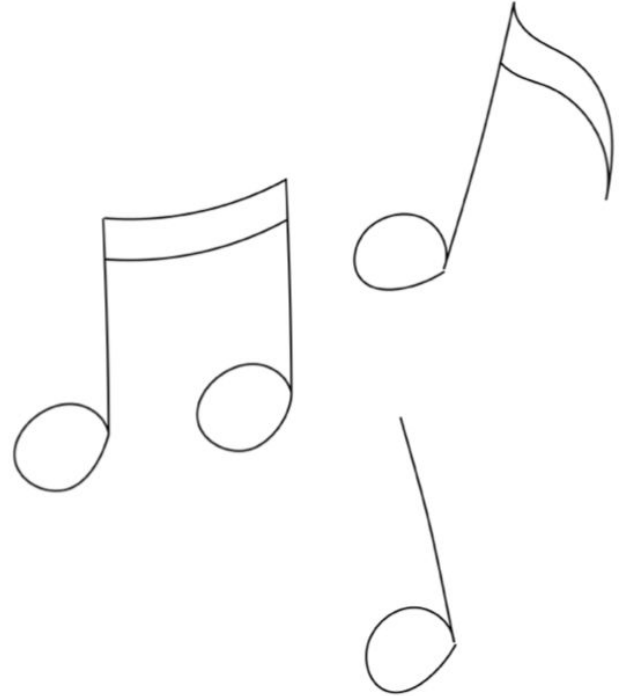




THE
SLEEP
KIT

Sleep Diary Entries

- *"On a side note after our first night when I saw her the next day and I asked her how she slept she said "good". Usually when you ask her how she slept it's usually "not good" or "not at all" so I consider "good" a win!"*



Sleep Diary Entries

- *"Overall, I personally felt that The Sleep Kit activities and interactions before bedtime, did tire her out and most nights she was sleeping quietly in her room and not pacing the hallways. I plan to continue to do the activities in the future and see for how long it continues to work. I realize it will be difficult for us to do them on a regular basis."*





2 Themes: Routine & Focus

- Routine: using The Sleep Kit on a regular basis provided caregivers with structured activities for the nightly routine.

"The routine for her was great, it was also good for me. It freed up my days. Because I knew every day that I was coming in that evening. I typically try to visit my Mom probably 5 days a week. Sometimes I would come in and I would visit with mostly everybody that was sitting around".

"I would usually read to the participant for about 20 minutes to start the night off and for that entire time she was 100% focused on me. She would never call out - which is something that she does frequently."

Kevin Roherty



2 Themes: Routine & Focus



- FOCUS: Caregivers expressed great satisfaction with the Kit because it provided a way to have meaningful and relaxed interaction with participants.

"I found the Kit to have many great ideas that I otherwise would not have thought of on my own. When we used the cards, I kept the pairs turned over and made it a bit more challenging. Well it was a huge hit. Mom was pretty excited to be beating me. Her smile was a genuine one and it warmed my heart to see her engaging in something other than watching TV. So we will be continuing our card games and I'm looking forward to them."

"Wow! Tonight was very rewarding! It was so rewarding to watch her face go from strained to pure relaxation. We even had a moment where we looked into each other's eyes and she placed her hand over mine. It's obvious that this time spent together is benefiting her well-being."

Lorie Yerxa, LPN



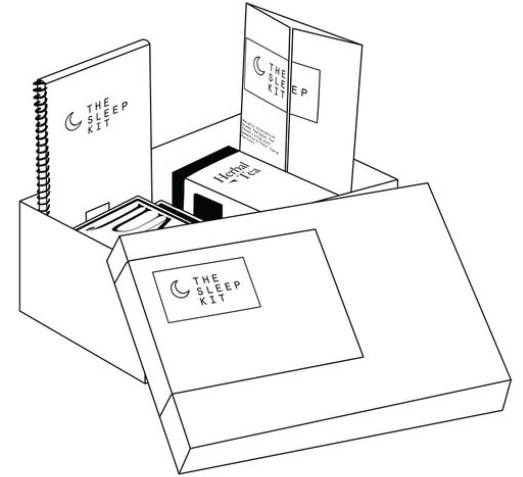
Peter & Bruce Atkinson



Additional Findings



- Care-partners in the community used sleep diaries as a daily journal
- Care staff used The Sleep Kit during the day to support residents experiencing responsive behaviors
- Care-partners incorporated additional interventions





Limitations

- Fitbits not always accurate for certain individuals
- 14-day period did not work for everyone
- Some people could not commit
- Volunteers
 - Not as experienced with dementia as staff/families
 - Do not have previous connection to resident - benefit?
- Notes (or lack-thereof...)
- Study began in the summer
- Hard to have a controlled environment

Where are we now?

- The findings of the study are being used to educate nursing home staff and care-partners on alternative therapies like The Sleep Kit to enhance sleep quality.
- Those who care for people with dementia are eager to find ways to improve the quality of life for those they are looking after.
- We are continuing to seek out new avenues to advance this area of study.

Thank you.



This research was supported by:



www.thesleepkit.org
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