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Sleep Issues of Older Adults: Lived Experience and Occupational Performance

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Abstract

Introduction: Sleep issues are prevalent among older adults which can affect occupational performance; however, there is a gap in the research in examining lived experiences of this population. This research may provide insight into these areas concerning this population.

Method: This qualitative phenomenological study was conducted via semi-structured interviews which were recorded. No identifiable information was collected during data collection. The inclusion criteria of the study sample were as follows: (a) aged 65 years or older; (b) have sleep issues or self-perceived sleep issues; (c) community-dwelling; (d) English is primary language; (e) live in West and Central Michigan. Exclusion criteria included those who have cognitive impairments (< 24 on the Mini Mental State Exam).

Results: Participants of this study (N= 12; 4 male, 8 female) were older adults, ages 67 to 88 (M= 74; SD). Mini Mental State Exam scores of participants ranged from 25 to 30 (M=27.83). Five main themes were constructed from the data using thematic analysis: health, routine, sleep experience, environment, and relationships.

Conclusions: Older adults in this study perceived that sleep issues affected their occupational performance in areas related to health, routine, sleep experience, environment, and relationships. Additional research in this area is needed to build a better understanding of how to address the occupational performance of sleep with this population. Future research should include a more diverse, broader sample. This could include measuring sleep and sleep quality with objective measures relating to the themes of our study.

Introduction

Background

Sleep is an essential component of health (Arora, 2021; Irwin, 2015; Krueger et al., 2016; Lee & Lawson, 2021), functional living (Koščec Bjelajac, 2020; Lorenz, 2014; Miletinova & Buskova, 2021), and well-being (Armand, 2021; Lee & Sibley, 2019; Vermeulen, 2021). Issues with sleep are prevalent across the lifespan (Pearson, 2017; Perlus, 2018; Vazsonyi et al., 2021; Wintersgill, 2019; Zavec, 2020); however, older adults generally sleep less and have poorer sleep efficiency when compared to younger generations (Burgess & Swanson, 2020; Dzierzewski, 2021; Garbarino, 2020; Logan & McClung, 2019). Research has estimated that 40-70% of older adults, ages 65 and older, have trouble sleeping (Foley et al., 2004; Jaussent et al., 2011; Miner, 2017). A wide variety of sleep problems are prevalent among older adults including insomnia, daytime sleepiness, symptoms of obstructive sleep apnea, restless leg syndrome, and inadequate sleep (< 6 hours) on a regular basis (Foley et al., 2004; Miner, 2017). Poor sleep quality, sleep duration, and sleep latency are possible modifiable elements that have been associated with limited mobility, physical function decline, and bodily pain in older adults (Campanini et al., 2019; Lorenz et al., 2014; Serrano-Checa et al., 2020; Vincent et al., 2021). Both short and long sleep duration are associated with a higher risk for stroke and mortality (Koo et al., 2018). Older adult sleep issues can also affect occupational performance, but the problem is the lived experiences have not been reported, necessitating this study. This research will be viewed through the Person, Environment, Occupation (PEO) Model, an occupational therapy theory that relates to occupations, including sleep.

Psychosocial factors also contribute significantly to sleep quality in the older adult population (McHugh et al., 2011). Depression appears to be strongly associated with sleep complaints among older adults (Bao et al., 2017). Bao et al. conducted a meta-analysis and systematic review of community-dwelling older adults who reported common sleep disturbances (24%); however, sleep issues were more than twice as prevalent in individuals with depressive symptoms (52%) or major depressive disorder (69%). Furthermore, there was a relationship between an increase in the prevalence of sleep problems and high levels of COVID-19 related loneliness among older adults (Grossman, 2021). One study with a focus on bereaved spouses and sleep patterns found that over 10% of all elderly individuals, regardless of bereavement status, had trouble sleeping and had a consultation with a physician (Richardson et al., 2003). An association was found between complicated grief, the presence of depressive symptoms, shorter sleep duration, and lower sleep quality (Milic, 2019).

Physical and mental conditions, including insomnia, obstructive sleep apnea, cardiovascular disease, type 2 diabetes, and cognitive impairment were also associated with poor sleep quality in older adults (Kim et al., 2021; Lee & Tetley, 2019; Mason et al., 2015). Night-time sleep disturbance is common in older individuals suffering from chronic pain and may be further exacerbated by medications for pain management (Curtis et al., 2018; Everitt et al., 2018; Mason et al., 2015; Milan, 2020).

The occupations of older adults are also affected due to sleep disturbances (Vincent et al., 2021). Studies have shown that older adults who do not meet normal sleep recommendations have more functional limitations, such as fall risks (Stone et al., 2014), and challenges in ADLs, IADLs, leisure and social activities, and physical activities (Vincent et al., 2021). Reduced

engagement in these activities can then lead to a decreased quality of life (Berkley, 2021). The purposes of this study was to identify the lived experiences and occupational performance of community-dwelling older adults with sleep issues. Nomura et al. (2010) defined self-reported sleep issues as experiencing at least one of the following: difficulty initiating sleep, difficulty maintaining sleep, and early morning wakening. This research hopes to provide insight into the lived experiences and occupational performance of older adults with self-reported sleep issues. Such findings may provide a useful framework for future research to expand this foundational knowledge about the lived experience of this population and empower occupational therapists and other health providers to include sleep as a primary area to screen and/or evaluate.

Literature Review

There is a growing body of research examining the association of older adults with sleep issues and how function is impacted, including the influence on activity engagement (Adjei & Brand, 2018; Chen et al., 2016; Endeshaw & Yoo, 2016; Kim et al., 2021), cognitive functioning (Li et al., 2022), functional impairment (Campanini et al., 2019; Ensrud et al., 2012; Goldman et al., 2008; Košćec Bjelajac et al., 2020; Malinowska et al., 2016), functional limitations (Chien & Chen, 2015; Friedman, 2016; Lorenz et al., 2014; Vincent et al., 2021), and emotional state (Anderson et al., 2014; Brandolim Becker et al., 2018; Napoleão et al., 2016). Cross-sectional studies by Kim et al. (2021) and Endeshaw & Yoo (2016) examined the relationship among different types of activity engagement and self-reported sleep issues among older adults. Activity engagement was measured using various activities, including social, cognitive, and physical. The results of these studies suggest that older adults reporting greater sleep issues experience lower social, cognitive, and physical activity engagements.

As discussed, there is existing research pertaining to older adults with sleep issues and how function is impacted; however, there is a gap in the research examining the perceived lived experiences of this population. Motivated by the lack of extant qualitative accounts of sleep and the older adult, this study seeks to provide foundational knowledge about the impact on the perceived lived experience as it relates to occupational performance of older adults with sleep issues.

Research Question

This study aims to answer the following research question: What are the perceived lived experiences of older adults with sleep issues as it relates to occupational performance?

Method

Research Design

This qualitative phenomenological study consisted of semi-structured interviews to explore the lived experiences of older adults with sleep issues. A phenomenological perspective focuses on understanding how individuals interpret their experiences and the meaning attributed to those experiences by the individual (Williams, 2021). This approach was applied to the research population based on a previous study by Carabajal, et. al (2018), who used a similar design to better understand participants' experiences as they ascended into leadership positions in rural communities. The present study was submitted to the Institutional Review Board at Grand Valley State University prior to initiating the study and commencing recruitment (IRB #: 22-283-H). Consent was obtained from participants before interviews were conducted. Incentives were not provided for participants to participate, but each participant was provided with a sleep hygiene information sheet (National Institute on Aging, n.d.).

Participants

The recruitment process included posting flyers (see Appendix A) in public locations that granted permission including Leslie Congregation United Church of Christ, Big Rapids United Methodist Church, Mecosta County Commission on Aging, Lansing Peak Performance Physical Therapy, and Bath Charter Township Senior Center. The inclusion criteria of the study sample were as follows: (a) aged 65 years or older; (b) have sleep issues or self-perceived sleep issues; (c) community-dwelling; (d) English is primary language; (e) live in West and Central Michigan. The sample size for this study was based on the research by Guest and colleagues (2006) who reported that twelve interviews were appropriate for their thematic analysis of a relatively homogenous population or until data saturation occurred in analysis. Exclusion criteria included those who have cognitive impairments as demonstrated by a score less than 24 on the Mini Mental State Exam (Pangman et al., 2000), under the age of 65, those without sleep issues, or those who reside in long term care facilities.

Instruments

No interview or survey questions regarding the current research question were found in the literature; therefore, the researchers adapted questions from Gotts and colleagues (2016) work on chronic fatigue syndrome. The questions were modified based the research question to reflect sleep issues and the lived experience. Additional standard demographic questions were asked to obtain a comprehensive and accurate description of the research sample (i.e. age, gender identity, marital status, ethnicity). The questions can be found in Appendix B. All interviews followed the same open-ended interview format; however, participants' responses to scheduled questions were followed up by clarifying questions as necessary. The questions supported the

purpose of this study by remaining occupation based. In addition, the interview questions were piloted on non-participants before the study to see how they were received or if any clarifications needed to be made prior. No changes were made as the questions were adequate in providing the desired information connected to the research question.

Data Collection

In preparation for the interviews, role-play, reflective and empathetic listening skills, and open and reflective body postures were practiced by the researchers as outlined by Carbajal et al. (2018) and Roberts (2020). The in-person administration of each interview was expected to last about an hour. The interviews were recorded to allow the examiners to review and transcribe the responses and accurately group common themes from each participant. No identifiable information was released with the recordings.

In response to the flyer, participants contacted the study researchers using the information provided on the flyer to schedule a time and date to complete the interview. When a time was agreed upon, two study researchers or a researcher with another individual from the site were present during the meeting for protection of the researchers and participants. The other individual included a therapist, pastor, manager, etc. depending on the site. At the start of the interview, each participant read the informed consent information sheet and gave verbal consent. The information sheet was not signed to avoid any identification of the participants during data collection per IRB-approved procedures. A copy of this information sheet was provided to participants upon request. Researchers answered any questions or concerns that participants had regarding the study.

The researchers also asked for verbal consent to record the interview. Participants were informed of the voluntary nature of participation in the study, and subjects were allowed to withdraw at any time without penalty. For the interviews, promptness and semi-professional attire were ensured. For example, official name tags were worn identifying the name and supporting institution of the researchers. At least two individuals were present for each interview conducted. Interviews were conducted and audio-recorded using a Sony Portable Voice Recorder with USB transfer (Model: ICD-PX370) by study authors and administered in a variety of quiet environments familiar to the participant. After gaining consent, the interviewer administered the MMSE and confirmed the participant's score was above 24. Then the interviewer turned on the recorder and began by asking the first question.

Covid precautions were followed per CDC guidelines. Through semi-structured interviews with twelve participants, the researchers were able to gather data to analyze for commonalities and themes. During the interviews, participants were encouraged to elaborate on their sleep issues and the reasoning behind them. The researchers documented their observations about the participants, their interactions with the participants, and the experience during the data collection process. At the end of the interview, the participants were thanked for their time, asked if they had any additional questions, and provided a sleep hygiene handout from the National Institute on Aging (n.d.) (See Appendix C). The researchers documented their observations about the participants, their interactions with the participants, and the experience during the data collection process.

Data Analysis

The interview recordings were uploaded as an audio file by the interviewer and transcribed using the transcription feature in Microsoft Word 365. Thematic analysis methods as outlined by Braun and Clarke (2006) was used as it is a practical data analysis approach to understand a set of experiences, thoughts, or behaviors (Braun et al., 2014; Kiger & Varpio, 2020). It has become the most widely adopted method of thematic analysis within the qualitative literature (Clarke & Braun, 2017). The method of analysis consisted of six steps, beginning with an overall understanding of the content (Roller & Lavrakas, 2015).

Step 1: Familiarization with Data

This was accomplished by dividing the interviews amongst the researchers and ensuring that at least two researchers listened to the interview recordings and reviewed each interview transcript for accuracy. Repeated and active reading of the raw transcripts provided an orientation to the data and a foundation for all subsequent steps (Braun & Clarke, 2006).

Step 2: Generating Initial Codes

The researchers then collaborated to identify sentences of relevant content to be used as units of analysis. The content was then systematically reviewed to manually develop an open coding scheme. Open coding reflects the meaning of the data as presented and does not use pre-assigned themes or categories (Cope, 2020). Codes were assigned words or phrases that illustrated meaningful data (Saldaña, 2011). These codes were used to condense the large amounts of textual material into a manageable format that could be analyzed. Each code was clearly defined and independent from the other codes to enable the researchers to later find meaning from the data. The coding scheme was recorded on an online platform, Google Sheets, to allow all researchers equal access, and included the name of the code, its definition, and a

verbatim example from the data. Once the coding structure was established, the researchers then applied the same codes to the entire data set by labeling data extracts with relevant codes, noting any potential connections that developed successive themes (Braun & Clarke, 2006).

Step 3: Searching for Themes

The researchers then examined the coded data to ascertain potential themes on a more general scale of significance (Braun & Clarke, 2006). This was accomplished by analyzing the codes and considering how the codes related to one another to form overall themes. A color or numerical scheme was utilized to identify the potential themes, then a thematic map or ‘mindmap’ was constructed as described by Boisen and colleagues (2021) and Kiger and Varpio (2020) to further visualize the themes and sub-themes and their relationship to one another.

Step 4: Reviewing Themes

This step involved reviewing and refining themes. The coded data extracts for each theme were reviewed and the researchers considered whether the themes formed a logical pattern. If the data extracts or themes did not appear to fit into a pattern, the themes were reworked with other coded data extracts or new themes were created or old themes were discarded (Braun & Clarke, 2006). At the completion of this step, there was a clear understanding of the different themes and how they related.

Step 5: Defining and Naming Themes

In this step, the main themes were defined, finalized and many required renaming to capture the essence of each theme. For each individual theme, a detailed analysis was conducted to tell the story of each theme and how it fit in relation to the research question (Braun & Clarke,

2006). It was also determined that the themes and sub-themes were distinct and did not overlap with the other themes.

Step 6: Producing the Report

During the final step of the thematic analysis, the researchers reflected on the importance of each theme. Executive summary statements were used as the foundation for the presentation of the results. Both narrative descriptions and direct quotations were applied to provide relevance of the themes in relation to the research question (Braun & Clarke, 2006). After compiling the themes, the data was member checked for trustworthiness; results were returned to the participants for validation of accuracy by verbal confirmation of themes (Birt et al., 2016). Member checking was completed with more than half of participants; the main themes and subthemes were reviewed with the participants and each agreed with the findings. Triangulation is viewing the data through two or more rigorous approaches or methods (Heale & Forbes, 2013). The purpose of triangulation is to decrease or counterbalance the deficiency of a single strategy, which increases the ability to interpret the results (Thurmond, 2004). The researchers applied this concept by having more than one researcher examine the data while coding and through member checking the results. Triangulation assists the researchers with interpreting the data and solidifying findings.

This study found that there are five main themes that influence and are influenced by sleep in older adults. These themes are health, routine, sleep experience, environment, and relationships.

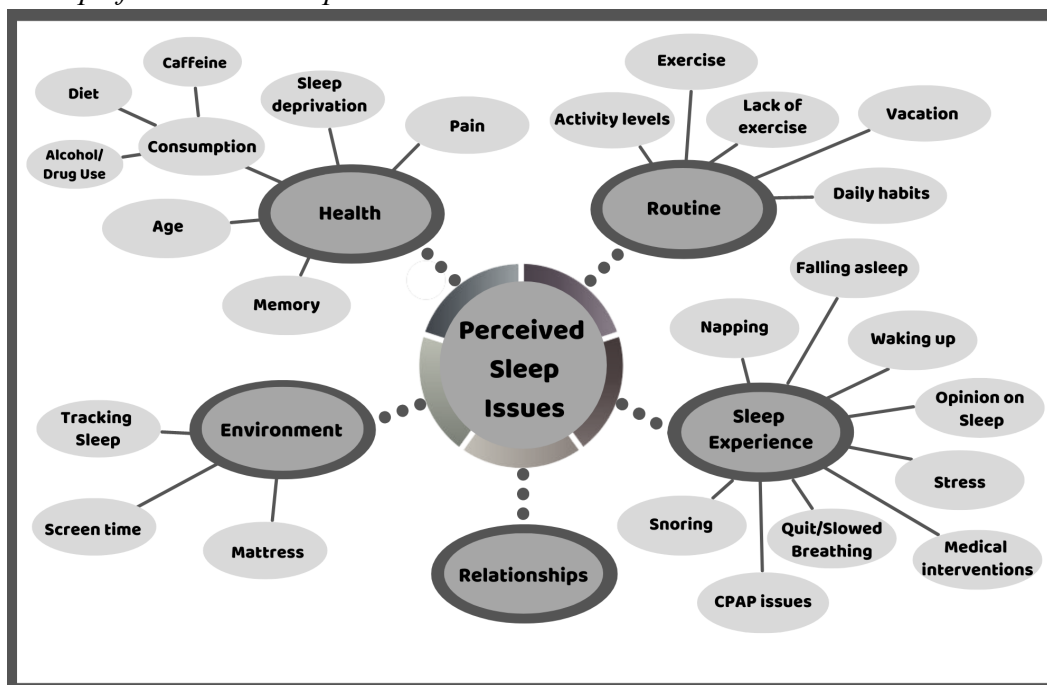
Results

Participants of this study (N= 12; 4 male, 8 female) were older adults, ages 67 to 88 (M= 74), located in West and Central Michigan. Five participants were married, five were widowed,

and two were divorced. Eleven of the participants were Caucasian and one participant was Black Indian. MMSE scores of participants ranged from 25 to 30 ($M=27.83$).

The thematic analysis resulted in five major themes including health, routine, sleep experience, environment, and relationships which are depicted in Figure 1. The qualitative data includes descriptions of the themes accompanied by direct quotes from participant interviews.

Figure 1
Thematic Map of Perceived Sleep Issues



Theme 1: Health

Health aspects such as sleep deprivation, pain, comorbidities, memory, and age as a factor were listed by participants as themes that have an impact on their sleep. Some participants spoke about the sleep deprivation being consistent over the years.

“I’d like to get a lot more sleep than I’m getting because I don’t think that’s healthy.

Cause right now, I am getting maybe five hours of sleep at night and I’ve been doing that for years and I know I need at least seven hours of sleep. I just can’t get it.”

“I’ve never slept longer than four or five.”

Other participants talked about pain causing issues with their sleep. Some struggled to fall asleep because of the pain while others were woken up from the pain.

“Frustrated with the ongoing aching and pain that comes with it.”

“I was having pain and I knew that I was going to have issues at bedtime, which I did.”

“If I get busy doing things and I forget to take my medicine, I’ll pay the price with pain that keeps me awake longer than I really want.”

Comorbidities can also play a role in sleep problems for older adults. Some cause issues in falling asleep, while others cause issues in staying asleep.

“I get up in the middle of the night ‘cause I have an enlarged prostate so and from that for whatever reason last night I probably went to the bathroom about nine or ten times.”

“I have restless leg syndrome too and I’ll have to get up and walk, walk, walk.”

“I only have one lung, I have a limited amount of oxygen.”

Participants shared information about what they assume is a relationship between their memory and sleep issues.

“I do feel that for me it’s adversely affected when I don’t have a good night’s sleep, my ability to process, to remember,”

“I feel like my brain gets foggy if I don’t have enough sleep.”

For many participants, age seemed to be a factor in issues with sleep.

“The only thing that’s affected my activity is my age and my health.”

“Age - everybody I know my age has to get up during the night to go to the bathroom.”

“Older and so that’s a factor.”

“I’m at that age.”

A subcategory of health is consumption, which includes themes like caffeine, diet, and alcohol or drug use. Caffeine is a common theme for having an influence on sleep for the participants.

Specifically, the time of day that caffeine is consumed.

“I have coffee switched to decaf coffee because that tends to affect me a little bit more.”

“Tea or coffee definitely would have an effect.”

“Drinking too much coffee then to try to stay awake and try to accomplish something, even though I’m in a bad mood.”

Another theme in the consumption subcategory was the participant’s diet.

“I do skip meals sometimes.”

“I’ve lost my appetite, I don’t eat like I should.”

“I don’t drink enough water.”

Finally, alcohol consumption and drug use was found to be a theme in participants. Some claimed it caused issues with sleep, while others claimed it helped them sleep.

“It’s been going on ever since I was about 16/17 years old and back in the day when I got old enough I used alcohol to go to sleep.”

“I’ve also tried CBD gummies. And if that doesn’t help by 12, 12:30, I’ll try a gummy and sometimes nothing helps.”

Theme 2: Routine

Routines such as activity levels, vacations, exercise, or lack of exercise, were indicated by participants to have an impact on their sleep. Some participants reported that staying on their routines and being active during the day provided them with better sleep outcomes.

“Getting up and staying active during the day helps me to sleep better at night.”

Furthermore, exercise specifically was a factor that positively affected participants’ sleep experience.

“I find that the more exercise I get, the better I sleep and the less I tire.”

“I think [exercise] helps me sleep, and I think it's good for me.”

Others reported that although they would exercise, they are not physically capable anymore as they once were.

“I have lost basically the capability to like even go for a walk with the dog because this is too much up and down.”

In addition, participants reported that a bad night of sleep can drastically affect their routines. It was indicated by participants that completing everyday activities is much more difficult without quality sleep.

“It definitely has takes a toll on you when you're trying to work or read or do anything like that you get really tired.”

“I don't enjoy things like I used to and I certainly when I'm tired I wanna sleep and so it affects me being able to do things that I enjoy.”

Others commented that vacations also impact their daily routines and sleep schedule.

“It might be a little bit difficult sleeping in other, new places.”

“You don't sleep well at all because you're afraid of not getting up on time, missing your flight.”

Theme 3: Sleep Experience

The experience of sleep was described by the participants as having several components including waking up, napping, falling asleep; being influenced by medical interventions, stress, snoring and other breathing issues, such as CPAP challenges; and having general opinions about the importance of sleep.

The most frequently reported factor perceived to affect the sleep experience was waking up multiple times throughout the night and waking up very early in the morning.

"I wake up two, three times a night."

“I usually wake up about two or three times a night, usually at 12:30. So I've only been sleeping an hour. Then around 2:30, and maybe 5:30.”

“Probably about 90% of the time I'm up by 5:00 and even before that.”

“I get up very early and usually and so I'm tired by early afternoon.”

Waking up throughout the night to use the restroom was the most common reason stated for waking.

“I get woken up by having to use the restroom and then when I can't go back to sleep.”

“Oh yeah, that affects my sleep 'cause now I gotta break my sleep and get up and go to bathroom.”

“Well, about the longest I can go without running to the bathroom is 5 hours - so if I go to sleep at 9:00 o'clock at night, I am up at 2 - and then I'm wide awake. And about the time that I should be waking up and getting up, I'm ready to go back to bed.”

Napping during the day appeared to provide enough energy to get through the day.

“I could lay down and go to sleep and take a nap and wake up half an hour later and it would be really refreshed and so I had the capability to nap and get some compensation for not sleeping as many hours as I should at night.”

“I can sit down and take a 30-minute light nap, so I try to use it sort of as a tool.”

“If I can take a little nap in the afternoon, I feel so much better.”

However, the act of falling asleep was an issue for several participants.

“I will go to sleep at 11:00 o'clock. I mean, I'll go to bed I don't fall asleep sometimes till 2, 3, or 4 in the morning or not at all.”

“I can feel tired but my mind won't shut off.”

For others, breathing challenges and CPAP issues can affect the experience of sleep.

“My wife said I snored.”

“Quit breathing.”

“From my wife...she said that, you know, I have periods of apnea.”

“Air is escaping,” “the hose might bump your head,” “mask is too tight,” and “I get sore...”

Stress was also identified as a factor affecting sleep.

“I have a lot of stress issues in my life that I think probably keep me awake.”

“Um, so I think also mentally, if I'm feeling agitated or I am, um, anxious about something or excited about something, it's hard for my mind to calm down and go into a restful state.”

Overall, the participants believed that sleep was a key component to their health and well-being and that the quality of sleep was more important than quantity.

“Sleeping is the greatest thing that it makes you - it gives you that rejuvenation that you need.”

“I think the quality is every bit as important, maybe even more so than the length of time.”

Theme 4: Environment

Mattress comfort, screen time, and tracking sleep were identified by participants as environmental factors that affected their sleep quality or ability to fall asleep. Many participants reported regularly watching television or using their cell phone prior to bedtime, and many reported dozing off to electronic use.

“I play solitaire [on cell phone] right up until bedtime, I'm also listening to a book at the same time, and I usually have the television on looking for news.”

“There's times I can't go to sleep, so I go and turn the TV on and I start watching programs and I might doze off.”

Others reported using electronics as a method of staying awake to prevent sleepiness.

“I try to stay awake, um, engage myself in a show that's interesting because as I said, if it's... if it's something that engages my mind, I don't get sleepy.”

Participants also reported difficulty getting comfortable in bed due to their mattresses. Some reported wanting to purchase a new mattress or trying out different mattresses in other bedrooms of their homes.

“The mattress because I do not like a real firm mattress, that was bothering my back, and my husband does. So now I have a different room with a different bed in it that one seems to help a lot.”

“We're talking about getting a new mattress just because I think the mattress we have, I think just needs– we just need an upgrade you know what I'm saying?”

Interestingly, some participants reported that they had attempted to track their sleep to better understand their sleep issues.

“And for a long time I had a watch. It was yeah, it was that. And then I would look at it and I would say, oh, I was really restless here or I didn't sleep well here or there or a couple of minutes there where your heart rate and everything goes up and I'm like, oh, I must have gone to the bathroom twice during the night. I don't remember that.”

“I got this Garmin watch, and I tracked, and I found out that the problem is I'm not having uh, they've got certain categories of types of sleep, I am under on the REM sleep substantially.”

Theme 5: Relationships

During the interviews, many participants mentioned how their relationships with others were affected by their sleep issues. Many individuals mentioned that it made them not want to talk or see other people for the fear of being grouchy or impatient.

“I find myself not wanting, not engaging with people, for fear I don't have the energy or the patience. And so on those days, I just stick to myself in my house”

“Yeah, sometimes I'm just tired and I don't wanna go, I don't wanna do anything, just, you know for a while. I thought oh, you know are you becoming a recluse”

Some participants also mentioned how it impacted the people around them, either a spouse or other family members.

“I believe it probably does have an effect on the grouchiness level in the household”

As demonstrated in this study, the five main themes including: health, routine, sleep experience, environment, and relationships, are the subjects perceived to have an affect on sleep experiences of older adults. Additionally, the themes reflected that there were many areas that were affected by the sleep experience, relating to the person and the environment, which ultimately influenced occupational performance.

Discussion

Sleep is an important factor of functioning in the older adult population. It is an occupation that can impact other occupations and functioning. As mentioned above, sleep issues are more common in the older adult than the rest of the population. The results of this study suggest that perceived sleep issues impacts and is impacted by many other areas of occupation and daily functioning of the older adult.

Past research suggests that sleep issues influence occupations (Vincent et al., 2021) and the results of this study align with this idea. Activities of daily living, social participation, and daily habits and routines, were identified as occupations negatively impacted by poor sleep hygiene. The findings in the present study are also in agreement with previous research examining the positive effects of physical activity on perceived sleep quality among older adults (Endeshaw & Yoo, 2016; Seol et al., 2022; Sonnega et al., 2020).

Midday napping was identified in this research as an energizing and helpful tool to facilitate activity. However, previous research proposes that performance is not enhanced by

daytime naps in older adults (Backhaus et al., 2016). This study disagrees with the study by Backhaus in that daytime napping did not appear to adversely affect nighttime sleep which is consistent with previous research (Dautovich et al., 2008).

Snoring and other breathing disturbances were identified by study participants as having a negative effect on their sleep. This finding is in accordance with a populational analysis of sleep and snoring that associated snoring with decreased sleep time and increased days with insufficient sleep (Bhattacharyya, 2015). This data suggests that self-reported snoring is associated with poorer quality and lesser quantity of sleep.

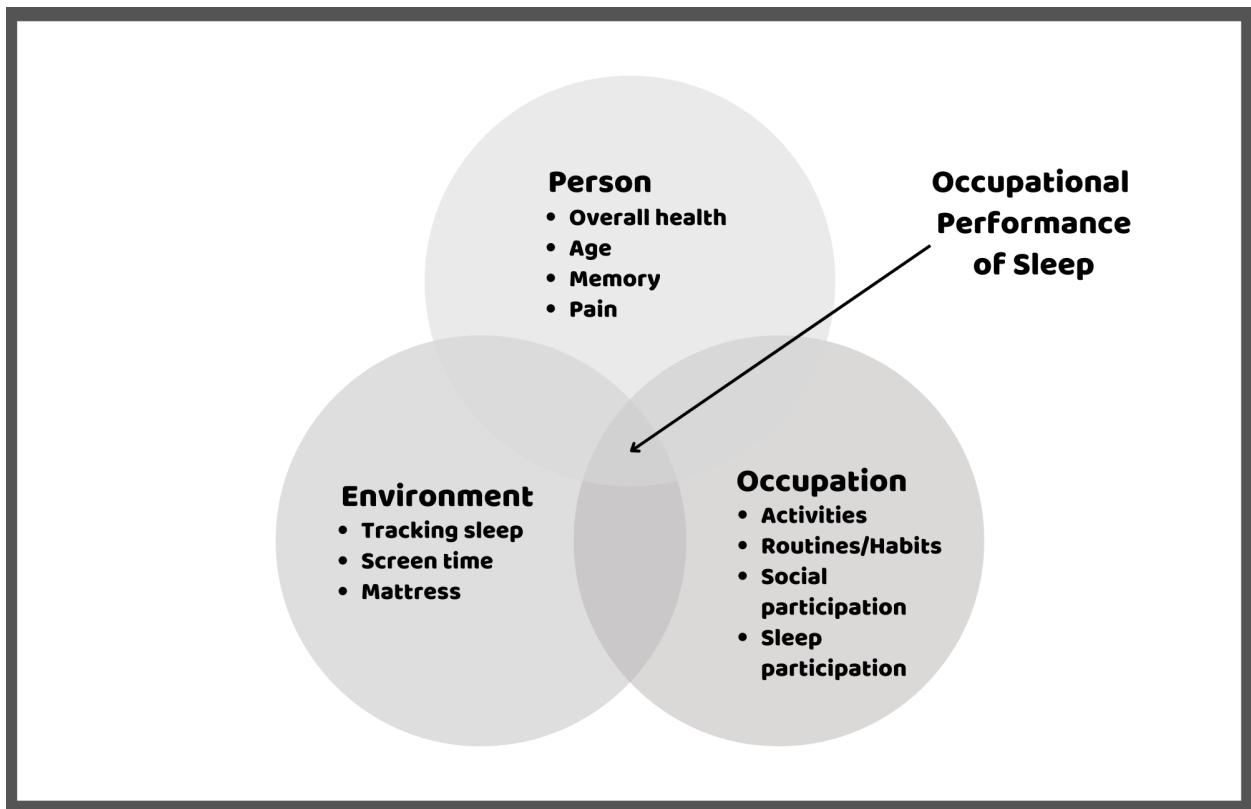
Relationships were recognized by study participants as being negatively impacted by sleep challenges, as being overly tired made them irritable and impatient. They opted to not participate in social activities or visiting friends and family because of their tiredness and undesirable behavior. However, other studies yield a different association between relationships, specifically isolation, and sleep. Research suggests that social isolation may have more of a distinct role in contributing to sleep problems, not that sleep problems affect relationships as the present study suggests. Evidence from a longitudinal analysis indicates that sleep quality was inversely associated with social isolation in older people (Yu et al., 2018) and a community-based cross-sectional study suggested that older adults with social isolation may experience sleep disturbances because they feel socially isolated (Cho et al., 2019).

A key finding of the thematic analysis was that multiple factors, including personal (Person) and environmental factors (Environment), were affected by the sleep experience and thus influenced occupational performance (Occupation). This is in line with the Person-Environment-Occupation Model and Figure 2 shows how the themes and subthemes of

this research relate to the theories framework. The first domain of the theory involves the ‘person’ which relates to intrinsic psychological, physiological, cognitive, and spiritual factors. The second domain of the theory is the ‘environment’ which includes cultural, social, or physical extrinsic factors. The third domain involves ‘occupation’ which refers to the everyday tasks that a person engages in to promote well-being, expression, and fulfillment. We included our research themes and sub-themes into the PEO model.

Figure 2

PEO Model as Related to the Themes and Sub-themes



Limitations and Future Directions

Several limitations should be considered in this study. First, the sample was only from Michigan, specifically west and central Michigan. Future research should examine if similar themes are present with participants in other regions. Another limitation is that some of the participants knew the researchers who interviewed them which could cause implicit bias within the study. Finally, the participants included in the sample were not a diverse population. Future studies should explore this topic with a more diverse group to better understand if the results translate to other demographics.

With this information, older adults and their health care professionals may be able to investigate the five themes in their daily lives and look for things that may be contributing to their sleep issues. This information can also be used to create treatment plans for older adults seeking skilled therapy services for their sleep issues. For issues pertaining to the environment theme, clinicians could address sleep hygiene in the client's home. For issues pertaining to routine, clinicians can help the client create a visual schedule to help keep their sleep/wake schedule consistent and help improve sleep.

There needs to be more research done on this topic in the future to provide diverse and accurate data as evidence-based support for interventions in practice that are focusing on sleep issues. Future research should include a more diverse, broader sample. This could include measuring sleep and sleep quality with objective measures relating to the themes of our study. Furthermore, additional research in this area is needed to build a better understanding of how to address the occupational performance of sleep with this population.

Conclusion

According to previous studies (Burgess & Swanson, 2020; Dzierzewski, 2021; Garbarino, 2020; Logan & McClung, 2019), older adults report experiencing more sleep issues than any other age group. This study aimed to fill a gap in the literature investigating the lived experience of sleep issues in the older adult population. Older adults in this study perceived that sleep issues affected their occupational performance in areas related to health, routine, sleep experience, environment, and relationships. Additional research in this area is recommended.

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Appendix A

Flyer for Sleep Participants

SLEEP STUDY RESEARCH

- Are you 65 or older?
- Do you have sleep issues?

We want to interview you! The interview will last only an hour!



Please contact us to set up a time at:

 phone number
sleepresearchgvsu@gmail.com
Grand Valley State University



Occupational Science & Therapy

This research protocol has been approved by the Institutional Review Board at Grand Valley State University. File no. ____ Office of Research Compliance & Integrity, 049 James H. Zumberge Hall, 1 Campus Drive, Allendale, Michigan 49401-9403, (616) 331-3197

Appendix B
Interview Questions

1. What is your age? Gender? Ethnicity? Marital status?
2. Please tell me about your home environment? Who lives with you in your home?
3. What types of work or volunteering activities are you involved in?
4. Can you please tell me a bit about your experience of having sleep issues?
 - a. How does it make you feel?
5. What do you think contributes to your sleep issues?
 - a. Think about your daily routine. What about your routine (helps and hinders) your ability to get a good night sleep?
6. How do your sleep issues affect your lifestyle/ behavior/ activities?
7. How does it affect your relationship with others?
8. Can you describe a typical (good and bad) 24 hr day?
9. Is there anything else you would like to tell me?

Questions adapted from Gotts and colleagues (2016) work on chronic fatigue syndrome.

Appendix C

Sleep Hygiene Handout

The graphic is a vertical poster with a dark blue background. At the top, the title 'GETTING A GOOD NIGHT'S SLEEP' is written in large, white, bold, sans-serif capital letters. Below the title, a paragraph of text explains that a lack of sleep or poor-quality sleep increases the risk of health problems like cardiovascular disease, high blood pressure, diabetes, depression, and obesity. This text is connected to four circular icons by a white line: a heart with a pulse line, a brain, a person with a hand on their forehead, and a bed. Below this, another paragraph states that these issues are also linked to memory problems, forgetfulness, and more falls or accidents. The bottom section features a large white circle containing the text 'Aim for 7-9 hours of sleep each night.' Below this circle, the text 'HERE ARE SOME TIPS TO HELP:' is written in white, bold, sans-serif capital letters. The background is decorated with small white stars and a white cloud-like border at the bottom.

GETTING A GOOD NIGHT'S SLEEP

An ongoing **lack of sleep** or **poor-quality sleep** increases your risk of **health problems** such as cardiovascular disease, high blood pressure, diabetes, depression, and obesity.

They are also linked to **memory problems, forgetfulness, and more falls or accidents.**

Aim for **7-9 hours** of sleep each night.

HERE ARE SOME TIPS TO HELP:



The infographic features a dark blue background with white clouds and stars. At the bottom, a person is shown sleeping in a bed with a teal headboard and footboard, covered with an orange blanket. Two white bunny ears are visible at the bottom of the bed. The tips are arranged in a grid-like fashion around the bed.

Go to bed and wake up at the same time every day, even on weekends. 

Find ways to relax before bedtime each night. 

Avoid distractions such as cell phones, computers, and televisions in your bedroom. 

Don't eat large meals, or drink caffeine or alcohol late in the day. 

Exercise at regular times each day, but not within 3 hours of your bedtime. 

Avoid long naps (over 30 minutes) in the late afternoon or evening.  Z-Z-Z

Visit <https://www.nia.nih.gov/health/good-nights-sleep> for more information about getting a good night's sleep.

 National Institute on Aging