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Occupational Therapy’s Role in Addressing the Intersectionality of Veterans Who Are Chronically Homeless, Mental Health, and Sleep Deprivation

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Focused Question

What is the role of occupational therapy in addressing sleep deprivation in veterans with mental health disorders who are also experiencing chronic homelessness?

Case Scenario

This critically appraised topic paper focuses on the role of occupational therapy improving the mental health and sleep deprivation of veterans who are homeless. When considering the components of this topic, the theoretical framework was described, then mental health and veterans who are homeless, then the impact of mental health on sleep, followed by the role of occupational therapy and sleep interventions.

Theoretical Framework

We used the lens of the Person-Environment-Occupation (PEO) Model to analyze this topic. In a seminal article, Law et al. (1996) described that this model is used to find the best fit between aspects of the *person*, the *environment* around them, and their meaningful *occupations*. The person includes *physical, affective, cognitive, sensory, and spiritual* aspects (Law et al., 1996). Environment includes *physical, social, institutional, and cultural* aspects (Law et al., 1996). Occupations are activities or tasks that are purposeful and meaningful to the person (Law et al., 1996). According to Law et al. (1996), the “best fit” is an interaction of these 3 parts and found using transactions between these factors, helping to identify occupational performance strengths and weaknesses. The PEO model was chosen for this topic based on the influence that the environment of being homeless has on a person and their sleep. The person factors of being a veteran with a mental health disorder also impact the occupation of sleep.

Mental Health and Veterans Who Are Homeless

Defining “mental health” has been controversial with a lack of consensus across multiple professional disciplines (Manwell et al., 2015). For this critically appraised topic paper, mental health will be defined as “a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with people, and the ability to adapt to change and cope with adversity” (U.S. Department of Health and Human Services, 1999, p. 4). Focus on mental health in the veteran population who are homeless will consider veterans who are unsheltered or living in supported housing. In the United States, veterans make up 9.7% of the total population (Morin, 2020). However, veterans make up a disproportionate 12.3% of the homeless population (Morin, 2020). Veterans often become homeless due to unstable work, experience of mental health disorders, housing instability, or substance abuse behavior (U.S. Department of Veteran Affairs, 2021).

Veterans who are homeless are at an increased risk of developing and/or having mental health disorders such as alcohol or drug abuse/addiction, depression, anxiety, and Post Traumatic Stress Disorder (PTSD) (Ding et al., 2018). Engagement in programs to target alcohol or drug abuse/addiction have been found to be successful for veterans who are homeless living in supportive housing (Ding et al., 2018). Anxiety and depressive disorders may affect individuals’ occupational performance and their perception of satisfaction with performance (Gunnarsson et al., 2023). Veterans are also more likely to have health conditions related to their environment, which may result in lasting stress (Crone, 2022). Chronic stress is a condition caused by the inability to reduce stressors and feelings of helplessness and directly correlated to decreased health and quality of life in veterans who are homeless (Crielaard et al., 2021; Crone, 2022).

Mental Health and Impact on Sleep Deprivation in Homeless Populations

Sleep deprivation is an issue that affects people who are homeless in many ways. The Centers for Disease Control and Prevention (CDC) (2022) stated that chronic sleep deprivation is



a public health epidemic on a national level. According to Abrams (2015), “[s]leep deprivation occurs when inadequate sleep leads to decreased performance, inadequate alertness, and deterioration in health” (p. 493). Person factors may also influence sleep deprivation such as affective components relating to attitudes, as well as physical environment factors such as being homeless (Law et al., 1996). This results in a poor “fit,” which can impact occupational performance (Law et al., 1996).

Sleep deprivation has also been associated with a decrease in productivity, consciousness, memory, high utilization of health care services, and comorbidities such as heart disease, obesity, mild or major depression, and Type 2 diabetes (CDC, 2018). Losing 1-2 hours of sleep over several nights affects individuals’ ability to perform similarly to those who do not sleep consecutively for a day or two (National Heart, Lung, and Blood Institute, 2022). According to Anderson et. al. (2021), “[c]ompared with the general population, people experiencing homelessness (PEH) display disproportionately negative health outcomes, including higher rates of addiction” (p. 1).

Sleep deprivation may impact many different areas of occupational performance within the occupational therapy scope of practice. The American Occupational Therapy Association (AOTA) (2020) defined the occupation of rest and sleep as “[a]ctivities related to obtaining restorative rest and sleep to support healthy, active engagement in other occupations (p. 32). Sleep can affect areas of occupation such as activities of daily living (ADL), which include activities such as bathing, toileting, dressing, and eating; instrumental activities of daily living (IADL), such as driving, grocery shopping, and caring of others; and social participation, which includes community, family, and friend participation (AOTA, 2020). Similarly, attention, decision-making, and reaction time, which lay the foundation for occupational performance, are impaired (Smith et al., 2023).

Occupational Therapy and Sleep Interventions

Sleep and rest are one of the eight occupations that are addressed by occupational therapy professionals (AOTA, 2020). Sleep and rest include activities to prepare such as getting the environment ready or the act of sleeping itself (AOTA, 2020). There are several interventions occupational therapists can implement to support sleep in homeless veterans with mental health concerns (Gutman et al., 2017; Leland et al., 2014; Smallfield et al., 2021; Swarbrick & Noyes, 2018).

According to Gutman et al. (2017), up to 70 million Americans experience sleep related issues. This can lead to decreased daytime productivity and physical or mental health issues (Gutman et al., 2017). Additionally, the goal of engagement in sleep is “[m]aintaining or improving performance of work, leisure, social participation, and other occupations” (AOTA, 2020, p. 9). This means that people having difficulty with their occupation of sleep may experience issues in other areas of occupation.

Occupational therapists may have an important role in supporting a person who seeks to improve their sleep quality. They can assist in making environmental modifications relating to sleep supplies, lighting, and sound (Gutman et al., 2017). The modification of performance patterns, such as adding self-soothing exercises and pre-sleep routines or mind-body/self-care interventions to support sleep can also be addressed by occupational therapists (Leland et al., 2014; Smallfield et al., 2021). Mental health, a person factor affected by sleep, may be addressed by occupational therapists (Ding et al., 2018; Gunnarsson et al., 2023; Law et al., 1996; Swarbrick & Noyes, 2018). While these interventions are moderately to highly effective in their respective studies, it is important to note that the homeless population may not have access to



what is needed for some of the listed interventions. Based on the review of literature, environmental adaptations may be difficult for the homeless population to use consistently due to housing insecurity and financial limitations (Crone et al., 2022; Kushel, 2018). Additionally, noise and light level may be out of the control of an individual experiencing homelessness. These environmental factors have the potential to limit time sleeping or quality of sleep (Law et al., 1996).

Purpose Statement

Currently, there are interventions available for rest and sleep for the general population. However, those interventions do not usually address the unique needs of the population of veterans who are homeless with mental health disorders. While there is information on the person, environmental, and occupational factors surrounding this topic separately, there is limited literature regarding how to address all of these factors when they transact with each other. The purpose of this critically appraised topic paper is to examine the impacts that being a veteran, having a mental health disorder, and being homeless have on sleep deprivation as well as barriers to resources and occupational therapy interventions to support this population.

Methodology

The literature search for this critically appraised topic paper occurred from February 24th through March 3rd, 2023. Allied health, occupational therapy, psychology, and multidisciplinary databases were used during the literature search. These databases included Public/Publisher MEDLINE (PubMed), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Clinical Key, and OT Search. The following search phrases were used to guide the search of the databases: “(homeless OR unhoused) AND (veterans OR military OR soldiers OR servicemen) AND (“mental health” OR “mental illness” OR “psychiatric illness” OR stress)”, “occupational therapy AND (“sleep interventions” OR “sleep treatment” OR “rest interventions” OR “sleep hygiene”)”, (“homeless veterans” OR “unhoused veterans” OR “unsheltered veterans”) AND “occupational therapy” AND “sleep deprivation,” and (veterans OR soldiers) AND “homeless” AND “sleep deprivation.” There were no exclusion criterion used due to limited literature available on this topic. The inclusion criteria consisted of all articles that addressed at least one of the following: mental health, homelessness, veterans, or occupational therapy’s role in sleep deprivation management.

Types of Articles Reviewed

There were a total of 47 articles initially reviewed and 27 were analyzed further. The 27 articles were selected based on rigor and relevance to the topic. Articles not selected were determined to be biased or had many limitations. Of the 27 articles, 5 studies were Level I studies (Crone et al., 2022; Gutman et al., 2017; Leland et al., 2014; Smallfield et al., 2021; Smith et al., 2023), 4 represented Level III studies (Alotaibi et al., 2019; Ding et al., 2018; Gunnarsson, 2023; Leveille et al., 2020), 3 represented Level IV studies (Anderson et al. 2021; Bolt et al., 2019; Manwell, 2015), and 4 represented Level NA sources (Abrams, 2015; Crielaard et al., 2021; Kushel, 2018; Swarbrick & Noyes, 2018). Other resources used were government documents, professional organization websites, and occupational therapy textbooks (American Occupational Therapy Association [AOTA], 2020; American Sociological Association as cited by the AOTA, n.d.; Center for Disease Control and Prevention [CDC], 2022; Hinojosa et al., 2017; Law et al., 1996; Morin, 2020, National Heart, Blood, and Lung Institute, 2022; Precin, 2023; Siegel, 2021; U.S. Department of Health and Human Services, 1999; U.S Department of Veteran Affairs, 2021).



Description of Evidence

Bias was noted in the evidence during the review. In much of the existing literature, homogenous groups with specific characteristics (Abrams, 2015; Bolt et al., 2019; Crielaard et al., 2021; Ding et al., 2018; Gutman et al., 2017; Leland, 2014; Siegel, 2021; Smallfield, 2021; Swarbrick & Noyes, 2018) were analyzed rather than the transactions between the person, environmental, and occupational factors relevant to our topic (Law et al., 1996). There was limited literature about the impact of sleep deprivation on veterans who are homeless. As we reviewed the literature, we determined a need to establish these transactions ourselves. Limitations also include the difficulty of sampling the population of people experiencing homelessness who may be difficult to contact consistently due to a lack of a permanent address. There is also a lack of rigorous research. Much of the existing literature is made up of editorials, level III/IV/NA, or government resources. More rigorous research that examines the person and environmental factors has the potential to increase positive occupational performance outcomes for this population.

Synthesis

Theoretical Framework

The PEO model (Law et al., 1996) was chosen to examine this population and the role of occupation therapy. This model is used to analyze aspects of the person, the environment, their meaningful occupations, and the “best fit” among these three parts (Law et al., 1996).

Person

The AOTA (2020) described many person factors including age, race and ethnicity, socioeconomic status, life experiences, psychological assets, and other health conditions. Aspects of the person relevant to the topic include being a veteran, experiencing homelessness, having a mental health disorder, and experiencing sleep deprivation. There are specific factors impacting veterans. All veterans are over the age of 18 years. There is a disproportionately high amount of African American veterans who become homeless when compared to veterans belonging to other racial or ethnic groups (Crone et al., 2022). The socioeconomic status of veterans experiencing homelessness and sleep deprivation negatively affects access to resources including housing and healthcare (Crone et al., 2022). The life experiences of being homeless and serving in the military are shared among this population. According to Crone et al. (2022), veterans are more likely to experience chronic mental or physical health conditions that can decrease quality of life.

Environment

Environmental factors related to occupational performance include *natural versus contrived environment, products and technology, support and relationships, attitudes, and services, systems, and policies* (AOTA, 2020). In an exploratory static group comparison, Anderson et al. (2021) explored the relationship of environmental factors on people experiencing homelessness. A connection was found between the general health of people experiencing homelessness and the total number of nights they spent outdoors (Anderson et al. 2021). According to Anderson et al. (2021), people experiencing homelessness who had a social conflict, a lack of social support, had decreased well-being compared to those who did not experience social conflict while being homeless.

For veterans who are homeless, accessing and maintaining needed resources may be challenging. Through analysis of multiple studies, Kushel (2018) summarized that individuals who are homeless were at an increased risk of having their medications or medical equipment stolen. This loss of medical resources created risk for health decline, relapse, and medical



admission/readmission (Kushel, 2018). According to Kushel (2018), homelessness was also associated with increased food insecurity and the inability to access self-care facilities. People experiencing homelessness often face issues with overcrowding of homeless shelters, insufficient bedding, and improper lighting leading to exposure to negative environments, decreased health, and insufficient sleep participation (Kushel, 2018). All factors of the environment play a role in the everyday life and occupational performance of individuals experiencing homelessness.

Occupation

For veterans who are chronically homeless, the occupation of sleep and rest may be impacted, which may lead to sleep deprivation (Law et al., 1996). Sleep deprivation leads to poor occupational performance in other areas of occupation such as ADLs, IADLs, health management, education, work, leisure, and social participation may all be affected (AOTA, 2020). Sleep deprivation may also cause a lack of productivity, attention, physical, and difficulties with mental health (Gutman et al., 2017; Smith et al., 2023). Without adequate rest and sleep, energy cannot be fully restored in order to engage in other daily occupations (AOTA, 2020). A lack of consciousness, attention, decision-making, or reaction time can also be extremely dangerous when participating in other occupations, such as health management (CDC, 2022; Smith et al., 2023). It is important to not only consider the influence of homelessness on the occupation of rest and sleep, but also the impact of rest and sleep on every other area of occupation as well.

Cultural Considerations

The American Sociological Association (as cited by the AOTA, n.d.) defined culture as “a set of shared languages, ideas, customs, traditions, beliefs, and practices shared by a group of people” (para. 7). Culture is part of one’s identity and can be shaped by the shared experiences of a population (AOTA, n.d.). A person can be part of multiple cultures at once (AOTA, n.d.).

Due to the many factors that contribute to the identity of members of this population as well as the shared experiences of veterans who are homeless experiencing sleep deprivation and mental health disorders, this population requires cultural consideration when providing services. Many people experiencing homelessness lack the transportation or the time to go to occupational therapy (Crone et al., 2022). In these instances, it may be useful for occupational therapists to provide services in the community or in homeless shelters. According to Crone et al. (2022), another issue is accessing services. Veterans experience several barriers to receiving healthcare including being unaware of services for which they are eligible, difficulty attending follow up appointments, and a general distrust in the healthcare system (Crone et al., 2022). Additionally, veterans are more likely to reach a crisis point requiring emergency care than to see primary or preventative care (Crone et al., 2022). Finally, many veterans who served for a short period of time or who were not honorably discharged may not be eligible for services through the Veterans Health Administration (VHA) (Crone et al., 2022). If a veteran is ineligible for VHA services and is also experiencing homelessness, it is unlikely they have the disposable income to pay for services out-of-pocket (Crone et al., 2022).

It is also important to consider physical resources available to the population of individuals who are experiencing homelessness. Some interventions, such as the use of a specific kind of pillow or consistent visits to different kinds of therapy, would be impractical for this population as individuals who are homeless may have inconsistent living environments, making it difficult to take special equipment with them or to visit the same therapy location consistently (Crone et al., 2022; Gutman et al., 2017; Leland et al., 2014). The teaching of self-management strategies for sleep may be the most practical for this population (Smallfield et al., 2021).



Finally, the culture surrounding mental health should also be considered when looking at occupational therapy services. People experiencing chronic mental health disorders are at an increased risk for suicide (Precin, 2023). Poor access to healthcare, poor sleep quality, and an uncomfortable environment may compound this risk (Anderson et al., 2021; Crone et al., 2022; CDC, 2022). Occupational therapy practitioners should know the signs of someone experiencing a mental health crisis so they can help the person access proper help (Precin, 2023).

Occupational Therapy Services

Benefits

According to AOTA (2020), occupational therapy practitioners are professionals concerned with increasing occupational performance, health, and well-being of clients. Occupational therapists' use of client-centered and occupation-based care matches the needs of individuals with mental health conditions in community settings (Swarbrick & Noyes, 2018). According to Swarbrick and Noyes (2018), occupational therapy services successfully increased individuals' independence and health management skills to promote wellbeing. However, few occupational therapy interventions exist that target sleep deprivation for specific populations. Interventions for veterans who are homeless with mental health disorders may include education and implementation of sleep or sleep preparation routines, added use of adaptive equipment, and education of self-management skills related to sleep (AOTA, 2020; Gutman et al., 2017; Smallfield et al., 2021).

Occupational therapists often work interprofessionally with other healthcare professions (Bolt et al., 2019). When addressing sleep deprivation and mental health, the interprofessional team may consist of occupational therapists, primary care physicians, psychologists, and nurses (Siegel, 2021). Interprofessional collaboration has shown to increase patient levels of satisfaction, reduce price of healthcare services, and increase morale of healthcare professionals (Alotaibia et al., 2018). According to Alotaibia et al. (2018), occupational therapists are important team members who implement distinctive perspectives of client care. Through implementation of the occupational therapy domain, practitioners have been successful in treating clients and increasing interprofessional understanding of occupational therapy (Alotaibia et al., 2018). Therefore, increased use of occupational therapy in interprofessional teams may generate greater success rates for the homeless veteran population.

Limitations

The goal of occupational therapy is to increase engagement in daily activities through the use of one's occupations (AOTA, 2020). However, the general understanding of the occupational therapy field and occupations is widely misunderstood (Hinojosa et al., 2017; Leveille et al., 2020). In a pre-test post-test study, Leveille et al. (2020) determined that professional understanding of occupational therapy was minimal; however, developing interprofessional teams increased the knowledge of the occupational therapy profession. Interventions that are used for sleep deprivation, may not be applicable to the homeless veteran population; further, these interventions call for specific resources that are often not available to homeless individuals (Crone et al., 2022; Kushel, 2018). When considering the homeless veteran population and mental health, there is a lack of research considering the topic of occupational therapy sleep deprivation intervention. Interventions that are used to treat sleep deprivation consider the whole population and typically do not take into account the environmental and personal factors of homelessness and mental health.



Summary

A total of 27 articles were comprehensively reviewed in this critically appraised topic paper. The articles included information on veterans who are homeless (Abrams, 2015; Anderson et al., 2021; U. S. Department of Veteran Affairs), sleep deprivation (CDC, 2022; Gutman et al., 2017; National Heart, Blood, and Lung Institute, 2020), mental health (Manwell et al., 2015; Precin, 2023; U.S. Department of Health and Human Services, 1999), sleep interventions (Smallfield et al., 2021), interprofessional care (Alotaibia et al., 2018; Bolt et al., 2019; Siegel, 2021), cultural considerations (American Sociological Association as cited by the AOTA, n.d.; Crone et al., 2022; Crielaard et al., 2021), the PEO model (Law et al., 1996), occupational therapy (AOTA, 2020; Hinojosa et al., 2017; Leveille et al., 2020; Swarbrick & Noyes, 2018), comorbidities (Ding et al., 2018; Morin, 2020), population needs (Kushel, 2018; Leland et al., 2014), and the impact of sleep on occupational performance (Gunnarsson et al., 2023; Smith et al., 2023). The following main points were found:

- Individuals who experience homelessness are at an increased risk of experiencing mental health disorders (Ding et al., 2018). The experience of mental health disorders is associated with decreased occupational performance including rest and sleep, decreased life satisfaction, and diminished wellbeing (Gunnarsson et al., 2023).
- Rest and sleep can impact all other areas of occupation such as ADLs, IADLs, education, work, leisure, and social participation due to factors of sleep deprivation resulting in a lack of restored energy, attention, productivity, or consciousness (AOTA, 2020; CDC, 2018; Smith et al., 2023). This is a foundational reason to include occupational therapy practitioners for their expertise in interventions such as modification to sleep environments or self management strategies to promote health and well-being through participation in all areas of occupation (AOTA, 2020; Gutman et al., 2017; Leland et al., 2014; Smallfield et al., 2021).
- Individuals experiencing homelessness are greatly affected by their environmental surroundings (Anderson et al., 2021). Many times individuals who are homeless experience support insecurity or conflict, harsh weather conditions, and a lack of resources (Kushel, 2018). These factors contribute to decreased health and wellbeing of individuals experiencing homelessness (Kushel, 2018). Rest and sleep performance is also affected by these factors.
- It is important to identify and manage cultural barriers that veterans who are homeless may experience. These include difficulty accessing healthcare due to financial or transportation limitations, difficulty receiving support from resources such as the VHA, and a lack of education surrounding services for which the veterans are eligible (Crone et al., 2022). Another barrier veterans who are homeless experiencing sleep deprivation and mental health disorders face is the ability to maintain and transport medical devices that are used in occupational therapy sleep interventions, such as specific pillows that may be large or difficult to carry from place to place (Gutman et al., 2017; Leland et al., 2014). These obstacles may make it difficult to incorporate many of the intervention strategies that occupational therapists recommend for clients to use in their daily life.

Clinical Bottom Line

What is the role of occupational therapy in addressing sleep deprivation in veterans with mental health challenges who are also experiencing chronic homelessness?

There is literature to support the role of occupational therapy in promoting rest and sleep in the population of veterans who are homeless experiencing sleep deprivation and mental health



disorders using interventions such as environmental adaptations or self-management strategies as well as the role of occupational therapy in mental health (AOTA, 2020; Gutman et al., 2017; Leland et al., 2014; Smallfield et al., 2021; Swarbrick & Noyes, 2021). Self-management strategies that were found to be successful include relaxation techniques, sleep hygiene routines, and proper physical activity throughout the day (Smallfield et al., 2021). However, there is not enough information about the barriers that veterans who are homeless with sleep deprivation and mental health disorders face in receiving proper healthcare and how to address this issue. The PEO model was used to analyze the many person factors of this population, the uncontrollable environmental factors, and the occupation of rest and sleep as well as the best fit among these factors (Law et al., 1996).

Occupational therapy was found to have a role in the treatment of sleep deprivation (AOTA, 2020; Gutman et al., 2017; Leland et al., 2014; Smallfield et al., 2021). The population of veterans who experience homelessness were found to have a higher incidence rate of sleep disorders as well as mental health disorders (Crone et al., 2022). However, veterans often have difficulty accessing preventative healthcare care and therapy services (Crone et al., 2022). The practicality of many interventions is also questionable as veterans who experience homelessness may also experience socioeconomic hardship, environmental disturbances, and mental health disorders, which may alter the effectiveness of interventions (Anderson et al., 2021; Crone et al., 2022; Ding et al., 2018; Morin, 2020). Occupational therapists may also play an important role in making referrals within an interprofessional team to better treat clients belonging to this population (Alotaibia et al., 2018; Bolt et al., 2019). Other professionals involved in the treatment of sleep deprivation include psychologists, physicians, and nurses (Siegel, 2021). Incorporation of interprofessional teams into the treatment of clients can lead to greater occupational performance and perceived success (Alotaibia et al., 2018).

Overall, there is literature about homelessness, veterans, mental health disorders, and occupational therapy interventions for sleep deprivation separately. However, literature tying these factors together is limited. More research needs to be done on the intersections of these factors to better support this population in achieving their “best fit” for successful occupational performance (Law et al., 1996). Occupational therapists have the responsibility to advocate for veterans who are homeless to be more able to access resources. Occupational therapists should use the interventions already available such as special equipment, environmental adaptations, and self management strategies to treat sleep deprivation in veterans who are homeless (Gutman et al., 2017; Leland et al., 2014; Smallfield et al., 2021). However, they need to be diligent to determine which interventions are most practical for the individual they are serving based on person and environmental factors (Law et al., 1996). For example, if a homeless veteran has access to live in a shelter and their housing is relatively stable, environmental adaptations and equipment may be useful (Gutman et al., 2017; Leland et al., 2014; Smallfield et al., 2021). On the other hand, if the person is routinely sleeping in a different place every night and cannot control their environment, the occupational therapist should consider self management strategies. Self management strategies include self-soothing exercises, deep breathing, developing a pre-sleep routine, or practicing mindfulness and self care (Gutman et al., 2017; Leland et al., 2014; Smallfield et al., 2021). These self management strategies are more accessible to veterans who are homeless who have financial or environmental limitations than those interventions that are costly. Overall, occupational therapy may play a major role in promoting rest and sleep in the population of veterans who are chronically homeless with mental health disorders and sleep deprivation.



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