ORIGINAL RESEARCH

Sleep inequities in nursing: A descriptive qualitative study on causes of poor sleep among black nurses in the United States

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ABSTRACT

Background: Sleep is critical to general health and occupational safety of workers. Black nurses in the United States report sleeping less than their White counterparts, indicating sleep inequity exists. Understanding what workplace factors contributing to this inequity and suggestions for improvement are vital to protecting nurses.

Methods: A descriptive qualitative research design with content analysis was used to examine focus group data from Black nurses working in the United States. Participants were invited to virtual focus groups or interviews to answer questions about their sleep. Questions were guided by the Social Ecological Model for Sleep.

Results: Fifteen nurses participated. Four themes emerged: Societal Impact, Workplace, Interpersonal-Cultural Context, and Individual. Twelve sub-themes were identified that described factors that affect all nurses (i.e., night shift, long work hours) versus societal and interpersonal events tied to racism that are most impactful for Black nurses' sleep. Participants offered six suggestions for changing the healthcare setting to increase a sense of belonging.

Conclusions: To improve sleep equity among Black nurses working in healthcare settings, a holistic approach towards worker health and safety may help attenuate individual risks from poor sleep. Systemic organizational efforts to increase belonging among staff could benefit from fostering trusting relationships with Black nurses, as well as increasing the diversity of healthcare leaders and managers.

Key Words: Health disparity, Healthcare workers, Insufficient sleep, Occupational fatigue, Workforce diversity, Black nurse

1. BACKGROUND

Poor sleep (i.e., low-quality and/or quantity of sleep, defined as less than 7-hours/day) is an ongoing occupational health concern for nurses, linked to fatigue, safety hazards[1,2] and adverse health conditions.[3] Workplace causes of poor sleep for nurses are well documented, including night shift work, long shifts, and excessive workloads.[4,5] Additionally, stress, often high when caring for patients and families navigating serious health crises, can spillover into time at home, resulting in difficulty falling and staying asleep.[6]

In the United States, significant disparities in sleep quality and quantity exist across racial lines. Workers who identify as Black or African American report sleeping less than their White counterparts, indicating there are sleep inequities in the workforce.[7] This trend has been noted among nurses in the acute healthcare setting, with Black nurses reporting sleeping on average 45 minutes less than their White nurses.[8] As a result, sleep inequity may place Black nurses

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at higher risk for experiencing the negative implications of poor sleep. Evidence suggests some of this inequity may be due to the added stress Black nurses experience from discrimination and racism at work.[9] Other research suggests Black nurses may also suffer from sleep deficits when they perceive a lack of managerial support.[8] Unfortunately, little evidence exists on what type of workplace support may buffer these effects.

To ensure occupational health equity in nursing, further examination is needed as to why sleep disparities exist among racial lines and how occupational health professionals and healthcare leaders can bridge these gaps. Non-White nurses in the U.S. have reported lower job satisfaction with a greater intent to leave, in comparison to White nurses.[10] With poor sleep linked to both job satisfaction and intent to leave,[11,12] improving Black nurses' sleep may not only advance health equity but also strengthen the nursing workforce through greater retention. As a result, this study aimed to (1) gain a deeper understanding of how the work environment contributes to poor sleep among Black nurses and (2) provide recommendations from participants on organizational changes that can better support their sleep.

Theoretical framework

The Social Ecological Model (SEM) for Sleep[13] derives from other public health models depicting systematic forces affecting health.[14] SEM for Sleep is represented through three nested circles. The outer circle signifies societal level factors, such as globalization and policy. The middle circle indicates social level factors, including family, work, school, and social networks. The inner circle symbolizes the individual-level factors, including beliefs, behaviors, and genetics. Since sleep generally occurs outside the workplace, using this framework allowed researchers to ask questions that differentiated between the multiple sleep disruptors nurses experience, personally and professionally.

2. METHODS

2.1 Design

We used a descriptive qualitative research design with content analysis of data. SEM for Sleep was used to develop a semi-structured question guide. The research team is versed in qualitative data collection and analysis, having practiced a variety of qualitative methodologies. Our expertise included healthcare leadership, nursing workforce equity and inclusion, occupational health and safety (emphasis on sleep and shift work), and mental health. The University of Cincinnati Institutional Review Board approved the study. The findings are reported using the Standards for Reporting Qualitative Research.[15]

2.2 Study population and recruitment

National recruitment efforts included email blasts through professional nursing organizations, such as the National Black Nurses Association, and researcher's participant repository, recruitment posts among research team networks (i.e., graduate student groups, nurse unions, nursing sororities), and snowball recruitment. Inclusion criteria were: (a) registered nurses identifying as Black or African American; (b) U.S. born; (c) working in acute care; (d) minimum of one-year of nursing experience; and (e) access to online videoconferencing platform. Our recruitment goal was 18-24 nurses, grouping six to eight participants per focus group, as recommended for collecting quality focus group data and reaching data saturation.[16] Individuals interested in participating contacted the PI, who screened and consented those meeting criteria. Participants were given a $50 e-card as a token of appreciation.

2.3 Data collection

Data were collected April through October 2022. Consenting participants were sent an online survey via REDCap, a web-based software platform hosted by Cincinnati Children's Hospital Medical Center and University of Cincinnati and designed for secure data capture.[17] We derived questions from national surveys, such as the Behavioral Risk Factor Surveillance[18] to ask about socio-demographics (i.e., age, gender, marital status, unpaid child and elder caretaking), sleep duration (i.e., working and off-days), and professional characteristics (i.e., nurse tenure, current job tenure, shift timing). We scheduled participants for a 90-minute virtual focus group via Zoom, offering interviews to those not available on dates provided. Two to three study team members attended to assist with potential technology issues and to take field notes. Focus groups and interviews were audio and video recorded. Participants were reminded that strict confidentiality was not possible, due to multiple participants included in a focus group. To enhance privacy, meeting entry was password protected, participants were asked to be in a private location, use headphones, and not share information heard during the session. Cameras were not required to be on. Zoom transcripts were verified and anonymized using ID numbers. Videos were deleted after transcripts were verified. Data were stored on the university's secure cloud system and accessed by password protected laptop.

2.4 Data analysis

Survey data were analyzed for means and frequencies using SPSS (IBM Corp., 2022). Due to concerns about participants being identified and the discrimination Black nurses experience, cell sizes less than 10 were not reported. Focus group and interview data were analyzed using inductive content

analysis, an iterative, open coding process.[19,20] We read transcripts several times before meaning units were identified, contextualized, and grouped into categories and themes. Two researchers independently coded each transcript and discussed until consensus was reached. A third researcher was available to address unresolved discrepancies but was not needed. NVivo (QSR International Pty Ltd.), Microsoft Office Word, and Excel were used to organize data and document analysis decisions.

We used multiple approaches to establish trustworthiness: credibility, dependability, confirmability, and transferability.[20] Credibility was established through two researchers independently coding data, sharing themes with participants for confirmation, and triangulating results with notes taken during data collection. Dependability was met through triangulation and maintaining an audit trail of analytic decisions. Confirmability was established through an audit trail and participants' confirmation of thematic findings. Transferability was established through recruiting nurses from across the United States, by presenting data for each theme, and discussing the findings in the context of other research.

3. RESULTS

Data saturation was reached with fifteen participants completing a focus group or interview. Fourteen completed the optional socio-demographic survey. Participants reported being on average 38 years old (n = 12, SD 10.4). Average sleep duration was calculated at 5.5 hours (0.8 SD) when working, and 7.2 hours (1.8 SD) when not working. Average tenure as a nurse was 9.3 years (8.4 SD) and average current job tenure was 3.4 years (1.8 SD). Due to small response numbers and concerns about participants being identified, exact frequency values are not being reported on gender, marital status, child and elder caretaking, and shift timing. (Where necessary, we will use "they/them" pronouns in the results when referencing participants). However, most participants identified as female, have never been married, provided unpaid childcare in the last 30 days, and worked dayshift hours.

Four themes and twelve sub-themes emerged from the data (see Figure 1), describing work and other factors impacting sleep (Aim 1). The four themes include Societal Impact, Workplace, Interpersonal-Cultural Context, and Individual. Data revealed a more complex framework than the SEM of Sleep,[13] aligning with a framework antecedent by McLeroy, Bibeau[14] where an interpersonal level exists. Participants also described Suggestions for Change on how to improve the acute healthcare setting (Aim 2).

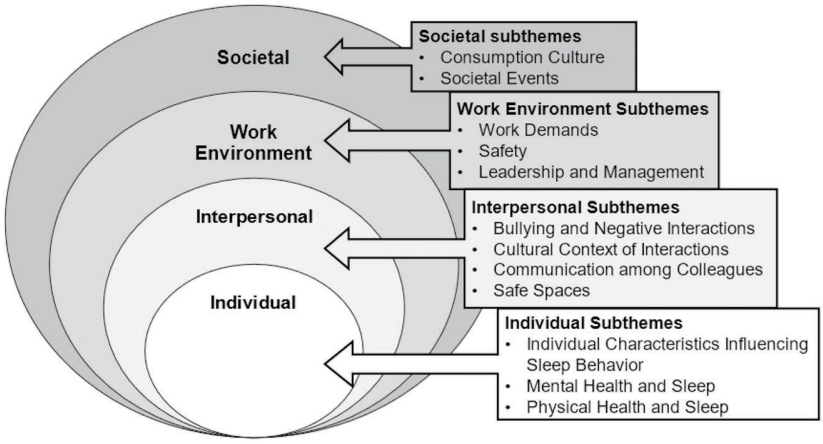

Figure 1. Themes and Sub-Themes

3.1 Societal impact on sleep theme

This theme describes Black nurses' perceptions of how society influences their sleep. The two subthemes are Consumption Culture and Societal Events.

3.1.1 *Consumption culture*

Participants described how technological advances have resulted in consumption culture contributing to poor sleeping habits. For example, entertainment via phones is always available. "A huge issue with sleeping in our community and ourselves is the electronics... I think it impacts all of us, not just the nurses" [Participant 8, 16-year tenure as a nurse]. Individuals who work irregular work hours believe society's poor sleep habits are reflected in a lack of understanding why night shift nurses' need to sleep during the day. Participant 8 continues, "You're always expected to answer [your cell phone]."

3.1.2 *Societal events*

Participants reported concern over local, national, and global events disrupting their sleep. The racial social justice movement in 2020 following the deaths of Ahmaud Arbery, Breonna Taylor and George Floyd left Black nurses concerned for their family members.

> "It made me very uneasy, just for the safety of everyone, myself, and my family... I was working downtown at the time in [large midwestern city], and they wouldn't let anybody downtown... We had to show nursing badges and show [police] which hospital we were going to... that was like a shock to me because I'm like, are we really in these types of times?" [Participant 15, 3.5-year tenure as a nurse]

Participant 14 (tenure as a nurse unknown) continues, "I do realize when social situations are going on like that, especially living in the downtown area, and seeing injustice and everything firsthand, that does affect my sleep."

Other participants reported thinking about the climate crisis (".... global warming, food, shortages, it's a variety of things"). They talked about the COVID-19 pandemic and whether another pandemic or health crisis could occur. They also commented on how the "Hero" label, used by the public to describe the healthcare workforce during the pandemic, is exploited by the healthcare system, excusing continued insufficient staffing and longer work hours. "That "Heroes on the Home front" acronym has made nurses seem a little larger than life. But in all actuality, you know we're just being burned out" [Participant 1, tenure as nurse unknown].

3.2 Work environment theme

This theme describes how leadership and management can create a workplace that feels supportive (or not) for nurse sleep. Specific work demands can contribute to sleep disruption. Participants described the impact of their sleep status on patients and their own safety. Subthemes include Work Demands, Safety, and Leadership and Management.

3.2.1 *Work demands*

Participants described how the heavy emotional and cognitive workload of caring for acutely ill patients disrupted their sleep. Participant 14 recounted a particularly difficult experience, when a pregnant patient died from a gunshot wound. "I feel like when I see situations like that it kind of runs heavy on my mind, and that might prevent me from sleeping." Participants described shift timing (e.g., night shift, early morning shifts), on-call shifts, and physically demanding long work hours impacting sleep. Participant 15 illustrated how it feels to work night shift, "I just feel woozy and disoriented, feeling like you had a drink before going to sleep, that's just how I feel when I wake up from working nights." Participant 3 (5-year tenure as a nurse) explained when on-call, "I don't really sleep just because one, I don't want to miss the phone ring... it's just hard for me to sleep knowing they can call you anytime."

Some participants talked about how working conditions have changed over time. Participants who were experienced nurses described shifts in expectations and insufficient staffing as being "not conducive", "not healthy", and "toxic". Additionally, they describe increased mandated documentation policies and procedures. "The amount of documentation that's required for different processes and different things at work, in the nursing field, I think that they've made it a lot harder for you to kind of go in, do your job and go home" [Participant 1].

3.2.2 *Safety*

Participants described how patient safety is at risk when they have not slept enough. They discussed how their emotional state is altered on too little sleep, which can potentially impact patient interactions. "My full personality isn't able to be on display to where I may not be able to comfort patients" [Participant 11, tenure as nurse unknown]. Others explained how lack of sleep may make them "not be as on point", "feel like I don't want to be [at work] or I'm too tired to function", "not as patient with my patients" or "irritable" and "off your game".

Drowsy driving was the only personal safety concern identified by participants. These reports included anecdotes of falling asleep while behind the wheel. "I kind of felt like I was being confused. You know, especially getting off at 5am in the morning and most of the time when I would get home, I would actually get as far as my driveway and fall asleep" [Participant 1]. They also described being woken by car horns, with Participant 5 (4-year tenure as a nurse) continuing, "I'm just not even aware of what my sleep deprivation is causing... I'm definitely falling asleep." Several participants talked about long commutes and fears about driving home safely after long shifts. Participant 8 remembers "falling asleep at the red light, you know that's scary. You know it's a blessing to still be here." Participants indicated they sometimes used caffeine to mitigate these risks.

3.2.3 *Leadership and management*

Participants perceived hospital leadership as not promoting healthy sleep, but instead only wanting to fill a staffing need. "They want a body. So as long as they have a body, they're okay" [Participant 1]. Leadership was described as running a business, with no care about employees. Participant 5

depicted leadership as distant, "... they're not on the floor, seeing that you know you have all these patients to take care of... it's a corporation, a business. I'm not sure if they even understand what's really going on. So, I for sure think that they don't care." Other participants echoed this sentiment using phrases such as, "it's about making that money."

Unit management played a larger role than leadership in whether participants felt healthy sleep was promoted. Managers were viewed as supporting sleep when they help their staff on busy days or show what feels like genuine care for their staff ("she doesn't expect you to be superhuman"). Conversely, managers who request schedule changes do not promote sleep. Participant 16 (5-year tenure as a nurse), who works dayshift, described a manager asking them to work a night shift. After agreeing, they described how it "would throw off my sleep schedule." Participant 10 (4-year tenure as a nurse) explained they would "block my manager's number [at] my old job on days I wasn't working." If not, they would feel "the guilt of reading it and feeling like, well, if I don't come in, I'm not a team player."

Participants described stressful working conditions caused mental distress that disrupted their sleep. They identified stress management programs offered through Employee Assistance Programs (EAP) as an example of organizational support for their sleep. But how organizations promoted EAPs varied. Some participants did not know if their hospital had EAPs. Participant 3: "I don't want to say there aren't any. I'm just going to say I'm not aware of any." Even if nurses recognized an organization's efforts to support a healthy worker through EAP programs or sleep promoting policies, how this was enacted came down to communication from unit managers. "A lot of it goes back to... the management there, and their support for the nurses" [Participant 1].

3.3 Interpersonal-cultural context theme

The Interpersonal-Cultural Context theme illustrates the interactions and communication among colleagues, managers, and physicians. Negative interactions involving racism were stressful, causing thoughts that disrupt sleep. Participants talked about creating a safe space as a way of releasing the stress and pain experienced at work. Some described positive work settings where they did not experience sleep disruptive thoughts. Subthemes included Bullying and Negative Interactions, Cultural Context of Workplace Interactions, and Safe Spaces and Communication Among Work Colleagues.

3.3.1 *Bullying and negative interactions*

Participants talked about interactions with co-workers, managers, and physicians that left them feeling demeaned, anxious, and/or at fault for negative outcomes, despite the high-quality care they provided. Participant 13 (2-year tenure as a nurse) depicted an encounter with a physician, when trying to report a patient's deterioration:

> It was around 7:30 am and the doctor didn't sign on till 8:00am... I know my patient is struggling to breathe, trying to catch her breath, and is in fluid overload. The doctor called me right away, and kind of belittled me, and talked to me like a child, like I made the worst mistake you can make in the world paging a doctor three minutes early... I wouldn't want somebody to give me a task to do before I start my shift, so I totally understand, but it was an honest mistake. Just the way she talked down to me I will never forget.

3.3.2 *Cultural context of workplace interactions*

Nurses described racism at work, as Participant 4 (27-year tenure as a nurse) stated, "... you still experience some of the racism, the microaggression from coworkers, even sometimes, unfortunately, patients." Two participants described not being hired for dayshift positions because they were not White.

> I've done travel nursing as well in the ER and it's a common thing to see that all the nurses on the undesirable shifts look a certain way, um being that they are minorities, and I don't think that's a coincidence. I don't think that it's that we prefer to work those shifts, yet those are what we are being hired into [Participant 9, 4-year tenure as a nurse].

Some participants illustrated how they respond and/or manage the effect of these experiences on their sleep and well-being. Participant 1, an experienced nurse, mentioned "My skin is pretty tough. You know because I've had to endure a lot in my career as a nurse." Participants' perception of these racialized interactions is that the offending colleague believes the nurse is incompetent at their job. Participant 1 continued to state "even as a seasoned nurse, even as a young nurse, those different things have an effect on your mental and you just kind of think, 'Maybe I could've done more than what I did do'." This domino effect, where nurses internalized the experience, caused them to question themselves and have lingering thoughts that delayed sleep. Participant 2 (5-year tenure as a nurse) communicated this, after standing up to a physician who was disrespectful towards them:

> I really had a hard time going to sleep that night, I was thinking about all the possibilities, like am

> I going to get fired or I'm going to see him and he's going to be really rude, or he's going to try to mess with me or something like that. And a lot of it is probably just my own mind circulating, but it did affect me because I didn't want to be looked at as that snappy nurse, and me being a Black nurse anyway, it's already painted that I'm going to be angry and be over the top, and I wasn't. I'm just letting you [the physician] know don't talk to me like that...

3.3.3 *Safe spaces*

Participants discussed the importance of creating a private space to release stress and difficult emotions in response to negative work experiences. A professional "face" must be maintained at the bedside, so they find a private location at work to process their emotions. Participant 2 explained how they seek that "space to cry and to feel what I'm feeling... we have those locker rooms, or sometimes I'll go to the bathroom so I don't make a big scene." Sometimes they must wait until they are home to find a safe space.

3.3.4 *Communication among work colleagues*

Participants identified effective communication as an important team element to inclusive and supportive work environments. Participant 4: "In our department, right now we're down one nurse but we're all very experienced so we'll help each other, we'll buddy up, whatever needs to be done." Sometimes, lack of sleep may cause a communication breakdown. Participant 14 described being tired while working with students, "I might not be as patient with them [students], or it's a lot harder for me to answer their questions."

3.4 Individual theme

The Individual Theme describes personal habits and how some are informed by nurses' knowledge and self-efficacy. This theme also describes how health is impacted by sleep. The subthemes include Individual Characteristics Influencing Sleep Behavior, Mental Health and Sleep, and Physical Health and Sleep.

3.4.1 *Individual characteristics influencing sleep behavior*

Participants reported on their personal habits, knowledge and skills surrounding sleep health. They described how their bedtime routines are crafted to enhance sleep. These include decreasing caffeine intake, listening to music, using aromatherapy products, engaging in relaxation methods, creating ambient lighting or darkened conditions, and/or using melatonin or other sleep aids. For example, Participant 16 described using lighting products to create a relaxing environment. "I actually found this light. It's like different colors. It kind of looks like outer space, and I find it pretty calming." Participant 11 outlined their specific sleep practices and routines:

> I try to not drink caffeine after one o'clock in the afternoon. I try as best as I can at least an hour before bed to limit the blue light... I like lights to go down and try to have all the lights off. I do have a sleep playlist I put on that works pretty well. I will take occasionally three to five milligrams of melatonin thirty minutes before I anticipate I'll go to sleep. I also have some sleepy tea ... an herbal based chamomile tea... I try not to be social, you know, at nighttime. I try to keep things pretty mellow.

While participants had knowledge about sleep, some acknowledged this did not always equate to enacting good sleep behaviors. "I feel rested, but I know from a healthcare perspective I should have six to eight hours [of sleep]. If I get six, I'm really good but most of the time, I'm getting maybe five hours, and maybe a little nap" [Participant 4]. Participant 8 also described "I have to scroll [on electronic device] before bedtime, and then I'm like I tell patients to put down the electronics at night and I'm the one doing it."

Participants described the challenges of balancing their lives while working shift work and acquiring skills to support their sleep. "There's only so many hours in the day, twelve of those are at work, and then, a 45-minute commute and then trying to get eight hours [of sleep]... It's really hard to prioritize your whole health with doing long shifts. I try to make up for it on the days when I'm off, because I do sleep in or take a nap." [Participant 9]. For some, obtaining skills coincided with a change in life (i.e., child[ren] growth and independence) or progressing out of the novice nurse stage. "I'm in a totally new place in my life. Now that [my children are] semi adults, [I'm] pretty empty nester" [Participant 4]. Others described specific decisions they made to prioritize sleep. "On the days when I tried working 3 days in a row, I don't like it. I rarely do it" [Participant 9]. Other decisions included initiating a meditation practice and/or self-care techniques (i.e., healthy eating, exercise), scheduling strategies (i.e., moving to dayshift, limit number of shifts in a row), consciously disconnecting from work through travel and time off, and appreciating time with family. Participant 13 described how they improved their sleep: "When I first graduated, I got a job as an RN. Every day I was so anxious I didn't feel like I was good enough. I would cry almost every day and have a nervous breakdown, and with developing or adapting to mindfulness or kind of implementing that into my life, it helped me tremendously."

3.4.2 *Mental health and sleep*

Participants talked about how mentally processing their workday at bedtime made it difficult to sleep. Common thoughts that delayed sleep included whether they completed all their work tasks, such as Participant 5 described:

> Doing handoffs [of critical patients] is very stressful, because you're not sure, you did all you could at the time while you were there... Going home you're still thinking about what else you could have done or things you could have changed, or what's going to happen while you're gone, so I feel like that's definitely inhibited my sleep before.

Lingering thoughts about interpersonal exchanges and traumatic events witnessed as a part of caring for acutely ill patients also delays sleep onset. Participant 8 explained, "The biggest impact that I've had with my sleep is the trauma... it's hard to separate that you know, as a person, a human being. You can't just turn that off and come home." Participant 14 described how interpersonal exchanges perceived as having cultural context can compound the effect of work-related stress. After explaining how unit staff regularly confused them with another Black nurse, Participant 14 stated, "There are those days where everything is going wrong, and you just want to sit there and think about all the negativity... this bad thing happened at work... then this coworker called me the wrong name... it's just kind of like you're digging a hole with all the thoughts, and then it affects my ability to sleep."

Participants described relying on their sleep hygiene practices and routines to help them let go of their mental stress. They also found support by talking to a nurse friend or a mental health professional. Participant 16 stated, "I have my own therapist, so I'm able to get things out. But that's another thing - I can't really like go into detail cause it's like the people I'm closest ... they don't really have the medical background to understand how it affects me." While some participants talked about developing anxiety since starting their nursing career. Participant 2: "I developed like severe anxiety since I've been a nurse." Others with more experience described developing coping strategies, such as cultivating self-care or "toughening up." Participant 5: "I think my personality has probably changed a little bit... I feel like I'm far more stoic now."

3.4.3 *Physical health and sleep*

Participants described how too little sleep left them feeling physically ill and how irregular work hours affected specific health outcomes, such as blood sugar regulation. Participant 1: "Normally when people would be resting, I will be eating my lunch, because I would be at work... I just had a very difficult time [keeping] my A1C under control until I actually got off of the rotating shifts." Others talked about improving their sleep by treating sleep disorders, such as obstructive sleep apnea.

3.5 Suggestions for change theme

There are six actions participants suggested organizations could take to support nurses (see Figure 2). These changes include: (a) Increasing racial diversity in leadership and management; (b) Creating employee resource groups where colleagues of color can support each other; (c) Fostering a team environment; (d) Fostering open communication, coupled with evidence that staff are being heard; (e) Improving schedules and mandating rest breaks; (f) Supporting nurses through recognition, perks, and promoting self-care.

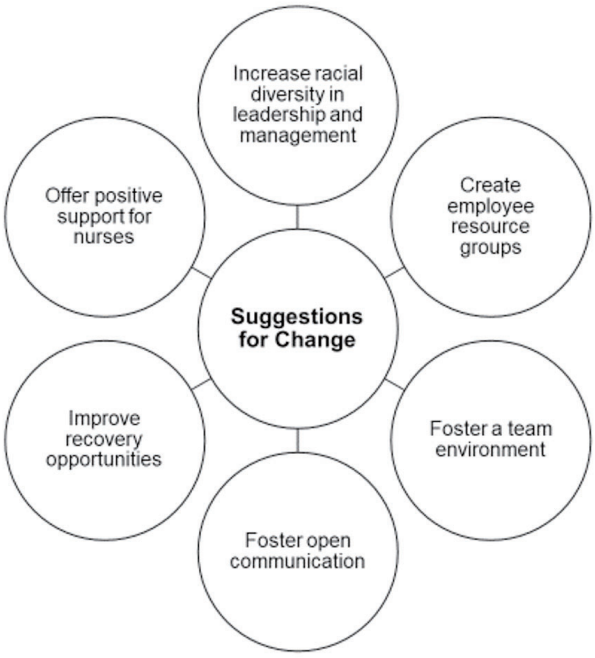

Figure 2. Participants' suggestions for changing the healthcare environment to promote sleep

Participants provided specific examples of change, such as "[In] staff meetings to have those conversations about different ways to get that needed self-care" [Participant 6, 8-year tenure as a nurse]. Also, to improve communication and encourage team environments, Participant 16 suggested "Let us have a say and just be able to voice our opinion and make suggestions". Participant 16 continued:

> "From the interview process, I could tell that my manager was caring, and she cared about how her employees felt, and it was about a teamwork environment. So, when I started working, I was

> able to see that. They can tell you anything, you know, just to make it sound good but I was able to see it in action."

Participants suggested an increase in racial diversity among hospital leadership and management:

> "... All of my managers have been non-Black nurses... I think it's good for people to see that the top level of the organization is diverse, because, you know, the people sitting at the meetings and making decisions about policies or new things that roll out, they have an idea how it affects everybody, because it's a diverse set of skills and backgrounds that are coming to meet and make decisions" [Participant 10]

They also suggested organization sponsored employee resource groups would be beneficial to their sleep. "Maybe debriefing at some point, like a monthly group of Black nurses that meet and discuss their experiences" [Participant 11].

4. DISCUSSION

This study was designed to investigate how working in the acute healthcare environment may affect the sleep of nurses who identify as Black. Epidemiological evidence supports Black Americans are at higher risk for poor sleep outcomes.[21] Yet little research exists with Black nurses who are already at high risk for poor sleep due to their work hours and demands. Participants reported aspects of their work known to disrupt sleep for all nurses and not exclusively across racial lines. For example, participants reinforced how work hours, work stress, and demands lead to poor sleep and fatigue, similar to findings from other nurses.[4,22] They also described the difficulties of balancing shift work and sleep and how they recognized that knowledge surrounding sleep health does not always equate to better sleep. Similarly, a study with medical residents found increasing sleep knowledge did not necessarily improve sleep outcomes.[23] Participants acknowledged how they are not as engaged or emotionally responsive to patients, families, and co-workers when they have little sleep. This phenomenon found across the nursing workforce known as presenteeism, has been previously associated with lower quality patient care and nurse burnout.[24] Consequently, supporting nurses' sleep may improve nurse health and wellbeing while also improving patient care.[25,26]

However, there are factors disrupting sleep that may be more unique to Black nurses. For example, similar to research findings with Black Americans,[27] they experienced stress as a result of violence against their community, resulting in insomnia-like symptoms. The effect of these societal issues on Black nurses' sleep reinforces the importance of viewing worker health and safety from a more holistic lens.[28] More explicitly, the restorative sleep workers need for workplace readiness occurs off the clock, yet poor sleep implications can cascade into the workplace. Acknowledging societal events affecting diverse worker groups, while offering and promoting programs to help them manage the associated stress may be beneficial. Additionally, sleep and fatigue training designed to control intrusive thoughts that can delay sleep may also be valuable.[29,30]

Evidence from this study supports that, despite awareness and efforts to reduce workplace violence and bullying in healthcare, the problem persists. For Black nurses, these interactions hold an additional cultural context of racism, with negative implications for their sleep quality. Participants described recurring thoughts about discrimination at work, fear of retribution, and/or questioning the quality of care they provided to patients, resulting in delayed or interrupted sleep. These thoughts are layered on top of lingering reflections from other workplace stressors that can produce insomnia symptoms, potentially increasing the magnitude of the risks to sleep and health among Black nurses. Findings from this study aligns with other research on workplace bullying, incivility, and discrimination, where encounters can lead to insomnia or insomnia symptoms.[31] Additionally, it provides evidence of how occupational health inequities can exist across racial lines in the healthcare system.

Finally, participants shared how healthcare organizations can better support Black nurses, with suggestions for building a more inclusive workplace. Managers can start by offering back-up support when workload is high to foster a team environment, check in with staff individually to nurture open communication, assign break buddies and other plans for recovery breaks, and regularly acknowledge nurses for their hard work. These actions are improvements all nurses can benefit from, regardless of race. However, employing these strategies may have the added benefit of reducing the effects of workplace discrimination on sleep outcomes as Black nurses who perceive their leadership and management as fostering a positive culture of support, trust, and communication are noted to have increased odds of better sleep-related outcomes.[32] Other suggestions, such as increasing racial diversity in leadership and creating employee resource groups can help organizations ensure Black nurses are not relegated to only work night shift and that voices from all nurses are being heard and represented.[33]

4.1 Limitations

This qualitative study included a small sample size that limits generalizability. However, recruitment efforts attempted to draw participants nationwide, as opposed to one healthcare system. Additionally, we triangulated findings with notes taken during data collection and provided a description of the study population and data presented to represent each theme. As such, we believe there could be high transferability across healthcare organizations. Data were collected in 2022, when nurse fatigue and burnout levels were still high from the COVID-19 pandemic. Study findings may reflect this, although results align with research conducted with nurses before the pandemic.

5. Conclusion

Being a nurse poses threats to individual restorative sleep, an essential component to health and wellbeing. Black nurses may face additional barriers because of systemic racism occurring within and outside their workplace. A culturally sensitive holistic approach to organizational change, with a diversity of leaders who foster trust and communication, may help attenuate risks for Black nurses, promoting sleep health equity and overall wellbeing. Future research would benefit from developing and testing theory-based organizational-level interventions designed to enhance nurse sleep through a culturally competent lens.

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Authors contributions

Dr. Hittle: study concept/design, data acquisition, analysis, interpretation, drafting and critical review of manuscript, final approval of version to be published, agree to be accountable for all aspects of work.

Dr. Wardlaw: study concept/design, data acquisition, analysis, interpretation, critically reviewed manuscript, final approval of version to be published, agree to be accountable for all aspects of work.

Elajah Trosclair: data acquisition, analysis, critically reviewed manuscript, final approval of version to be published, agree to be accountable for all aspects of work.

Dr. Bankston: study concept/design, data acquisition, interpretation of data, critically reviewed manuscript, final approval of version to be published, agree to be accountable for all aspects of work.

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Conflicts of Interest Disclosure

The authors declare that there is no conflict of interest.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Sciedu Press. The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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