Common meanings of good and bad sleep in a healthy population sample

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A R T I C L E   I N F O

A B S T R A C T

Objectives: The study's purpose was to understand the common meanings and shared practices related to good and bad sleep from narratives of a sample of healthy participants.
Design: Interpretive phenomenology was the approach to analyze narratives of the participants' everyday experiences with sleep. Participants were interviewed and asked to describe typical good and bad nights' sleep, what contributes to their sleep experience, and the importance of sleep in their lives. Team interpretations of narratives identified common themes by consensus.
Setting: Medium sized city in New York State (upper west region).
Participants: A sample of 30 healthy participants were from a parent study (n = 300) on testing the sleep questions from the Behavioral Risk Factor Surveillance System from the Centers for Disease Control and Prevention.
Measurements/analysis: Interpretations of good and bad sleep.
Results: Participants described similar experiences of good and bad sleep often directly related to their ability to schedule time to sleep, fall asleep, and maintain sleep. Worrying about life stresses and interruptions prevented participants from falling asleep and staying asleep. Yet, based on current life priorities (socializers, family work focused, and optimum health seekers), they had differing values related to seeking sleep opportunities and strategizing to overcome challenges.
Conclusions: The participants' priorities reflected the context of their main concerns and stresses in life that influenced the importance given to promoting sleep opportunities. Public health messages tailored to life priorities could be developed to promote healthy sleep practices.

Introduction

Sleep is a normal physiologic need for people that has been objectively studied in terms of sleep length, stages, continuity, rhythms, disturbances, and quality.[1–4] However, for the average person, sleep is ubiquitous, something that is part of life and only thought about when lack of sleep results in trouble or ill health, which ultimately results in apathy toward sleep health. More recently, sleep research outcomes have focused on length of sleep, whereby short-sleep (<5 hours) and long-sleep (>9 hours) are associated with development of cardiovascular, depression, and obesity risks.[5] To gain insight into the average persons sleep practices that affect their health and

wellness, what is needed is to understand the common meanings and shared practices of sleep in the context of daily life experiences.

In the US and worldwide, health organizations have identified sleep problems as detrimental to general health and well-being. The Institute of Medicine[6] declared poor sleep as a major public health problem, the World Health Organization categorized obstructive sleep apnea as a major preventable chronic respiratory disease,[7] and the Centers for Disease Control and Prevention (CDC)[8] report that 7–19% of Americans state they never get sufficient sleep. Furthermore, the US Department of Health and Human Services[9] incorporated sleep into its Healthy People 2020 agenda for improving national health by increasing hours of sleep in adults to 7 or more hours in 70.8% of the population, for individuals with sleep apnea symptoms to seek evaluation (28%), and to decrease the rate of car crashes involving drowsy driving to 2.1 per 100 million miles traveled. More recently, the American Academy of Sleep Medicine and

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Sleep Research Society in a joint consensus statement recommended 7 to 9 hours of sleep to promote optimum health in a healthy adult.[10] While organizations have determined the need, it is unknown what average healthy persons think about their sleep. If we can understand the meaning and value of sleep in peoples' lives that influences sleep practices, we can obtain insight into potential interventions to promote healthy sleep.

Normal sleep has been studied from a neurological and molecular perspective.[1] Nonetheless, there are only a few qualitative papers related to sleep experiences in healthy people. One early study, Askerstend et al.[11] reported on the subjective meaning of sleep from a longitudinal design that followed eight subjects sleeping in a lab at a variety of schedules measured by polysomnography to predict sleep quality measures. They found that perceived sleep quality was closely related to the subjects' ability to fall asleep quickly and stay asleep (sleep continuity) and awaken close to the acrophase or time of peak activity. The study was an in-lab study and lacked experiential context of sleep. A more recent study, Harvey et al.[12] compared the subjective meaning of sleep quality between individuals with and without insomnia using a "speak freely" interview approach to ask participants to describe good and poor sleep quality, and found that tiredness on awakening and the number of awakenings during the night were the most important variables regarding sleep quality. These studies reported comparisons of subjective and objective sleep; however, they did not provide context of daily lived experiences that may influence the meaning and importance of sleep. In another study, Coveney[13] described the subjective sleep experiences and sleep practices of shift workers, and students, realizing that the social context influenced how they managed sleep in their lives. This context was influential in understanding the meaning of their attitudes toward sleep.

More recently, Buysse[14] introduced a conceptual model of sleep health in order to clearly establish a meaning of the term *Sleep Health*. Five dimensions of sleep were identified as relevant including: sleep duration, sleep continuity or efficiency, timing, alertness/sleepiness, and satisfaction/quality (subjective assessment of good or poor sleep). The subjective dimension of satisfaction/quality clearly places good sleep in the context of the individual and society that could be explicated with qualitative research approaches. *Sleep Health* is then appreciated in the context of individual, social, and environmental demands from the perspective of the participants' situational meanings. Thus, an investigation of healthy individuals is warranted to add contextual insights to understanding sleep health.

Thus, the purpose of this study was to understand the common meanings and shared practices of good and bad sleep. The parent study provided the text data from the rich narrative descriptions of good and bad sleep. The goal of the parent study was to validate and refine the sleep questions from the Behavioral Risk Factor Surveillance System (BRFSS) from the CDC.[15]

Methodology

An interpretive phenomenological approach was used to guide the study of the everyday experiences of sleep in the narratives of a sample of healthy people.[16,17] In this method, the researchers uncover the everyday common meanings of an individual's life with the goal of discovering the meaning embedded in the text. The purpose of this analysis is not to predict but to understand the contextual meaning of a situation. The researchers' interpretations reveal what is important to the individual, his/her issues, concerns, and understandings of his/her world.[18] Human experiences are historical and temporal, based on language and cultural practices.[19] Recurring themes or common knowledge identified by interpretive studies embody the practical knowledge or wisdom that is familiar to the individuals in their lives. By reflecting on the experiences of individuals, the investigator identifies the issues and problems as they are best understood in that particular context. Thus, we are able to describe the experience of everyday living and sleeping.

Participants and methods

Thirty participants randomly sampled from the parent study (n = 300)[15] were interviewed. The original pool of n = 300 participants were English-speaking community-dwelling adults aged 18 and older who did not use continuous positive airway pressure (CPAP) or oxygen while sleeping. Potential participants had previously consented to be contacted for interviews as part of the parent study. A random number generator was used to yield 30 numbers between 1 and 300. The target number of participants for the parent study interviews was preset to 30 so that participant characteristics (such as shown in Table 1) would be representative of the parent sample by virtue of the central limit theorem. Participants were contacted in numerical order. If participants were unreachable or declined to be interviewed, a block of five additional random numbers was generated. Contacts were made until thirty agreed to be interviewed. Only three potential participants declined (giving lack of time as a reason), thus, only one additional random number block was generated. When participants agreed to be interviewed, they chose from several time slots for their interviews; they were encouraged to be in a private location where they could talk freely by phone during the interview. Twenty-nine participants who agreed to be interviewed completed their interviews at the appointed times; one appointment was missed, then rescheduled and completed. Ultimately, thirty participants were interviewed about their everyday sleep experiences. See Table 2 for the interview guide. These narratives provided rich descriptions of everyday sleep experiences that provided the data for text analysis.

Interview procedure

The interviewer (first author), an expert in the interpretive phenomenology method, developed the open-ended questions for the interview based on the methodology. Questions were reviewed and approved by the research team. For the parent study, the investigator was initially blinded to all participants' data (age, gender,

Table 1
Participant characteristics (n = 30)

Variable	Mean (SD)	Range
Age	38.8 (14.9)	19–71
BMI	25.8 (5.2)	18–37
Sleep hours to feel rested (BRFSS #1)	7.8 (3.3)	5–24
Average hours of sleep (BRFSS #2)	7.0 (1.1)	4–8
Epworth sleepiness scale	5.8 (4.9)	0–21
Actigraphy measures:		
Total sleep time (hours)	6.8 (.9)	4.6–8.2
Sleep efficiency (%)	82.0 (5.8)	71–91
Sleep latency (minutes)	17.0 (11.7)	0–47
Wake after sleep onset (minutes)	48.9 (15.1)	24–68
Gender	Male/Female	8/22
Race[a]	W/AA/Asian	28/1/1
Comorbidities[b]	Heart attack	3
	Irregular rhythm	1
	Metabolic syndrome	2
	Asthma	3
	Depression	4
	Anxiety	4

Notes
a. Race and ethnicity self-identified.
W = white.
AA = black or African American.
HL = Hispanic or Latino.
b. Comorbidities based on self-report medical history.