



Metaphorical Analysis of Sleep Disorder from a Cognitive Perspective

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Abstract

Background: Understanding psychological states related to sleep disorders often requires the use of conceptual or cognitive metaphors.

Objectives: This study aims to perform a cognitive-metaphorical analysis of sleep disorders.

Methods: This qualitative study employed cognitive analysis and was conducted in 2024. The study population included all patients with sleep disorders in Tehran. Given the qualitative nature of this research, and following the principle of theoretical saturation, we conducted semi-structured interviews with up to 12 patients who visited sleep clinics at Erfan and Golestan hospitals. The Praglazaz group utilized the metaphorical method to identify metaphorical expressions.

Results: Through an analysis of the patients' expressions, we identified 183 metaphorical phrases. The findings revealed seven key metaphorical expressions: Feeling like a car without energy, being in an invisible place, drowning in a deep ocean, experiencing theft at night, falling into an endless abyss, feeling deprived of something, and feeling trapped in suffocating layers.

Conclusions: This study highlights the importance of conceptual metaphors in expressing, identifying, and understanding the psychological states associated with sleep disorders. By identifying various metaphors related to sleep disorders, we can explore different avenues for treatment.

Keywords: Sleep Disorders, Metaphorical Analysis, Cognitive Analysis, Conceptual Metaphors

1. Background

Insufficient or non-restorative sleep can disrupt normal physical, mental, social, and emotional functioning, potentially leading to various sleep disorders over time (1). Sleep disorders are conditions that impact the quality, quantity, and duration of sleep a person can achieve each night (2). This category includes outpatient clinical sleep conditions with a broad range of diagnoses (3). Additionally, sleep disorders can adversely affect overall health, mental well-being, safety, and quality of life (4). The International Classification of Sleep Disorders provides standardized definitions and categorizations for these disorders. Sleep disorders are common in both adults and children, although children may exhibit different symptoms compared to adults (5). Types of sleep disorders include insomnia, sleep-disordered breathing,

sleep apnea, central disorders of hypersomnolence, circadian rhythm sleep disorders, parasomnias, and sleep-related movement disorders (6).

People with sleep disorders often express their psychological states through conceptual or cognitive metaphors (7), a concept rooted in Lakoff's cognitive science theories (8). According to Lakoff and Johnson (9), our language and thought are fundamentally metaphorical, which helps us understand abstract phenomena and informs our behavior (10). Conceptual metaphors consist of a source domain, based on human experiences, and a target domain, which the source clarifies (11). Connections between these domains, known as metaphorical mappings, link abstract and concrete concepts (12). Understanding metaphors tends to improve with age and mental development (13), which may explain why they are processed in complex brain areas like the prefrontal cortex (14).

Many abstract psychological concepts often rely on conceptual metaphors to connect them with human experiences, both mentally and physically. Examples of such concepts include quality of life (15), health literacy (16), and pain (17, 18). Psychological disorders also exhibit a metaphorical nature. For instance, research has shown that the source domains related to depression include place, container, path, direction, object, person, taste, and color (19). Another study identified common metaphors for eating disorders, such as viewing the disorder as a vicious creature, a destructive person, an endless war, a confined space, or a result of lifestyle choices (20). Additionally, a study highlighted five types of metaphorical expressions associated with mental health issues: Depression as darkness, anxiety as a stream of unrelated thoughts, bipolar disorder as a roller coaster, and schizophrenia as the whisperings of a huge monster (21).

Metaphors related to sleep help us understand specific conditions and characteristics, and we even use these conceptual metaphors in our dreams. Sleep disorder metaphors carry both cognitive and emotional significance, which may explain why our feelings about sleep are often expressed in metaphorical terms (22). Research on older adults with sleep disorders found that they describe their sleep states as complex objects (23). Additionally, studies indicate that sleep disorder metaphors can be applied in organizational contexts; for example, "organizational insomnia" is a common phrase used in busy workplaces (24).

Today, the significance of metaphors in the context of mental disorders is increasingly recognized. Therapists and patients can communicate about sleep disorders and the emotions they provoke through the use of metaphors. From this viewpoint, sleep disturbances are not just a matter of psychological organization; they represent a dynamic and metaphorical organization at an implicit level. Metaphors can help patients gain a better understanding of their current situation. Research on metaphors related to sleep disorders is limited, particularly within the literature focused on Persian-speaking patients.

2. Objectives

This type of research represents a new frontier that enables clinical psychologists and psychiatrists to approach sleep disorders from an interdisciplinary perspective and through a novel lens. Based on this premise, the present study aims to explore sleep disorders from a cognitive-metaphorical perspective.

3. Methods

3.1. Participants

The method used in this qualitative study was cognitive analysis, conducted in 2024. Due to the nature of the research, based on the theoretical saturation rule, 12 patients with sleep disorders were purposively selected from the sleep clinics of Erfan and Golestan hospitals. The inclusion criteria for the sample included having a history and diagnosis of sleep disorder for at least two years by a psychiatrist, having a history of drug and psychological treatment (often these disorders are so severe that patients report that they have not achieved any results from conventional treatments and psychotherapy, and require a fundamental change in the person's lifestyle), providing informed consent to participate in the study, and the ability to articulate their experiences regarding their sleep disorder. The exclusion criterion was any unwillingness to continue cooperation during the research.

3.2. Data Gathering and Extraction

The duration of the interviews with participants ranged from 100 to 140 minutes. The questions began with a general question. Follow-up questions were asked to obtain richer information during the interview; for example, "What would you like your sleep problem to be?" or "Is this possible for you? Could you please explain your understanding of your sleep disorder further?" The question was then asked: "Do you mean that the metaphor used helps you convey your point better?" "What do you most like about your sleep disorder?" etc.

3.3. Data Analysis

After collecting and organizing the data, metaphorical phrases and sentences were analyzed using the Prageljaz group metaphor identification method to identify expressions used by patients with sleep disorders. This approach focused on phrases and sentences rather than individual words. Ultimately, 183 metaphorical expressions were identified.

3.4. Confidence and Doubt

At the conclusion of the interviews, the participants shared their feelings about the study. They mentioned that they initially approached the interview with a strong sense of internal conflict and reluctance. However, after about 15 minutes, they started to view themselves from a different perspective. They acknowledged that they became more aware of themselves and their illnesses, and they recognized the

significance of the impact their words and actions have on others.

3.5. Data Rigor

The peer review method was used to ensure data accuracy. Analyzed categories were shared with two clinical psychologists, two psychiatrists, and two cognitive linguistics experts for feedback. Weekly Skype meetings were held to discuss the analysis results, enhancing the research's credibility through diverse professional input.

3.6. Ethical Consideration

At the study's start, the purpose was explained to the patients, and written consent was obtained. The researcher assured them that their information would remain confidential to uphold ethical standards.

4. Results

4.1. Descriptive Data and Demographic Characteristics

In this study, 12 patients with sleep disorders participated, aged between 53 and 75 years, with a mean age of 64.58 ± 3.36 years. Among the participants, seven were male and five were female. Table 1 presents descriptive data and demographic characteristics of the participants, including age, gender, type of sleep disorder, duration of interview, etc.

As detailed in Table 2, the diagnoses included: Two patients with sleep apnea, two with parasomnias, three with insomnia, two with circadian rhythm sleep-wake disorders, two with sleep-related movement disorders, and one with central sleep-wake disorders.

4.2. Categories Obtained from Concepts

In this section of the findings, each of the main themes is presented with patients' metaphorical interpretations. Table 3 presents the metaphors related to sleep disorders. The most common metaphor was "drowning in a deep ocean" (38 mentions), followed by "falling into an endless abyss" (33 mentions), and "being in an invisible place" (32 mentions). The least common metaphor was the feeling of deprivation (12 mentions). These findings highlight significant themes in the metaphors associated with sleep disorders.

4.3. Description of the Research Questions

1. Metaphor of feeling like a car without energy:

- Patient 3: "Most mornings when I wake up, I feel like

a car that has run out of fuel."

- Patient 7: "I feel like I didn't sleep at all, or if I did, it didn't give me any energy to keep the machine of my being moving."

2. Metaphors of being in an invisible place:

- Patient 1: "I'm lost in an unfamiliar place and exhausted. What will happen to me, and what should I do?"

- Patient 9: "I feel stuck and weary of my circumstances, like being trapped behind an invisible wall."

3. Metaphor of drowning in a deep ocean:

- Patient 6: "Sleep feels like diving alone in a vast pool, with no one to save you."

- Patient 10: "Sometimes, I fall into a deep sleep, and it feels like I'm sinking to the bottom of the sea, struggling to surface."

4. Metaphors of the existence of theft in the night:

- Patient 7: "I feel insecure when I sleep, as if a thief is stealing my rest."

- Patient 11: "I call it an 'embezzler' — it takes away all my sleep."

5. Metaphors of falling into an endless abyss:

- Patient 12: "For me, insomnia feels like being thrown from a thick cloud into a valley, and there's no one to catch me."

- Patient 8: "Sleeping feels like falling into a special world, a place I can't escape and where I feel trapped."

6. Metaphors of feeling deprived of something:

- Patient 2: "Sleep has become a struggle for me; I feel like I barely experience it. I wish I could sleep well and have dreams."

- Patient 10: "I can't sleep, even with pills. The dreams feel artificial and leave me more tired."

7. Metaphors of feeling trapped in suffocating layers:

- Patient 4: "It feels like someone is strangling me in my sleep."

- Patient 5: "Sometimes, I feel like I'm suffocating, and it eventually feels as if someone is choking me."

5. Discussion

This study conducted a cognitive-metaphorical analysis of sleep disorders, revealing seven common metaphorical expressions: Feeling like a car without energy, being in an invisible place, drowning in a deep ocean, experiencing theft at night, falling into an endless abyss, feeling deprived, and feeling trapped in suffocating layers. These findings align with Breheny et al. (23), who noted that individuals with sleep disorders

Table 1. Demographic Characteristics of the Participants in the Study

Row	Sex	Type of Disorder	Academic Status	Age	Job	Interview by the Minute
1	Female	Sleep-related movement	Bachelor	63	Freelance	120
2	Male	Insomnia	Bachelor	54	Retired	105
3	Female	Parasomnias	Undergraduate	53	Housekeeper	110
4	Female	Apnea	Diploma	64	Housekeeper	100
5	Male	Apnea	Bachelor	61	Retired	135
6	Female	Sleep-related movement	Diploma	70	Housekeeper	117
7	Male	Central sleep-wake	Undergraduate	74	Freelance	125
8	Female	Parasomnias	Undergraduate	67	Service work	100
9	Male	Insomnia	Diploma	58	Employee	120
10	Male	Circadian rhythm	Bachelor	68	Retired	132
11	Male	Circadian rhythm	Diploma	72	Retired	110
12	Male	Insomnia	Postgraduate	75	Retired	105

Table 2. Summary of Statistical Indicators Related to Demographic Variables of Patients with Sleep Disorders ^a

Variables	Values
Types of sleep disorders	
Insomnia	3 (25)
Apnea	2 (16.67)
Parasomnias	2 (16.67)
Central sleep-wake disorder	1 (8.33)
Sleep-related movement	2 (16.67)
Circadian rhythm	2 (16.67)

^a Values are expressed as No. (%).

describe their experiences as complex. Additionally, the study supports Schoeneborn et al. (24), highlighting the prevalence of sleep-related metaphors in various contexts. This research aims to explore patients' metaphorical explanations for sleep disorders, a topic that has received little attention in prior studies.

Sleep disorders are often linked to mental health issues, including the depressive spectrum (25) and anxiety disorders (26), which are classified as distinct categories in diagnostic guidelines. Consequently, using conceptual metaphors could enhance the diagnosis of sleep disorders, making this study a unique contribution to the field. Sleep is not just a natural necessity; it is also a profound source of meaning and connection to the universe. This mysterious state significantly impacts language skills and is viewed with symbolic complexity across cultures (27). According to Lakoff's theory of conceptual metaphors (8), each metaphor draws from our experiences, emotions, and unconscious thoughts. In the circadian cycle, sleep becomes a refuge where the mind transcends waking limits, allowing individuals to explore dreams and deep

symbolism. Due to the profound psychological symbolism involved, individuals often resort to metaphors to articulate their conditions (28).

Additionally, the sleep cycle can be disrupted by these underlying issues, potentially leading to sleep disorders. In such cases, a metaphorical examination becomes essential. Sleep disorders, which are frequently not visible or experiential, compel individuals to use verbal metaphors to communicate their psychological struggles to therapists during sessions. As previously mentioned, the roots of sleep disorders often lie in psychological and mental health problems such as depression and anxiety disorders. Consequently, cognitive and executive functions, including attention and learning, may be impaired. On a more positive note, empirical evidence has demonstrated that third-wave psychological therapies, which often utilize metaphors — such as mindfulness (29), compassion-focused therapy, and acceptance and commitment therapy — can significantly impact sleep disorders (30). These findings highlight the important role that conceptual understanding plays in addressing such issues.

Table 3. Frequency and Percentage of Metaphors Related to Sleep Disorders ^a

Metaphors	Values
The feeling of a car without energy	14 (7.65)
Being in an invisible place	32 (17.49)
Drowning in a deep ocean	38 (20.77)
The existence of theft at night	30 (16.39)
Falling into an endless abyss	33 (18.03)
Feeling deprived of something	12 (6.56)
Feeling trapped in suffocating layers	23 (12.57)

^a Values are expressed as No. (%).

Individuals with sleep disorders often use metaphors rooted in physical experiences to express their emotional responses to sleep. This may explain why stressful dreams frequently involve bodily sensations. These metaphors can reflect emotional states linked to sleep disorders. Expressions like feeling trapped in an invisible place, drowning, or falling into an abyss convey emotional and physical burdens, revealing confusion about their condition. Metaphors such as being a victim of a thief or feeling suffocated indicate the desperation faced by patients dealing with treatment-resistant sleep disorders.

This study emphasizes the importance of language and speech in relation to sleep disorders. It also highlights that verbal elements can have significant clinical implications for organizing and modifying cognitive and psychological treatments for these disorders. Additionally, this type of research, combined with in-depth studies on hypnotic drugs, can contribute to understanding the clinical roots of sleep disorders. This approach encourages researchers to examine sleep disorders from multiple perspectives, allowing for more comprehensive strategies in their treatment.

As a result, these metaphors open new windows for diagnosing various sleep disorders and will be a valuable source for evidence-based interventions in future research. One of the limitations of this study is the limited range of sleep disorders. The qualitative nature of the present research method and the judgmental and purposeful selection of samples somewhat limit the generalizability of the results. Another limitation of this study was the lack of cooperation from patients with sleep disorders during the study. Many of them were reluctant to talk about their condition after a few minutes and would emotionally withdraw from the study.

Although this type of study is a basic study, it is necessary to design intervention protocols (therapeutic

and educational) based on the findings of this study in future research. Researchers are also advised to design metaphor-based assessment tools for the health and mental health of patients with sleep disorders and to estimate their psychometric properties. Moreover, it is suggested that the metaphors of each type of sleep disorder be examined separately in various studies.

Footnotes

Authors' Contribution: F. R. is the only author of the article and the study was solely carried out by the author.

Conflict of Interests Statement: The author declares no conflict of interest.

Data Availability: The dataset presented in the study is available on request from the corresponding author during submission or after its publication.

Ethical Approval: This research has been approved by the Ethics Committee of Islamic Azad University, Hamedan branch under the code: [IR.IAU.H.REC.1402.157](#).

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