



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم



MONA MAGHRABY



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم



شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY

Factors Affecting Quality of sleep among patients with Burn Injury

Thesis

**Submitted in Partial requirement of the Master Degree
in Medical Surgical Nursing**

By

Samar Galal Abu Lymoun

(B.Sc.2012)

**Faculty of Nursing
Ain Shams University
2020**

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Samar Galal

Abstract

Sleep disturbances in patients with burn can result in negative consequences on physical, emotional, and cognitive status, which may impact patient satisfaction, clinical recovery, wound healing, and hospital length of stay. **Aim:** This study aimed to assess factors affecting quality of sleep in patients with burn injury. **Design:** A descriptive explorative design was utilized. **Setting:** Burn unit at Tanta emergency University Hospitals/ Egypt. **Study subject:** A purposive sample of sixty patients admitted in the previous mentioned setting. **Tools of data collection:** Three tools were used for data collection: An interviewing questionnaire, Groningen's sleep quality Scale (GSQS) and factors affecting burn patient's quality of sleep assessment tool. **Results:** 68.3% of the studied patients had poor sleep quality while, 31.7% had average sleep quality. In addition, there were highly statistically significance positive correlations between GSQS and psychological factors, personal habits factors, health care factors and environmental factors affecting quality of sleep with $P=0.00000$. **Conclusion:** Patients with burn injury experienced poor sleep quality related to the patient's related factors such as psychological factors, physical factors and personal habits related factors, health care related factors and hospital environment. **Recommendations:** Health education and instructional booklet should be given to burn patients with sleep disorder on how to improve their sleeping pattern and quality of life, with more efforts to improve the awareness of this patients regarding the importance of good sleep and avoidance the risk factors of insomnia.

Keywords - Burn injury, Quality of sleep.

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List of Abbreviations

ABG	Arterial Blood Gases.
BMI	Body Mass Index.
COPD	Chronic Obstructive Pulmonary Disease
ECG	Electrocardiogram.
EMG	Electromyogram.
EOG	Electro-oculogram.
GSQS	Groningen's Sleep Quality Scale.
HPA	Hypothalamic Pituitary Adrenal.
ICU	Intensive Care Unit.
IV	Intravenous
MSLT	Multiple Sleep Latency Test.
NREM	Non-REM.
OR	Operation Room.
PSG	Polysomnography.
PSQI	Pittsburg Sleep Quality Index.
PTSD	Post-Traumatic Stress Disorders.
REM	Rapid Eye Movement.
RLS	Restless Legs Syndrome.
SPSS	Statistical Package for the Social Science.
SSS	Stanford Sleepiness Scale.
SWD	Slow Wave Disturbance.
SWS	Slow Wave Sleep.
TBSA	Total Body Surface Area.
US	United States.
WHO	World Health Organization

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Introduction

Burns are global public health problem, accounting for an estimated 180.000 deaths annually. The majority of these occur in low and middle in-come countries, burns are leading cause of morbidity, including prolonged hospitalization, disfigurement and disabilities, often with resulting stigma and rejection (*WHO, 2018*).

Burns represents not only a very serious illness with a potential fatal complication, but also profound a traumatic events with a significant potential for development of complex problems, in addition to burn patients need to accommodate with their new body image and the processes that lead to changes in their lives due to injury, also the recovery from burn need providing health care that involve management of physical, psychological and social problems and prevention of complications of burn (*Elalem, Shehata & Shattla, 2018*).

Burn injuries are devastating, sudden and unpredictable forms of trauma which affect the victims both physically and psychologically. Sleep disturbances are commonly found in hospitalized patients with burn injury, these changes in sleep patterns have negative effect on various phases of rehabilitation. Alteration in sleep pattern

is responsible for undesirable metabolic changes that occur after a major burn (*Jain, et al., 2018*).

Sleep disorders are among the complications that hinder the healing process of burn patients. Sleep disorder complicates the healing process and makes the burn patients more distressed. Physiological pain resulting from tissue damage, dressing change, prescribed medicines itching, and stress and anxiety caused by changes in appearance and uncertainty of treatment outcome and being hospitalized can lead to sleep disorders in patients with acute burns and in the initial stages of their treatments (*Seyyed-Rasooli et al. 2016; Carter, Carrougner & Pham, 2016*).

After burn, sleep is needed for cell growth and repair, maintaining a healthy immune system and neuronal rest and repair. Poor quality of sleep among patients places them at higher risk for complications like delaying recovery, impairing wound healing, and disturbing the function of the immune system, and adversely affects the psychological and neurological status (*Bani Younis & Hayajneh, 2018*).

Furthermore, sleep disturbances among patients with burn injury impair the patient's cognition, memory

function, impairs protein synthesis, cell division, and cellular immunity, and consequently alters normal healing. Together, these effects may elevate the patient's morbidity and mortality (*Williams, et al., 2015*).

Sleep disturbance after burns was associated with increasing burn size. Significant associations were found between dissatisfaction with sleep and physical function, social function limited by physical function and perceived appearance, social function limited by appearance, sexual function, emotion (persistent anger and sadness), family function, family concern, satisfaction with role, work reintegration, and religion, indicating the pervasive nature of this symptom on a range of quality of life domains in young adult burn survivors (*Lee, et al., 2017*).

Following burn injury, the patient is subjected to many stressors that contribute to sleep deprivation. Psychological stresses such as pain and anxiety affect sleep. Treatment-related factors include splinting modalities, therapeutic interventions, diagnostic procedures and certain sedative, analgesic, and anesthetic agents known to interfere with deep sleep (*Mayes, et al., 2013*).

Physiologic effectors generally relate to the wound itself, the metabolic response to stress and injury, and the