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abstract

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Sleep Disturbances and Psychological Well-Being in Pediatric Oncology Patients: Clinical and Environmental Insights

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Introduction: This study examines the relationship between sleep quality and psychological well-being in pediatric leukemia patients at An-Najah University Hospital in Nablus, Palestine. Sleep is vital for the physical and psychological health of children, particularly those undergoing cancer treatment.

Pediatric oncology patients often experience disrupted sleep due to chemotherapy, medications, hospital routines, pain, and psychological stress, which may exacerbate emotional distress, impair coping mechanisms, and hinder treatment outcomes by weakening the immune system. Despite its importance, the connection between sleep patterns and psychological outcomes in pediatric oncology remains underexplored.

Methodology: This cross-sectional observational study assessed sleep patterns and their clinical and environmental determinants in 60 pediatric leukemia patients aged 5–18 years, recruited via convenience sampling. Sleep quality was evaluated using the Pediatric Sleep Questionnaire (PSQ), while psychological well-being was measured with the Strengths and Difficulties Questionnaire (SDQ) and PROMIS Emotional Distress scales for anxiety and depression.

Clinical data were extracted from medical records, and a semi-structured survey explored sleep practices, including bedtime routines and environmental factors.

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Results: Analysis revealed a significant association between poor sleep quality and higher levels of anxiety and depression ($p < 0.05$). Seventy-five percent of participants reported frequent sleep disturbances, with factors such as chemotherapy, active disease stage, inadequate pain management, and inconsistent bedtime routines contributing to sleep problems. Environmental factors like hospital noise and lighting were major disruptors. Participants highlighted preferences for quieter, darker environments and reported using relaxation techniques, such as deep breathing, to improve sleep.

Conclusion: The findings emphasize the need for targeted interventions, including better pain management, adjusted hospital routines, and enhanced sleep practices, to improve sleep quality and psychological well-being. These strategies, combined with optimizing environmental factors, could support both the physical recovery and mental health of pediatric leukemia patients, contributing to improved treatment outcomes.