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Master's Thesis

Sleep duration affects performance on clinical assessment in a patient with CDKL5 syndrome: a preliminary case study

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Limassol, May 2021

CYPRUS UNIVERSITY OF TECHNOLOGY

FACULTY OF HEALTH SCIENCES

DEPARTMENT OF REHABILITATION SCIENCE

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Approval Form

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ABSTRACT

Sleep disorders are prevalent in patients with neurological problems. The effect of those disorders in the rehabilitation of patients is already reported in some studies. This study aimed to examine if total sleep duration, deep and light sleep duration or awake period of a patient with CDKL5 syndrome correlates with the clinical performance on specific tests. The assessment tool we used was a sleep tracker (wrist band), which collected actigraphy data for 25 days/nights. Clinical performance was evaluated with five personalized tests that examined the patient's ability to support the head from three different positions and also the patient's response to the sensory stimuli on feet. The findings showed that deep sleep can provide better results in one of those tests in contrast with light sleep which can cause a reduction in the score of one of the tests. Those findings are associated with previous studies, and finally, we can support that sleep duration could impact the rehabilitation of a patient. However, further research is needed to explain the rest of the results.

Keywords: sleep, sleep stages, rehabilitation, CDKL5 syndrome, actigraphy