

MEETING ABSTRACT

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# Sleep and sleepiness in relation to pain in pediatric surgery patients - an exploratory pilot study

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## Background

Recent studies suggest a reciprocal relationship between pain and sleeping disorders among adult patients [1] and different biological mechanisms are being proposed [2,3]. Data with regard to this topic is very limited in pediatric patients. The present study aims to serve as an exploratory pilot study regarding the relationship between pain and sleep in children and adolescents.

## Materials and methods

Choosing a combined qualitative and quantitative method we interviewed 40 postoperative children and adolescents (age 11-18) at the Department of pediatric and adolescent surgery of the Medical University of Graz regarding their sleep, sleepiness and pain in semi-structured interviews. For contextual data the patient charts were analysed retrospectively.

## Results

Thirty eight (95%) patients reported suffering from disturbed sleep in the hospital. Out of all patients, 23 (58%) had problems falling asleep because of pain, 20 (50%) woke up during the night because of pain and 38 (95%) indicated tiredness during the day.

Higher maximal pain during the preceding 36 hours and the occurrence of pain in the night before the questioning took place was related to worse sleep quality as well as to higher sleepiness at the time of interview. Current sleepiness and a general sleepiness during the day were associated with a higher subjective pain level. The same results could be found in case of lower sleep quality during the whole stay in the hospital and in case of sleep disturbance in the night before the questioning took place.

## Conclusions

Recovery after a surgical intervention will be supported by sufficient sleep quality. Therefore the high incidence of sleep related problems in postoperative children and adolescents is disadvantageous. As there is an association between pain and the quality of sleep, interventions like an adapted pain management should be discussed. Due to the lack of validation of the interviews and the exploratory study design, these results need to be confirmed in further studies.

## Competing interests

The authors declare that they have no competing interests.

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