

cognitions about the consequences of insomnia ($\beta=0.230$, $p<0.01$) and sleep expectations ($\beta=0.268$, $p<0.01$) were associated with languidity. Sleep-incompatible behaviors ($\beta=0.165$, $p<0.05$) and perceived stress ($\beta=0.267$, $p<0.01$) were associated with flexibility, while trait anxiety ($\beta=-0.137$, $p=0.058$) and negative cognitions about the consequences of insomnia ($\beta=-0.318$, $p<0.01$) were associated with rigidity. Less agreeability to pharmacotherapy over behavioral therapy was associated with morningness ($\beta=0.129$, $p<0.05$), while greater agreeability to behavioral therapy over pharmacotherapy ($\beta=-0.158$, $p<0.05$) was associated with rigidity.

Conclusion: Sleep-wake irregularity in patients with CID is a perpetuating factor strongly associated with evening and languid/flexible circadian types, while other predisposing and perpetuating factors can be also determined by circadian preference and/or type. Circadian measures in the evaluation of CID patients may help clinicians individualize BSM treatments, including patients' acceptability.

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A POSSIBLE ROLE FOR THE CIRCADIAN SYSTEM IN AGGRESSION IN DEMENTIA

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Introduction: Growing evidence suggest a bidirectional relationship between circadian and sleep regulation, and the pathology and progression of dementia. Behavioral and psychological symptoms of dementia (BPSD) are very prevalent, and lead to an enormous disease burden in patients, families and caregivers. Indications for a possible disruption of circadian regulation of emotions and behavior in dementia, can be found in the phenomenon known as 'sundowning', exacerbation of neuropsychiatric symptoms during the late afternoon and early evening. Aggression in particular can be a very debilitating symptom of dementia, and previous animal and human studies point to a possible role of the circadian rhythm in the propensity for aggressive behavior. Therefore, we examine here the timing of aggression in a dementia cohort.

Methods: We studied the timing of aggression incidents on a university psychiatric hospital unit treating patients with dementia and additional behavioral problems. During a 6-month period (November 2020 - April 2021) 84 patients were admitted to the ward. Data of these patients were retrospectively analyzed. During this period 335 individual incidents of aggression (verbal and/or physical) were reported by the nursing staff.

Results: Among the 84 subjects, 42 (50%) had at least one aggression incident during hospital admission. 41% of all incidents occurred between 4-10pm. (5-9pm (36.4%), 9pm-1am (11.6%), 1-5am (5.7%), 5-9am (22.7%), 9am-1pm (10.7%), 1-5pm (12.8%)). In every investigated month, a peak in number of incidents could be seen between 7 and 8pm. Aggression incidents were most likely to occur in Alzheimer's dementia (OR: 3.75). Patients who exhibited aggression had worse cognitive impairment (difference in mean MMSE: 4.57 ± 2.1 , $p=0.034$).

Conclusion: Aggression incidents were most prevalent during the late afternoon and evening. Furthermore, the severity of cognitive impairment and type of dementia negatively impacted the prevalence of aggression. Our study thus confirms a possible role of the circadian rhythm in aggression. The role of the circadian rhythm in the pathophysiology of neurodegenerative disorders, and specifically in their neuropsychiatric symptoms, warrants further research.

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