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Response to: Relationship between sleep and disease activity in pediatric depressed patients with Crohn disease

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We appreciate Dr. Kawada's interest in our paper¹ and the opportunity to respond. Our manuscript presented secondary analyses and should be considered exploratory. Dr. Kawada notes the small number of controls. We agree and included this as a limitation in our original publication. Given the high subject burden of this study, it was difficult to recruit healthy control subjects.

The second concern relates to factor analysis of the Pittsburgh Sleep Quality Index (PSQI). Dr. Kawada comments that Sleep Latency is related to Sleep Duration and Habitual Sleep Efficiency, and thus should be included as a Quantitative, rather than Qualitative, indicator of sleep disturbance. This point is well-taken; however the factor names should not be taken too literally. The labels were merely a shorthand notation to summarize constituent elements. Our data supported Sleep Latency loading onto what we termed the Qualitative Factor, findings in agreement with a previous factor analysis of the PSQI.² Similar to our findings, those authors found a factor consisting of Sleep Duration and Habitual Sleep Efficiency, whereas Sleep Latency loaded separately.

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Regarding low predictive ability, we were not interested in achieving prediction equations for Quantitative and Qualitative Factors of sleep. Our aim was to examine relationships between sleep, neuropsychiatric dysfunction, and inflammation in our cohort. We believe a model can provide information of clinical interest even with low R^2 .

We agree that Crohn's disease (CD) and ulcerative colitis are mechanistically different, thus we limited our study to CD. We also agree that looking at the relationship of specific inflammatory markers to sleep disturbance is an important area to pursue, as highlighted in a recent review.³

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