A Prospective Exploration of the Relationship Between Objectively Measured Sleep and Fatigue in People with Early Rheumatoid Arthritis

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BACKGROUND

In people with RA, self-reported sleep disturbance is mildly correlated with fatigue1,2. People, however, tend to overestimate their sleep quality in self reports as compared to Polysomnography (PSG)3,4 measurement, which is the gold standard done in a laboratory setting5. To our knowledge, no study has yet examined the relationship between objectively measured sleep quality and fatigue experienced by people with RA in their usual living environment.

RESULTS

Figure 1: Predictors of Fatigue

Table 1: Rheumatoid Arthritis (RA) Participant Characteristics

Table 2: Correlations with Fatigue at Baseline and 12 Months

Table 3: Hierarchical Multiple Regression Modelling (3 Models) at Baseline and 12 months

DISCUSSION

- Higher levels of fatigue were predicted by presence of joint inflammation, younger age, and objective measures of disturbed sleep in individuals living with early RA
- After accounting for the stronger predictors, self-reported functional limitation was not found to be a predictor of fatigue
- Disease activity was not associated with age, so higher fatigue levels among younger participants may not be explained by more disease activity
- Strength of the prediction model weakened at 12 months, which may be explained in part by lower disease activity at 12 months

CONCLUSION

Poor quality and quantity of sleep predicted fatigue in adults recently diagnosed with RA, even after controlling for the stronger predictors (younger age and presence of tender & swollen joints). Interventions aimed at optimizing restful sleep may help individuals living with early RA manage fatigue, particularly in younger people with active joint disease.

REFERENCES: