40 Social Support Moderates the Relationship Between Pain and Sleep Quality in Multiple Sclerosis

Kaitlin E Riegler[1,2], Megan L Bradson[1], Garrett A Thomas[1], Peter A Arnett[1]
[1]Pennsylvania State Univeristy, State College, PA, USA. [2]Psychology Service, VA Connecticut Healthcare System, West Haven, CT, USA

Objective: Lower levels of social support in persons with Multiple Sclerosis (PwMS) are associated with myriad poor outcomes including worse mental health, lower quality of life, and reduced motor function (Kever et al., 2021). Social support has also been associated with physical pain (Alphonsus et al., 2021) and sleep disturbance (Harris et al., 2020) in PwMS. Pain is one of the most common symptoms of MS (Valentine et al., 2022) and is also known to be related to sleep disturbance (Neau et al., 2012). With these considerations in mind, the goal of the current study was to examine social support as a possible moderator in the relationship between pain and sleep quality in PwMS.
Participants and Methods: This cross-sectional study included 91 PwMS (females = 76). A neuropsychological battery and psychosocial questionnaires were administered. For sleep quality a composite was created from the sleep and rest scale of the Sickness Impact Profile (SIP), sleep-related items on the Multiple Sclerosis-Symptom Severity Scale (MS-SSS) (i.e., sleeping too much or sleep disturbance, fatigue or tiredness, and not sleeping enough), and an item from the Sleep Habits Questionnaire (SHQ) ("How many nights on average are you troubled by disturbed sleep?"). This composite (α = .76) has been used in prior research. Lower scores were indicative of worse sleep quality. Pain intensity and pain interference were measured using the Brief Pain Inventory (BPI). Pain intensity was calculated from four pain indices (i.e., pain at its worst in the last 24 hours, at its least in the last 24 hours, on average, and current pain at the time of the assessment) and pain interference was calculated from seven indices (i.e., general activity, mood, walking ability, normal work, relationships with others, sleep, and enjoyment of life). The Social Support Questionnaire (SSQ) measured average satisfaction with supports. A series of hierarchical linear regressions were conducted with the sleep quality index as the outcome variable and satisfaction with social supports, both indices of pain (intensity and interference), and their interactions as predictors. Then, simple effects tests were used to clarify the pattern of any significant interactions.
Results: Regression analysis revealed that the interaction between pain interference and satisfaction with social support was significant (p = .034). Simple effects tests revealed that when satisfaction with social support was high, pain interference was associated with better sleep quality (p < .001). The interaction between pain intensity and satisfaction with social supports was also significant (p = .014). Simple effects test revealed that at high levels of satisfaction with social supports, pain intensity was associated with better sleep quality (p < .001).
Conclusions: Satisfaction with social support moderated the relationship between pain interference and pain intensity on sleep quality in PwMS. Specifically, high satisfaction with social support buffers against the negative effects of pain interference and pain intensity on sleep quality in PwMS. This provides evidence that interventions aimed at increasing social supports in PwMS may lead improvements in sleep quality and reduce the impact of pain on sleep quality.

Categories: Multiple Sclerosis/ALS/Demyelinating Disorders
Keyword 1: multiple sclerosis
Keyword 2: sleep
Correspondence: Kaitlin E Riegler Affiliations: 1Pennsylvania State University, University Park, PA, 2Psychology Service, VA Connecticut Healthcare System, West Haven, Connecticut Email: Kriegler25@gmail.com

---

41 High Stress and Negative Attributional Style is Associated with Depression Symptoms in Multiple Sclerosis

Megan L Bradson[1], Kaitlin E Riegler[1,2], Garrett A Thomas[1], Gray A Vargas[3], Peter A Arnett[1]
[1]Department of Psychology, The Pennsylvania State University, University Park, PA, USA. [2]Psychology Service, VA Connecticut Healthcare System, West Haven, CT, USA. [3]Neuropsychology Department, Kennedy Krieger Institute, Baltimore, MD, USA