

The association between sleep duration with migraine frequency, disability and perceived stress in the Headache Assessment via a Digital platform in United States (HeAD-US) Study

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BACKGROUND

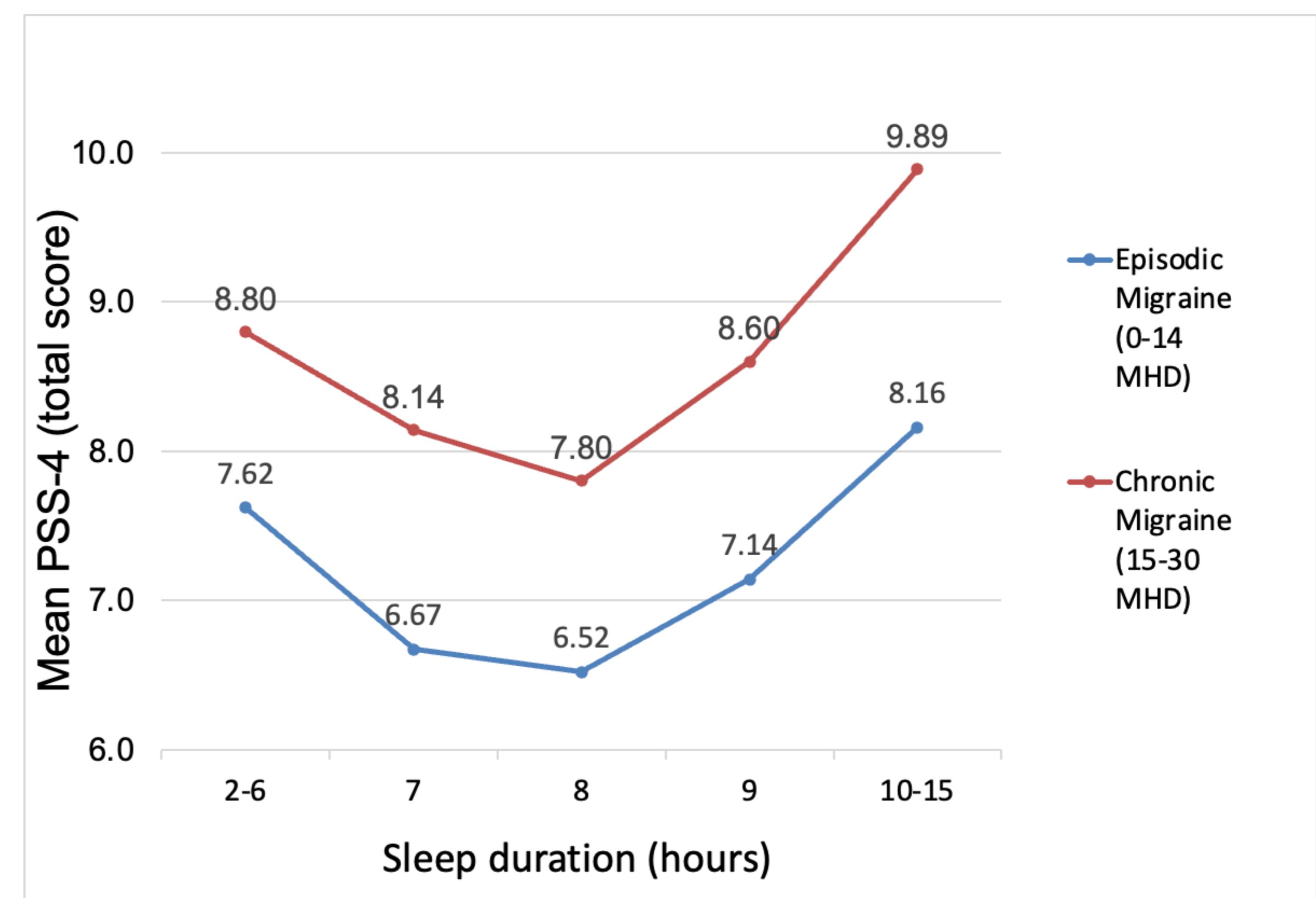
- Short and long self-reported sleep duration are associated with negative health outcomes
- Limited data suggests that adequate nightly sleep duration may reduce daily pain intensity in those with chronic migraine
- We examined the association between self-reported sleep duration on migraine frequency, disability and perceived stress scores

RESULTS

Sample characteristics

	≤6 hours	7-9 hours	≥10 hours	Total
Age, Mean (SD)	2215 (35.3)	3896 (62.2)	156 (2.5)	6267
Female, n (%)	43.1 (12.7)	40.9 (13.2)	36.4 (14.0)	41.5 (13.1)
Female, n (%)	1952 (88.1)	3598 (92.4)	142 (91.0)	5692 (90.8)
Race, White (%)	3664 (84.9)	2104 (84.4)	142 (91.0)	5768 (84.7)
Ethnicity, Hispanic (%)	170 (7.7)	226 (5.8)	8 (5.1)	404 (6.4)
Annual Household Income, >\$75,000, n (%)	795 (45.1)	1691 (51.5)	42 (36.5)	2528 (50.7)
Education, ≥ College degree	1491 (67.3)	2972 (76.3)	92 (59.0)	4555 (72.7)
≥15 migraine headache days per month	952 (42.9)	1317 (33.8)	74 (47.4)	2343 (37.4)
MIDAS severe disability, n(%)	1832 (82.7)	3031 (77.8)	140 (89.7)	5003 (79.8)
PSS-4 Total Score, mean(SD)	8.13 (3.07)	7.14 (3.05)	8.98 (3.47)	7.53 (3.11)
Anxiety, PHQ4, n(%)	1099 (49.6)	1476 (37.9)	90 (57.7)	2665 (42.5)
Depression, PHQ4, n(%)	814 (36.7)	989 (25.4)	71 (45.5)	1874 (29.9)

Sleep duration and perceived stress



Unhealthy sleep duration and migraine outcomes

	≤ 6 hours	≥ 10 hours
Disability	9.5% higher (95% CI: 1.038–1.155)	59.6% higher (95% CI: 1.358–1.876)
Migraine Headache Days	9.2% increase (95% CI: 1.033–1.154)	23.5% increase (95% CI: 1.045–1.459)

CONCLUSIONS

- Self-reported short (≤ 6 hours) and long (≥ 10 hours) sleep duration is associated with a more disabling and more severe migraine phenotype, characterized by increased headache frequency, greater symptom severity, and higher stress levels