

Validity of Self-Reported Migraine in Adolescents and Children



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Background

- Est. 7-9% of children & adolescents have migraine^{1,2}
- International migraine trial guidelines recommend prospective collection of headache symptoms^{3,4}
- No strong consensus on how to define a day with any occurrence of migraine (migraine-day):
 - 1) Patient self-report of migraine
 - 2) Diagnostic criteria based on patient self-report of associated symptoms (aura, timing, etc.)

Objective

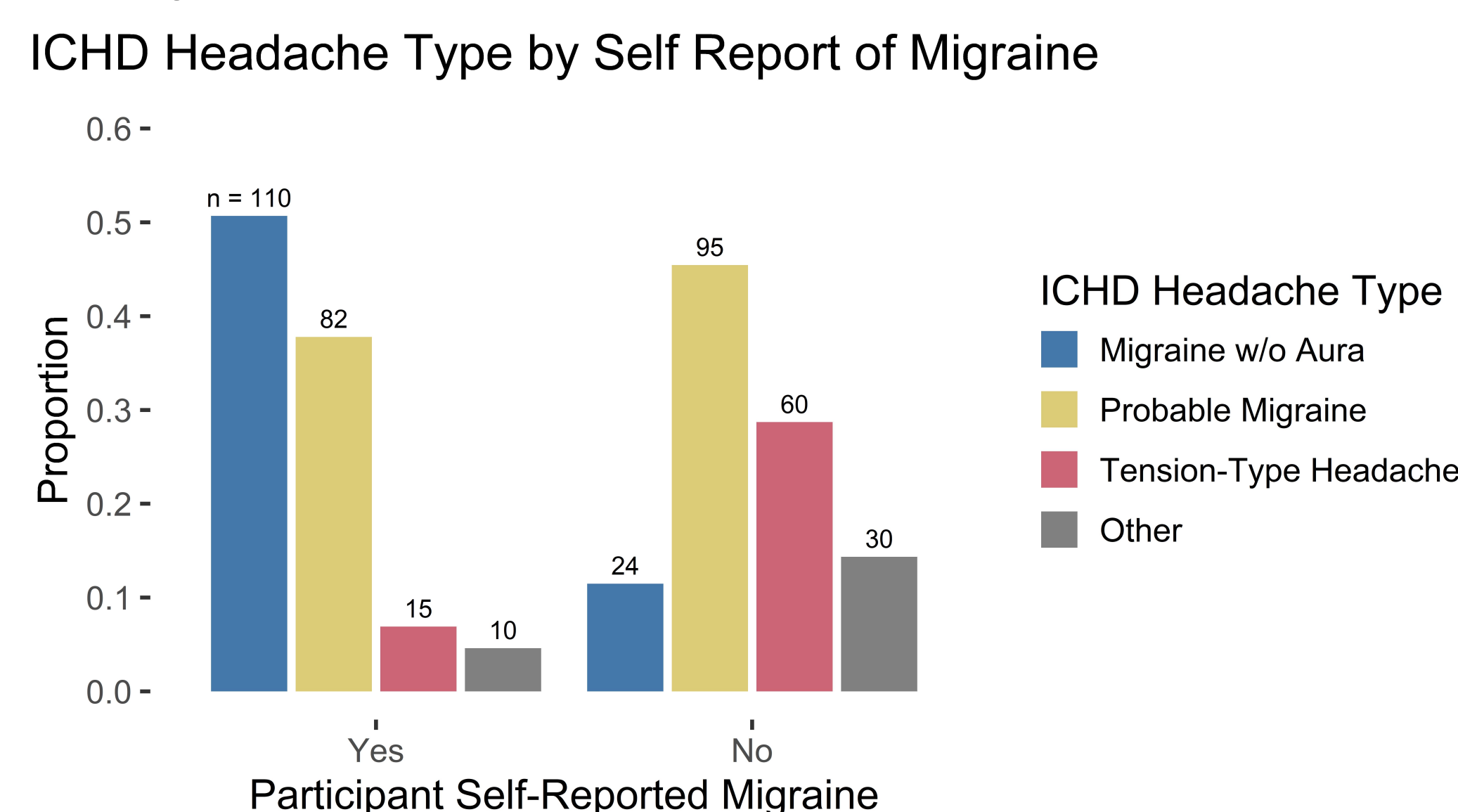
To assess agreement between migraine-day by self-report and by diagnostic guidelines for children and adolescents who completed a headache (HA) diary

Methods

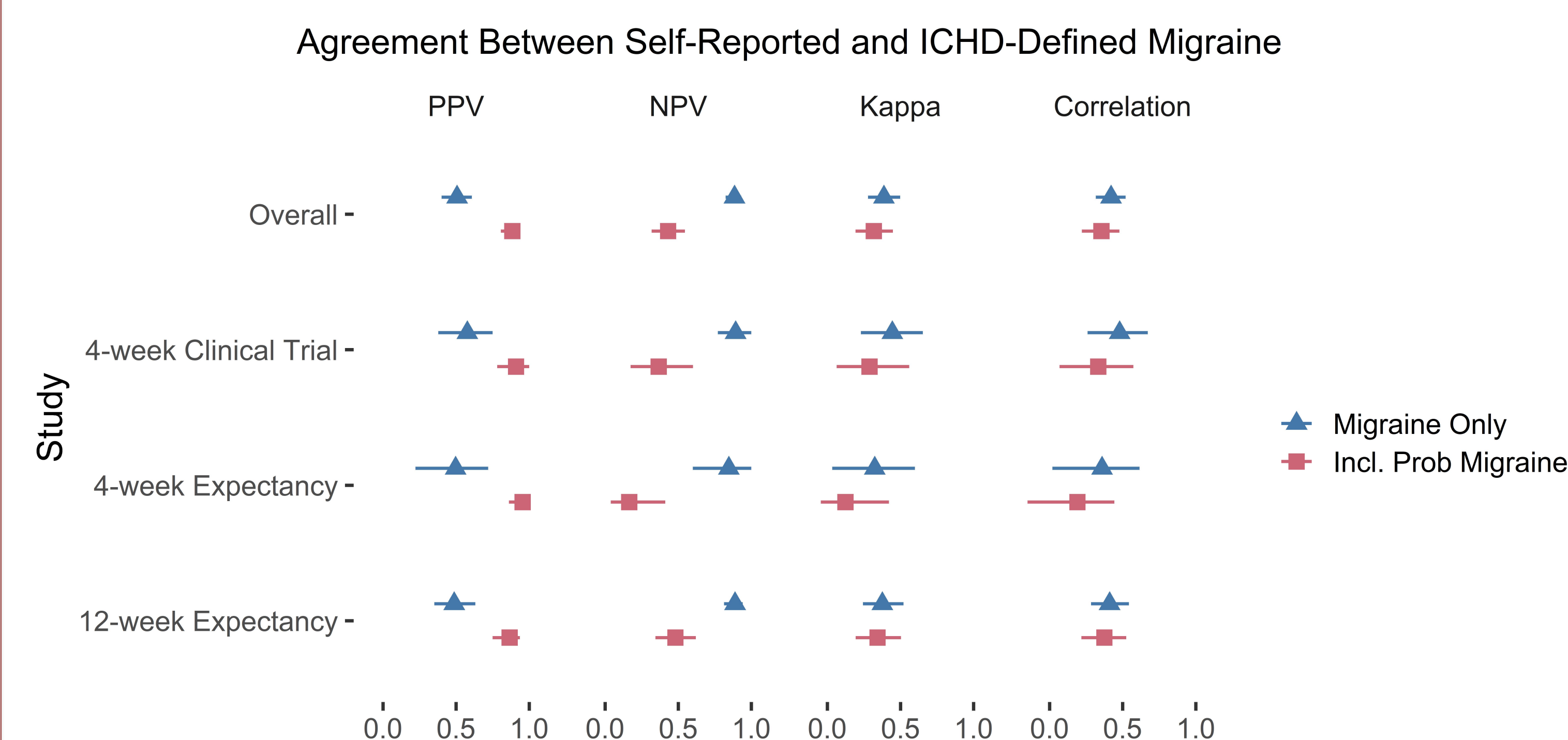
- Secondary analysis of data from 2 projects
 - 1) Clinical trial – Occipital nerve blocks
 - 2) Study of treatment expectancy – Usual care
- Participants completed:
 - Texting diary for 4 or 12 weeks (by treatment)⁵
 - Detailed assessment on random 20% of days with self-reported HA (HA-day)
- Determined if a HA-day met criteria for migraine or probable migraine
 - Based on the International Classification of Headache Disorders 3rd edition (ICHD)⁶
- We compared self-reported and ICHD-defined migraine-days by positive and negative predictive values (PPV; NPV) and Cohen's Kappa (Kappa)
- Confidence intervals (CIs) generated via bootstrap⁷

Results

- 116 participants completed diary between Nov 2018 and Nov 2021; 100 completed ≥ 1 detailed assessment
 - Mostly female (83%), non-Hispanic White (78%), and adolescent (93%)
 - Median ≥ 15 HA-days/month at baseline
- Of 5521 diary entries, 3399 reported HA-days
- 426 requests for detailed assessment



- 419 completed assessments (98% completion)
 - 217 days with self-reported migraine
 - 134 days with ICHD-defined migraine without aura
 - 177 days with ICHD-defined probable migraine with or without aura



- Low agreement between self-reported and ICHD-defined migraine without aura

Results

- PPV of 0.51 (95% CI: 0.40-0.61)
- Kappa of 0.39 (95% CI: 0.28-0.61)
- Allowing for probable migraine:
 - Increased PPV (0.51 vs. 0.88; 95% CI: 0.40-0.61 vs. 0.81-0.94)
 - Decreased NPV (0.88 vs. 0.43; 95% CI: 0.82-0.93 vs. 0.32-0.55)
 - No sig. change in Kappa (p=0.6)

Conclusions/Future Directions

- Low agreement between self-reported and ICHD-defined migraine
 - Kappa < 0.4 after adjusting for chance
 - Allowing for probable migraine did not change Kappa significantly
- Limitation: Could not confirm migraine with aura (no Qs about symptom laterality or timing)
- Suggests that patients' understanding of migraine may not align with diagnostic criteria
 - Both definitions may capture different aspects of living with migraine as a chronic disorder
- We recommend greater transparency; many publications do not clearly state their definition of a "migraine-day"

References

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