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Objective

- Women with migraine are divided into 3 groups based on the relation of headache to menses: Pure Menstrual Migraine (PMM), Menstrual Related Migraine (MRM) and Non-Menstrual Related Migraine (NMRM).
- Herein we examine the relationships of migraine group to time to peak headache pain intensity, functional impairment and pain interference in a large systematic sample of women with migraine.

Eligibility

- Respondents, ≥18 years, were recruited to the MAST Study from a nationwide online research panel, using stratified random sampling. A validated screener used modified ICHD-3-beta criteria to identify individuals with migraine.
- Respondents averaging ≥1 headache day per month (MHD) over the previous 3 months. This analysis included women with episodic migraine aged 18-55, who were pre- or peri-menopausal, with ≥ 1 menstrual period in the last 12 months.

Methods

- For all attacks (both menstrual and non-menstrual), we assessed 1) time to peak headache pain intensity 2) time to initial functional impairment and 3) time to peak functional impairment dichotomizing onset times into rapid (≤60 minutes) and slow (>60 minutes).
- The PROMIS Pain Interference Short Form 6b assessed work and social consequences of pain over the past 7 days (normalized score, mean 50, SD 10).
- Chi-square tested differences among dichotomized outcome measures. ANOVA and Tukey post hoc tests (p<.05) were used to assess differences in mean PROMIS standardized scores.

Fig 1. Proportion of women reaching specified outcome within 1 hour by menstrual migraine subgroup

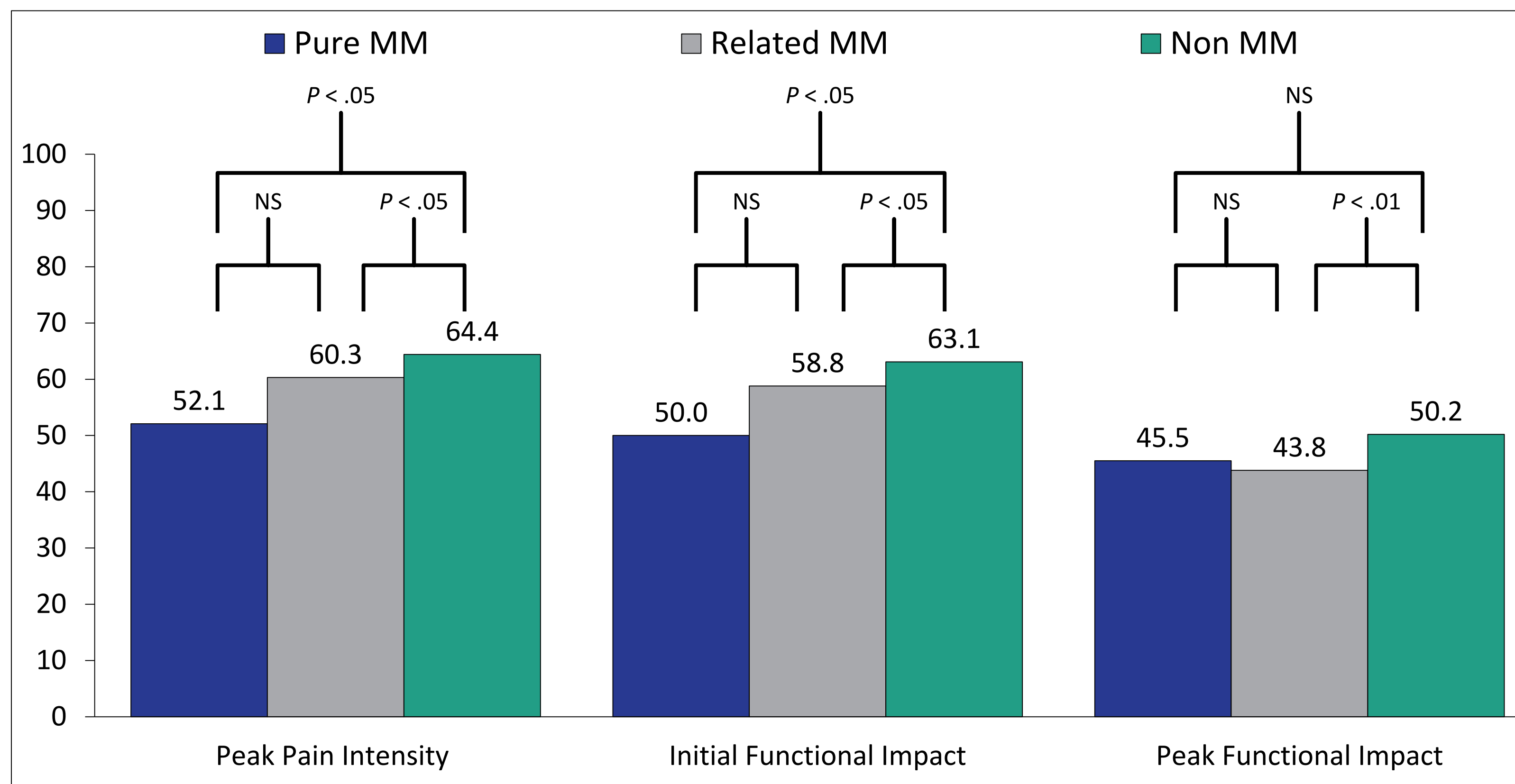


Table 1. Distribution of Time to Peak Intensity, Initial Functional Impact and Peak Impact of Headache Among Women in the Analysis

Time for Headache to Reach Peak Pain Intensity (%)	... Initial Functional Impact (%)	... Peak Functional Impact (%)
15 Minutes	8.3	8.6	4.9
30 Minutes	22.9	18.1	12.7
60 Minutes	31.7	27.5	27.0
90 Minutes	14.9	13.0	17.6
2 Hours	12.7	13.1	17.5
4 Hours	6.4	4.3	8.1
> 4 Hours	3.0	3.6	4.7
DK/NA	0	11.9	7.5

Summary values for ≤60 minutes: Peak Pain Intensity 31.2%, Initial Functional Impact 26.7%, Peak Functional Impact 17.6%. Summary values for >60 minutes: Peak Pain Intensity 62.9%, Initial Functional Impact 54.2%, Peak Functional Impact 44.6%.

Results

- Among 2,833 eligible women, the mean age was 36.5 years. 78.6% were Caucasian and they averaged 3.6 MHDs.
- A total of 73 women (2.6%) met criteria for PMM, 817 (28.8%) for MRM and 1,943 (68.6%) for NMRM.
- Within an hour of the start of an attack, 62.9% reported that headache pain reached peak intensity, 54.2% experienced an initial impact on functioning and 44.6% experienced peak functional impact.
- Women with NMRM were more likely to reach peak pain intensity within 60 minutes (64.4%) compared with women with MRM (60.3%; $P = .044$) and PMM (52.1%; $P = .031$). Patterns were similar for initial and peak functional impairment within an hour for the three groups (Fig 1).
- Post hoc analyses showed a trend towards a lower proportion of rapid (60 minutes or less) pain onset and impairment among PMM women and MRM women as compared to NMRM women.
- PROMIS-derived pain interference was lower among PMM women (standardized score 52.9) vs MRM (57.1) and NMRM (56.0) ($F=12.4$, $P < .001$; all post hoc comparisons were significant $P < .01$).
- Overall, more than half of women in the study reached peak pain intensity and initial functional impact within 1 hour.

Conclusions

- Women with NMRM were more likely to achieve peak pain intensity and peak functional impairment within one hour of headache onset compared to women with peri-menstrual attacks (PMM and MRM).
- Women with NMRM had more pain interference than women with peri-menstrual pain.