Persistent moderate or severe neck pain (MSNP) after motor vehicle collision (MVC) is an international public health problem.1,2 Recent increases in MVC-related injuries and fatalities have stimulated additional research and efforts to improve the recognition, treatment, and outcomes for patients with MVC-related pain.3,4 Although many studies have explored sex differences in MVC-related pain between men and women,5-8 to date sex differences in symptom characteristics and predictors of persistent post-MVC MSNP have not been assessed.

We hypothesized that significant differences in predictors of persistent MSNP would exist between men and women experiencing MVC.

**METHODS**

European American men and women ≥18 and ≤65 years of age presenting to one of eight emergency departments (EDs) in four no-fault insurance states within 24 hours of MVC who did not have a serious fracture or other injury requiring hospital admission were enrolled. Baseline ED assessment included an evaluation for the presence of MSNP (defined as neck pain lasting ≥7 days estimated physically recover). Patients reporting involvement in litigation at six weeks follow-up were excluded. Interactions between gender and other predictors were evaluated and relative risks (RRs) by gender were estimated using Poisson regression adjusted for study site. Interactions with p <.10 were considered significant.

**RESULTS**

Eight hundred and thirty-nine patients (859/948; 91%) completed 6 week follow-up, 711/948 (75%) were non-litigants and included in analyses.

MSNP was present in 242/451 (54%) of females vs. 109/257 (42%) of males in the ED (X² = 8.28, p = .004) and 158/453 (35%) of females vs. 412/585 (16%) of males at 6 week follow-up (X² = 29.40, p < .001).

Although women experienced a higher prevalence of persistent pain (Figure 2), individual predictors of pain outcomes were more strongly predictive in men than in women (Table 2).

Predictors of persistent MSNP that differed significantly in men and women included pain catastrophizing, age, and collision type (Table 2).

**CONCLUSIONS**

Significant differences in predictors of MSNP exist between men and women experiencing MVC.

While women experienced higher rates of MSNP, a number of vulnerability factors were more influential in men.

Further studies are needed to better understand sex differences in the etiology of post-traumatic pain.

**REFERENCES**


