INTRODUCTION

- Persistent moderate or severe neck pain (MSNP) after motor vehicle collision (MVC) is an international public health problem.1

- Increasing evidence suggests that important differences may exist in the pathogenesis of persistent pain between men and women,2-4 but to date sex differences in 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 ≥4 on 0–10 NRS during the past week).

- Interactions between gender and other predictors were estimated using Poisson regression adjusted for study site. Interactions with p < .10 were considered significant.

- Extent of damage to vehicle
  - Minor
  - Moderate
  - Severe

- Cigarette Use
  - None
  - Light
  - Moderate

- Annual income
  - <20,000
  - $20,000 to $40,000
  - $40,000 to $80,000
  - ≥$80,000

- Education
  - Less than high school
  - High school graduate or less
  - Some college or trade school
  - College graduate or graduate degree

- Employment status
  - Employed
  - Unemployed
  - Retired

- Age
  - <18
  - 18-65
  - ≥65

RESULTS

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

- MSNP was present in 243/453 (54%) of females vs. 109/257 (42%) of males in the ED (Χ² = 8.28, p = .004) and 158/453 (35%) of females vs. 41/258 (16%) of males at 6 week follow-up (Χ² = 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


