

# PAIN IN FRANCE ANALYSIS OF 2015 NATIONAL HEALTH AND WELLNESS SURVEY DATA

Authors: Yacine Hadjati, M.D.\*, Jeffrey Vietri, Ph.D.\*\*

## BACKGROUND

Pain is commonly understood as an important determinant of health-related quality of life (HRQoL), limitations to activities, and healthcare use.

While surveys of the impact of specific types of pain in France have been reported, the most recent large-scale survey assessing the prevalence and impact of pain in France was reported in 2011, which was based on data collected in 2008<sup>[1]</sup>.

## OBJECTIVES

To describe the current impact of pain on adults in France in terms of health-related quality of life (HRQoL), impairment to activities, and use of healthcare

## METHODS

Data source: Data were provided by the 2015 National Health and Wellness Survey an Internet-based survey of adults 18 and older in France (N=19,173). All measures were by self-report

## GROUPING VARIABLES

- Self-report of pain as a condition experienced in the 12 months prior to the survey
- Sex
- Charlson co-morbidity index score (CCI), a comorbidity index which weights and sums the presence of mortality-related diseases, here calculated using self-reported diagnoses; respondents were categorized as CCI=0, 1-2, 3-4, or 5+<sup>[2]</sup>

## OUTCOME MEASURES

- HRQoL: Measured using the SF-36v2, a widely-used 36-item survey which provides a variety of scores<sup>[3]</sup>
- Mental health component summary (MCS) scores, which measure mental and emotional health
- Physical health component summary (PCS) scores, which measure physical health
- SF-6D health utility scores, a preference-based index score<sup>[4]</sup>
- Higher scores on each measure indicate better health
- Activity impairment was measured with the Work Productivity and Activity Impairment questionnaire, general health version (WPAI:GH)<sup>[5]</sup>
- Scores range from 0-100%
- Higher values indicate greater impairment in non-work activities

- Healthcare utilization in the prior 6 months due to any cause
- The number of health care provider (HCP) visits
- % using the emergency room (ER) at least once
- % hospitalized at least once

## ANALYSIS

- Respondents who indicated they had experienced pain in the prior 12 months were compared to those who did not
- MCS, PCS, SF-6D, activity impairment, and HCP visits were compared using independent-samples t-test
- % visiting ER and % visiting hospital were compared using chi-square test
- Analyses were conducted both overall and within gender by CCI strata to reduce confounding

## RESULTS

- Sample characteristics
  - The total sample included 19,173 respondents, was 48.3% men, with an average age of 47.9 years
  - Approximately 1 in 5 respondents (n=4,007) reported pain
- Most respondents (84%, n=16,059) had CCI scores of 0 (Table 1)
- The proportion of respondents reporting pain increased with increasing level of CCI.
- Very few respondents had CCI of 3-4 or 5+

Table 1: Respondents according to Sex, Presence of Pain, and Co-morbidity Category (CCI)

	Women		Men	
	NO PAIN	PAIN IN PAST 12 MONTHS	NO PAIN	PAIN IN PAST 12 MONTHS
Overall	7657	2408	7509	1599
CCI=0	6865	1897	6221	1076
CCI=1-2	745	464	1149	433
CCI=3-4	41	33	92	62
CCI=5+	6	14	47	28

- HRQoL: Health-related quality of life was worse among those with pain, with consistent results across domains, sex, and CCI categories
- Mental component summary scores approximately 3.5 points lower overall (minimally important difference [MID]=3.0) (Physical component summary scores more than 6 points lower [MID=3.0]) (Figure 1 & 2)
- SF-6D health utilities 0.09 points lower (MID=0.03) (Figure 3)

- Activity impairment was twice as high among those with pain as those without pain (Figure 4)
- Healthcare utilization
  - Respondents with pain also had more healthcare provider visits on average (Figure 5)
  - Pain was also associated with visiting the emergency room (Figure 6)
  - Those with pain were more likely to be admitted to the hospital (Figure 7)

Figure 1: Mental Component Summary Scores in France by Presence of Pain

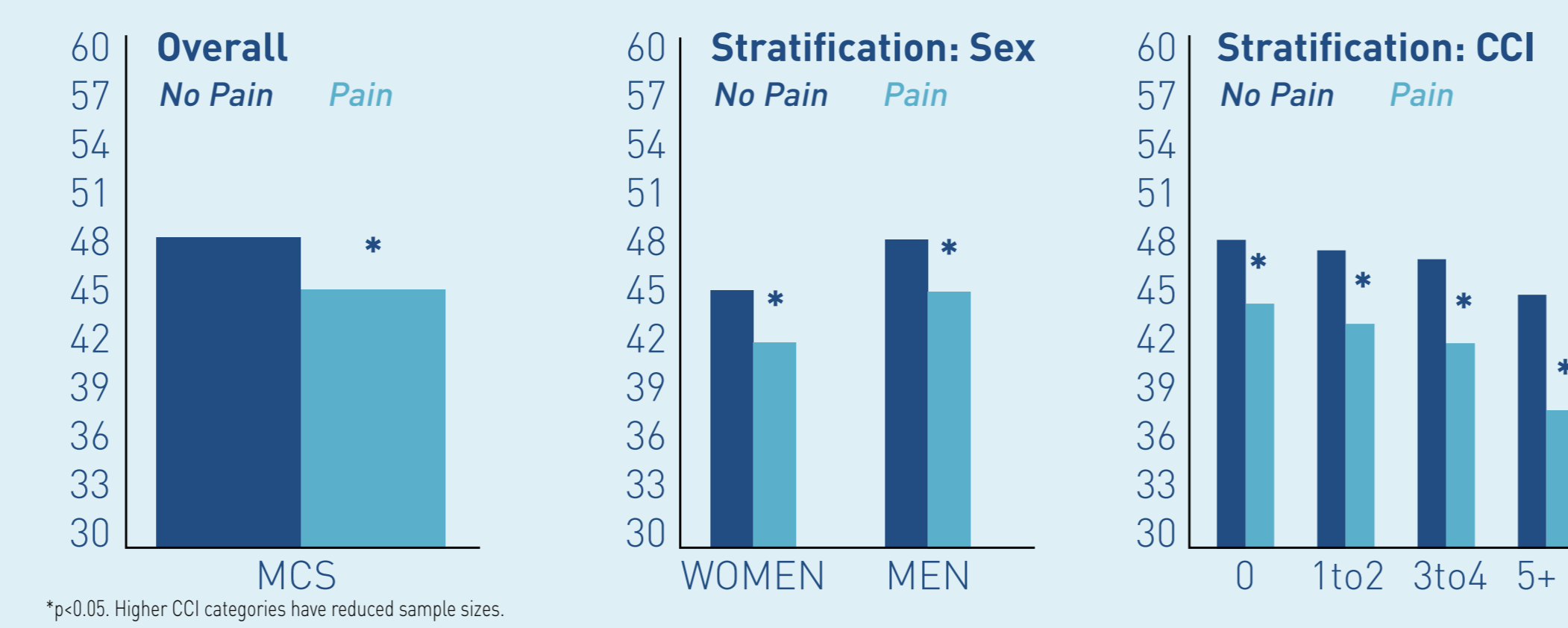


Figure 2: Physical Component Summary Scores in France by Presence of Pain

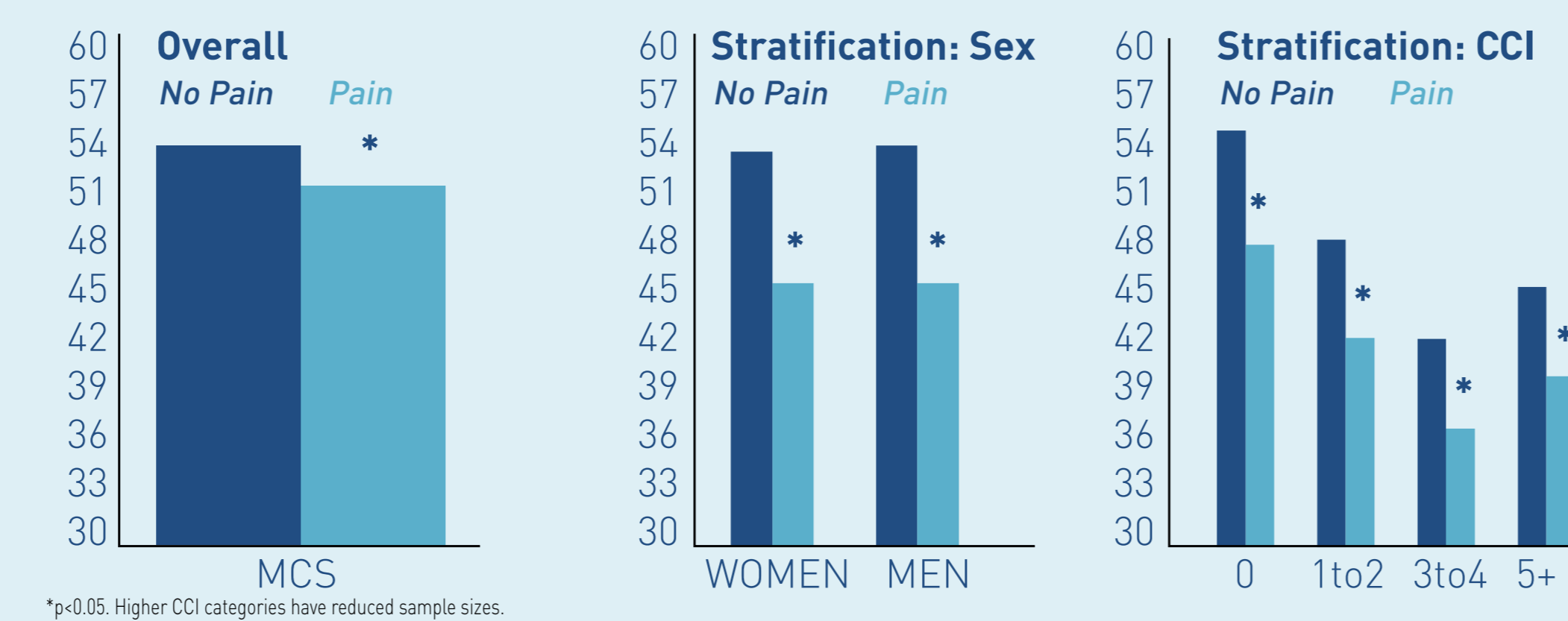


Figure 3: SF-6D Health Utility Scores in France by Presence of Pain

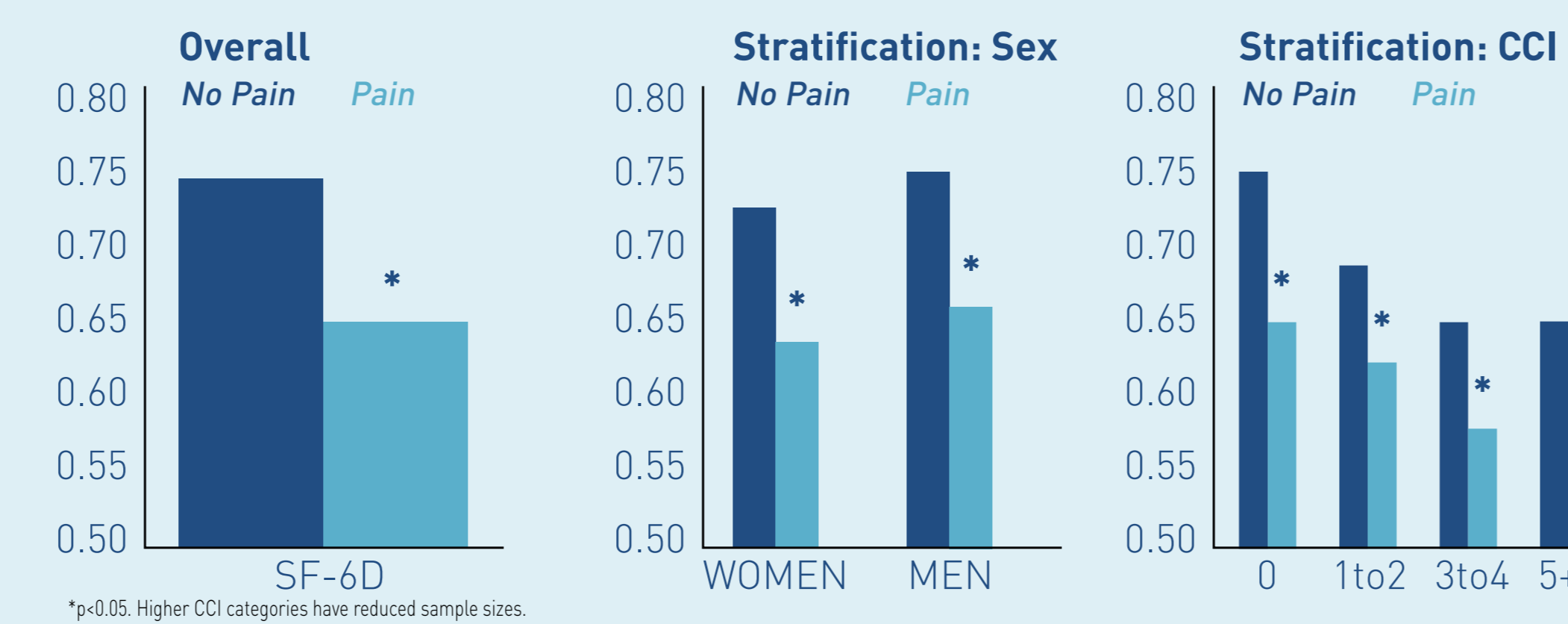


Figure 4: Activity impairment in France by Presence of Pain

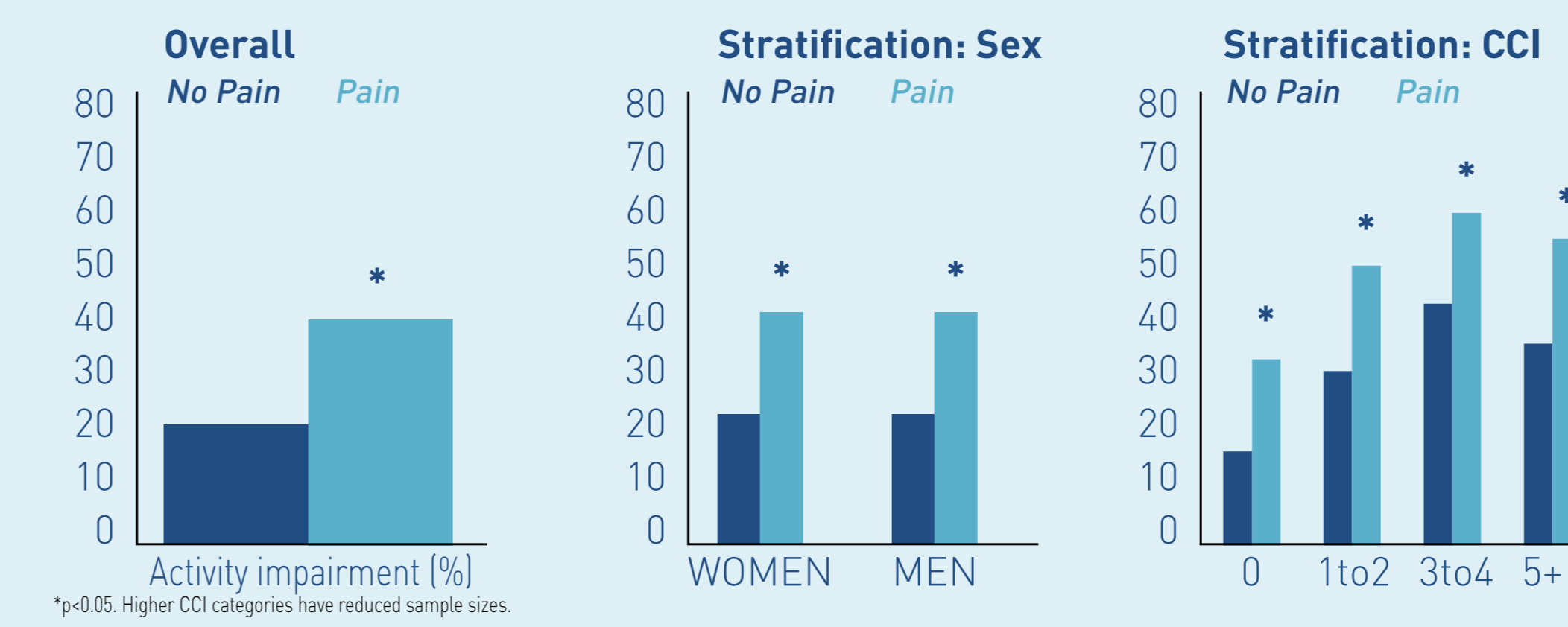


Figure 5: Healthcare Provider Visits (6-months, all-cause) in France by Presence of Pain

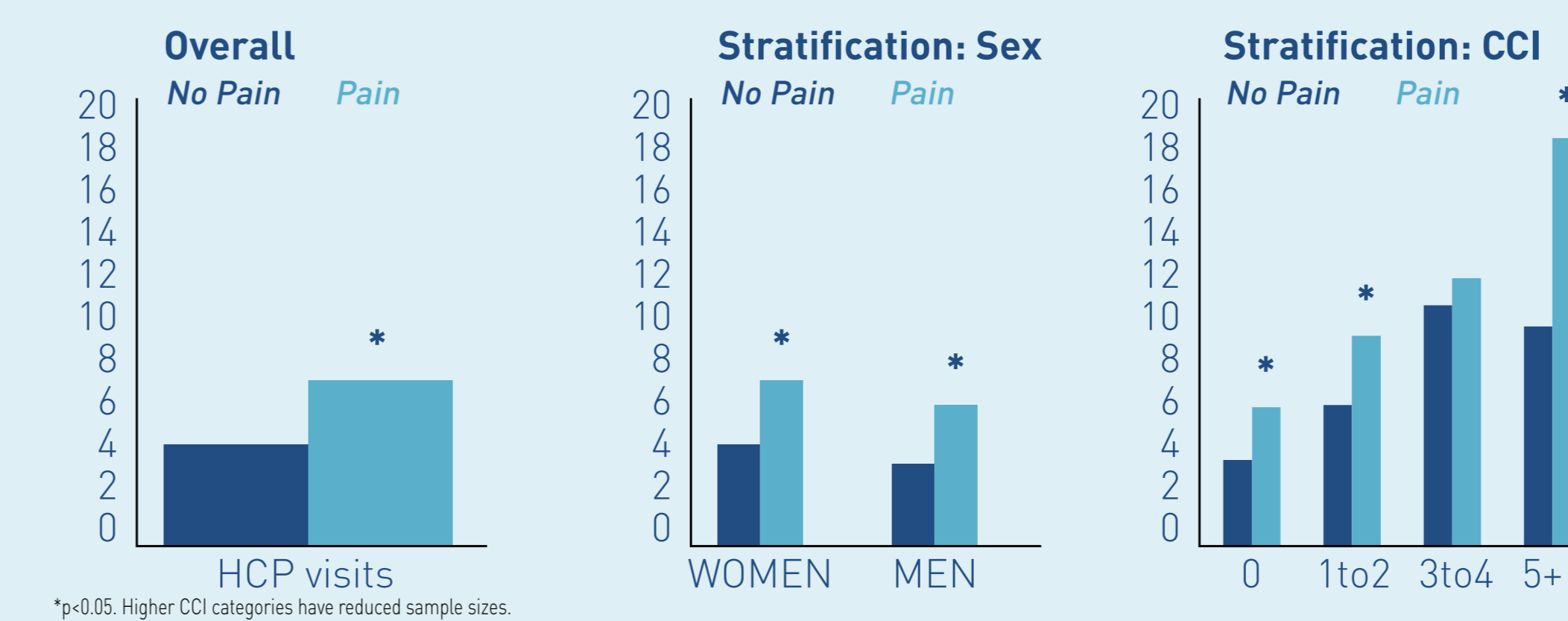


Figure 6: Percentage of adults in France visiting the emergency room by Presence of Pain

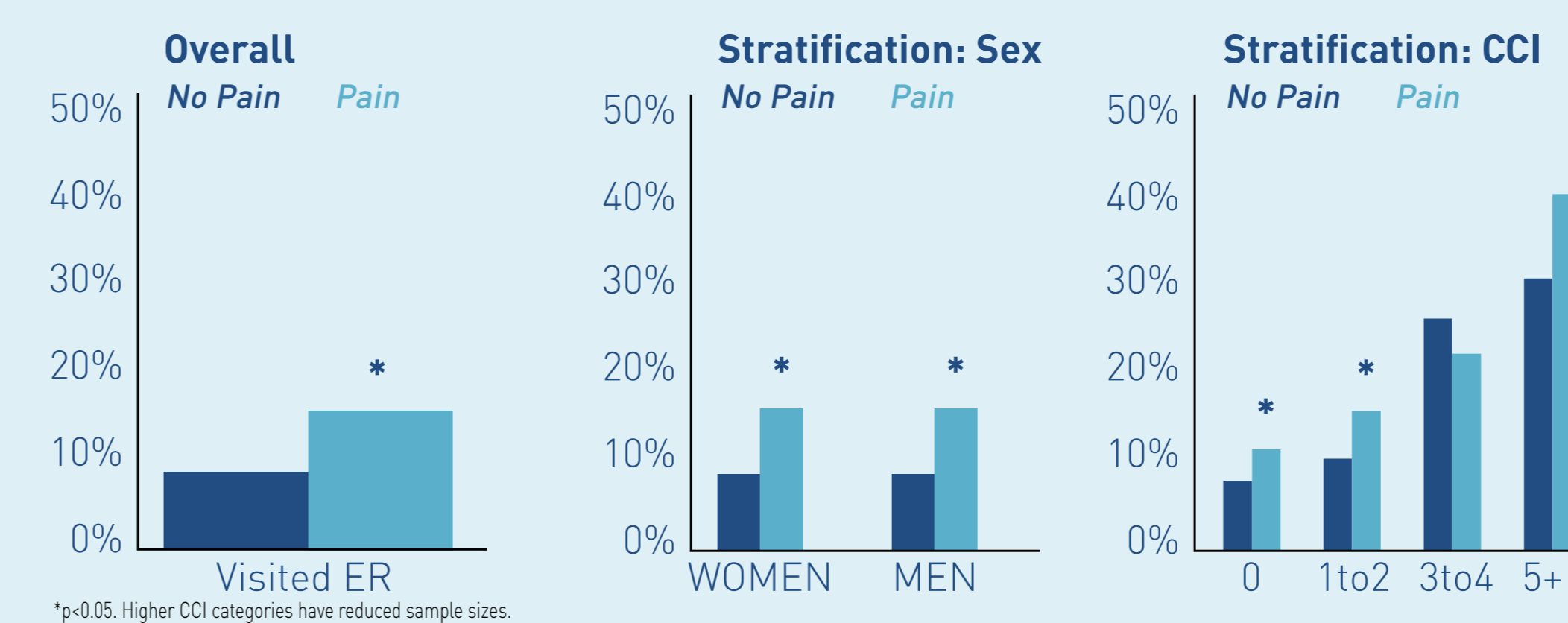
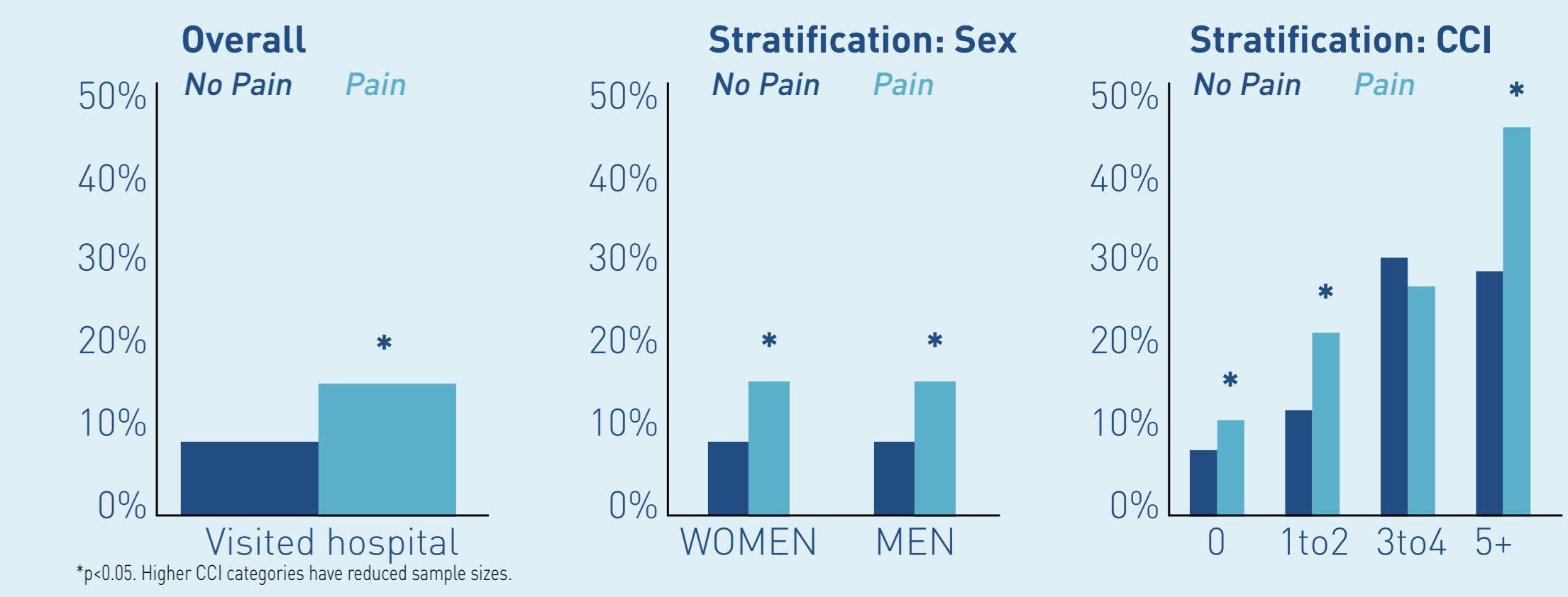


Figure 7: Percentage of adults in France being hospitalized by Presence of Pain



## DISCUSSION

- Adults in France who had pain suffer from clinically-meaningful reductions in both mental and physical HRQoL
- Pain is associated with significant increases in impairment to daily activities, with an absolute increase of approximately 20%
- Individuals with pain also use more healthcare
- The relationships between pain and outcomes were generally consistent across sex and level of comorbidity, though sample sizes limited the opportunity to find significant differences in outcomes among respondents in the higher-CCI categories

## CONCLUSIONS

**Pain continues to be both common and burdensome among adults in France.**