



Advocate
Illinois Masonic Medical Center

Racial Differences in Management of Chronic Non-Cancer Pain

Authors: Amir Siddiqui, DO, Stefanía Diaz Morales, MD, Alvaro Guerra Branger, MD, Nebojsa Nick Knezevic, MD, PhD
Department of Anesthesiology, Advocate Illinois Masonic Medical Center, Chicago, IL



Introduction

- Recent research suggests that there is a disparity in the management of chronic pain in different races, particularly in Black, Indigenous, and People of Color (BIPOC).¹
- Other findings suggest differences in pain prevalence and responses to acute and chronic pain among these groups.²
- This study examines the demographic and clinical characteristics of pain management among different racial groups.

Methodology

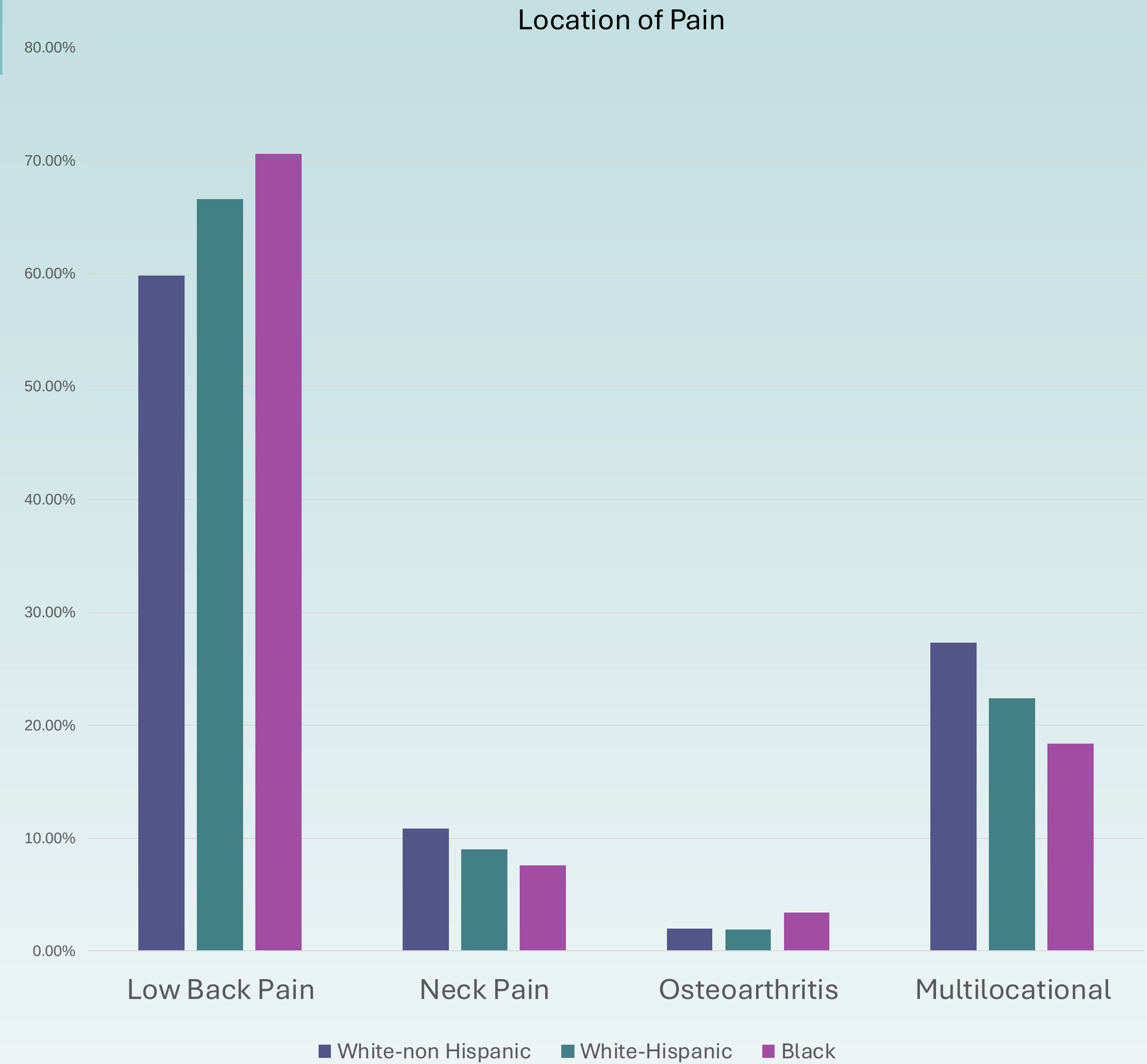
- After receiving approval from the Advocate Healthcare IRB, a total of 1,662 patients in the Chicagoland area were analyzed to determine variations in pain intensity, duration, type of pain, and treatment modalities.
- These patients were followed for a minimum of one year and had at least four different clinic appointments.
- Participants were subcategorized based on race, identifying as White-non-Hispanic, White-Hispanic, or Black.
- We collected variables such as age, Body Mass Index (BMI), duration of pain, pre-visit and post-visit pain rating on a numeric rating scale (NRS), location of pain, type of intervention received and use of different pain medications.
- We used IBM SPSS 27 (IMB Corporation, Armonk, NY) to perform statistical analysis; data were analyzed using ANOVA, χ^2 , and correlation analysis. Differences were considered significant with a p-value of $P < 0.05$. Incomplete data was excluded from analyses

Results

- Of the 1,662 participants in this study, 47.8% identified as White-non-Hispanic, 32.6% identified as White-Hispanic, and 19.6% identified as Black.
- Significant differences in mean age and BMI were observed across groups. The Black population reported a higher average age and BMI measurement ($p = .012$ and $p < .001$, respectively) (Table 1).
- Low Back Pain was the most prevalent condition across all groups, particularly among Black patients (70.6%, $p = .005$).
- Treatment strategies also varied significantly; steroid injections were most used, again especially among Black patients (90%, $p < .001$) (Table 2).
- Gabapentin and opioids were more frequently prescribed to White-Hispanic and Black patients compared to White-non-Hispanic patients ($p < .001$) (Table 2).
- These two populations also reported higher NSAID use than the White-non-Hispanic population ($p = .041$) (Table 2).
- Other treatments, including muscle relaxants and benzodiazepines, showed varying usage patterns across the groups.

	White-non-Hispanic	White-Hispanic	Black	p value
Age (Mean $\pm$ SD)	62.46 ± 15.39	64.39 ± 14.57	64.90 ± 13.43	$p = .012$
BMI (kg/m ²) (Mean $\pm$ SD)	29.22 ± 6.87	30.84 ± 6.25	32.69 ± 8.09	$p < .001$
Duration of Pain (months) (Mean $\pm$ SD)	46.43 ± 55.31	46.18 ± 72.36	45.97 ± 52.32	$p = .993$
Pre NRS (Mean $\pm$ SD)	7.67 ± 1.50	8.08 ± 1.25	8.07 ± 1.12	$p < .001$
Post NRS (Mean $\pm$ SD)	3.82 ± 1.99	3.98 ± 2.18	3.93 ± 2.13	$p = .385$

Table 1: Age, BMI, Pre and Post Treatment Scores



Type of Treatment	White-non-Hispanic	White-Hispanic	Black
Steroid Injection*	82%	89%	90%
Gabapentin*	33%	50%	50%
Opioids*	59.7%	52.5%	65.8%
Muscle Relaxants	32.4%	33.8%	40.6%
NSAIDS	54.9%	61.9%	58.2%
Tricyclic Antidepressants	5.9%	5.9%	4.6%
Benzodiazepines*	26.6%	18.9%	17.8%
Other antidepressants and anxiolytics*	34.2%	25.5%	23.3%

Table 2: Treatment methods (* = $p < .05$)

Discussion

- Pain assessment and management can be challenging due to its subjective nature. Its assessment and management requires an organized and effective communication strategy between patients and their providers.
- Our findings highlight disparities in pain management approaches and outcomes across different racial and ethnic groups, suggesting a need for tailored pain management strategies to address these differences effectively.
- Further studies should focus on overcoming these obstacles to ensure adequate and equal healthcare for all patients.

References

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