

# Chronic Pain and Its Effects in College Students

Madelyn Montgomery, Pharm.D. Candidate, J. Mark Ruscin, Pharm.D, J. Chris Lynch, Pharm.D.

## BACKGROUND

Most studies of chronic pain focus on the middle age or geriatric populations. Very few studies have been conducted in young adults, especially in the age range of typical college students (18-24). The CDC's NHANES surveys report that 5.4% of young adults (age 20-39) have a chronic pain condition requiring prescription pain medicine use. Chronic pain is less common in young adults. However, it may have a negative impact on student's daily lives.

## OBJECTIVE

- To evaluate and draw conclusions about the impact of chronic pain and medication use on college student's ability to meet academic responsibilities and maintain an active social life.

## METHODS

### Study Design

- cross section investigation of college-age students attending Southern Illinois University Edwardsville from the SIUe Student Health Center, School of Pharmacy students, and distribution on social media. IRB approval was obtained from the SIUe IRB.

### Inclusion Criteria

- College students of any age

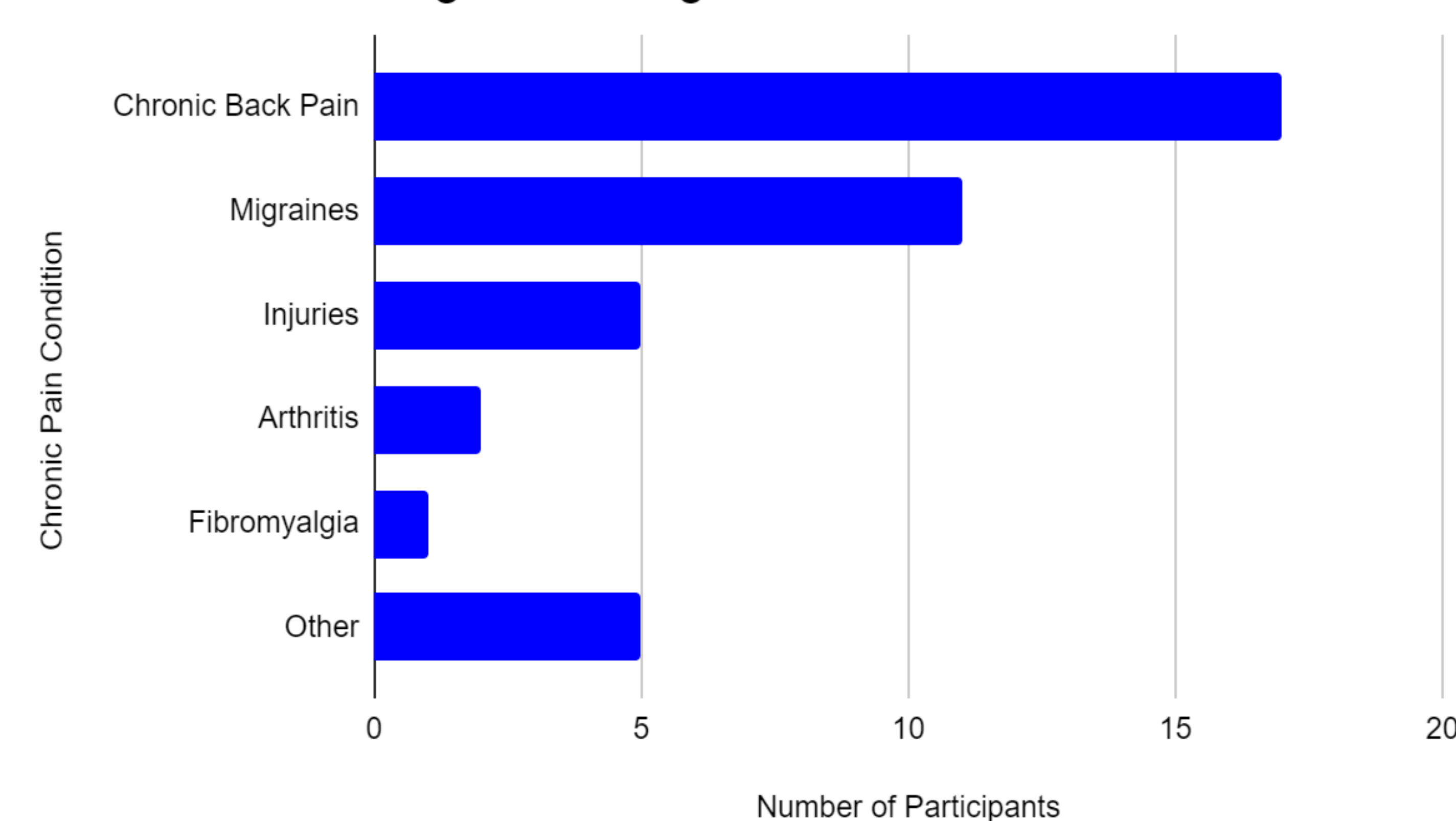
### Exclusion Criteria

- Participants who did not report having a chronic pain condition

## RESULTS

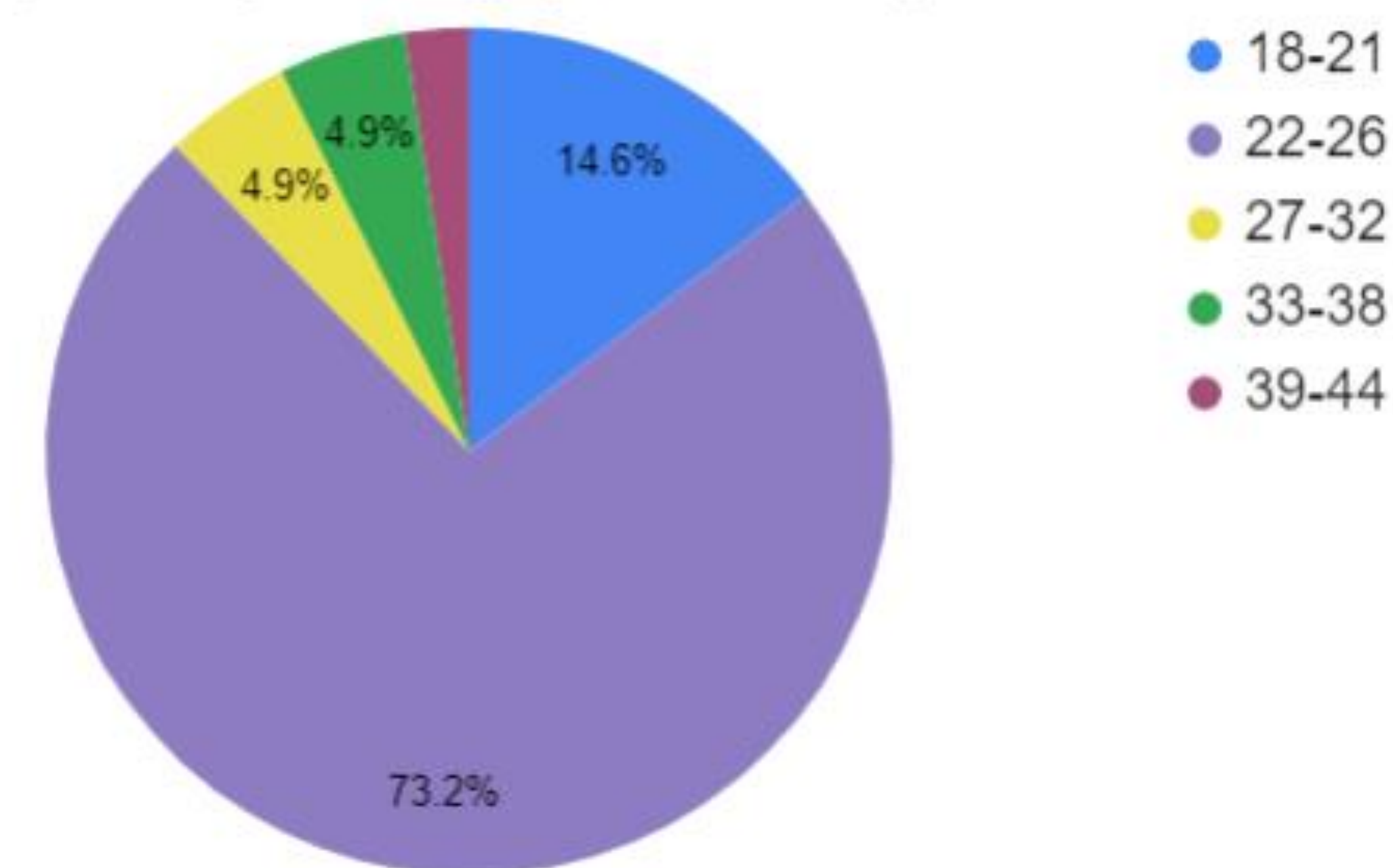
Between August 2020 and March 2021, we received 135 responses, with 41 reporting a chronic pain condition. They then selected which condition affects them (see Figure 1). Most participants were Caucasian (90%) and female (76%). For age, 15% were 18-21, and 73% were 22-26 (Figure 2).

Figure 1: Diagnoses of Patients



## RESULTS

Figure 2: Age Demographics of Surveyed Students



We received 135 responses, with 41 reporting chronic pain (most common causes Table 1). Participants were Caucasian (90%); female (76%). Mean baseline pain scores were  $4.6 \pm 1.80$ . Respondents most severe pain was rated at  $7.3 \pm 1.6$ . In the less severe pain group, participants mean impact on academics was  $4.1 \pm 2.3$ ; on social activities was  $4.0 \pm 2.0$ . In the more severe pain group, impact on academics was  $6.5 \pm 2.9$ ; on social activities was  $6.2 \pm 2.5$ . Participants with more severe pain rated the negative impact of pain medicine on academics to be  $3.0 \pm 2.9$ , vs  $2.2 \pm 2.5$  in the less severe pain group. Positive impacts of medication on academics were rated at  $3.8 \pm 3.0$  in the more severe pain group, vs  $3.6 \pm 3.0$  in the less severe pain group. Similar positive impact on social activities at a mean of  $4.4 \pm 2.7$  in the more severe pain group and  $3.8 \pm 2.5$  in the less severe pain group.

Table 1: Impacts on Groups separated by Average Pain Score in the Last Month

Question	Impacted Category	Average Pain Rating less severe (1-5) N= 28 patients	Average Pain Rating more severe (6-10) N= 13 patients
Impacted Negatively (1-10) by Chronic Pain	Academics	$4.1 \pm 2.3$	$6.5 \pm 2.9$
Impacted Negatively (1-10) by Chronic Pain	Social Life	$4.0 \pm 2.0$	$6.2 \pm 2.5$
Pain Medication Negatively (1-10) Impacts:	Academics	$2.2 \pm 2.5$	$3.0 \pm 2.9$
Pain Medication Negatively (1-10) Impacts:	Social Life	$1.7 \pm 2.2$	$2.6 \pm 2.1$
Pain Medication Positively (1-10) Impacts:	Academics	$3.6 \pm 3.0$	$3.8 \pm 3.0$
Pain Medication Positively (1-10) Impacts:	Social Life	$3.8 \pm 2.5$	$4.4 \pm 2.7$

## RESULTS

Table 2: Impacts on Groups separated by Most Severe Pain Score in the Last Month

Question	Impacted Category	Worst Pain Rating less severe (1-5) N= 5 patients	Worst Pain Rating more severe (6-10) N=36 patients
Impacted Negatively (1-10) by Chronic Pain	Academics	$2.6 \pm 1.9$	$5.1 \pm 2.7$
Impacted Negatively (1-10) by Chronic Pain	Social Life	$2.2 \pm 1.5$	$5.0 \pm 2.3$
Pain Medication Negatively (1-10) Impacts:	Academics	$2.6 \pm 3.1$	$2.4 \pm 2.6$
Pain Medication Negatively (1-10) Impacts:	Social Life	$3.2 \pm 2.6$	$1.8 \pm 2.1$
Pain Medication Positively (1-10) Impacts:	Academics	$2.4 \pm 2.2$	$3.8 \pm 3.0$
Pain Medication Positively (1-10) Impacts:	Social Life	$3.4 \pm 1.9$	$4.1 \pm 2.6$

## DISCUSSION

Studies in this demographic have focused on student athletes (sports injuries), which is a non-representative sample of college students. The most common causes of chronic pain in our sample were chronic back pain and migraine. Our findings suggest further studies are warranted to more closely examine chronic pain and the functional impacts of treatment in college age students.

## CONCLUSION

- Chronic pain and pain medication use can negatively impact academics and social activities in college-age students. More severe pain appears to amplify this impact.
- While taking pain medication was perceived to have both positive and negative effects, the positive impact of taking pain medication typically outweigh the negative impact, particularly in those with more severe pain.

Thank you!