

## BACKGROUND

- Osteoarthritis remains among most common debilitating forms of chronic synovial joint disease.<sup>1</sup>
- As it relates to OA, chronic pain is a major concern for which there are few viable long term treatment options without significant side effects.<sup>2,3</sup>
- A disproportionate risk-benefit profile of opioid use for arthritis pain control, makes these modalities less than ideal.
- A need for alternative options of pain management among patients suffering from chronic joint pain exists.
- Cannabidiol (CBD) use has increased exponentially over the past several years as it has become readily available to consumers.
- There is a paucity in literature and general consensus on the efficacy of cannabidiol use among patient suffering from various arthritic conditions.<sup>4</sup>

## OBJECTIVE

- The purpose of this study was to perform a large investigational survey to identify multiple parameters of Cannabidiol use.
- First, to explore commonality of cannabidiol among various populations
- Second, to identify patient reported outcomes of CBD use compared to baseline
- Third, to delineate the impact of CBD on patient-reported reliance on other pharmacologic modalities for arthritic pain management.

## METHODS

- Novel survey was designed to capture information from individuals with various forms of arthritis on REDCap Survey Instrument Tool.
- Survey enrollment and access was restricted to 6 months (May 5th, 2020 to November 5th 2020)
- The survey was distributed to collect a convenience sample from social media platforms, online patient organizations, and the Arthritis Foundation, NY newsletter.
- Anonymous online survey, initially taken by 709 patients. Patients were excluded if they were <18 years old, denied arthritic pain, denied trying CBD for arthritic pain. 428 patients were included in the study.
- The survey recorded demographic information, characteristics of CBD use, effects of CBD on pain, physical function, and sleep using Likert rating scale.
- Patients graded their arthritis pain on a 0 to 10 NRS scale, before and after taking CBD. Pain percent reduction and point reduction was calculated based on the difference to baseline.

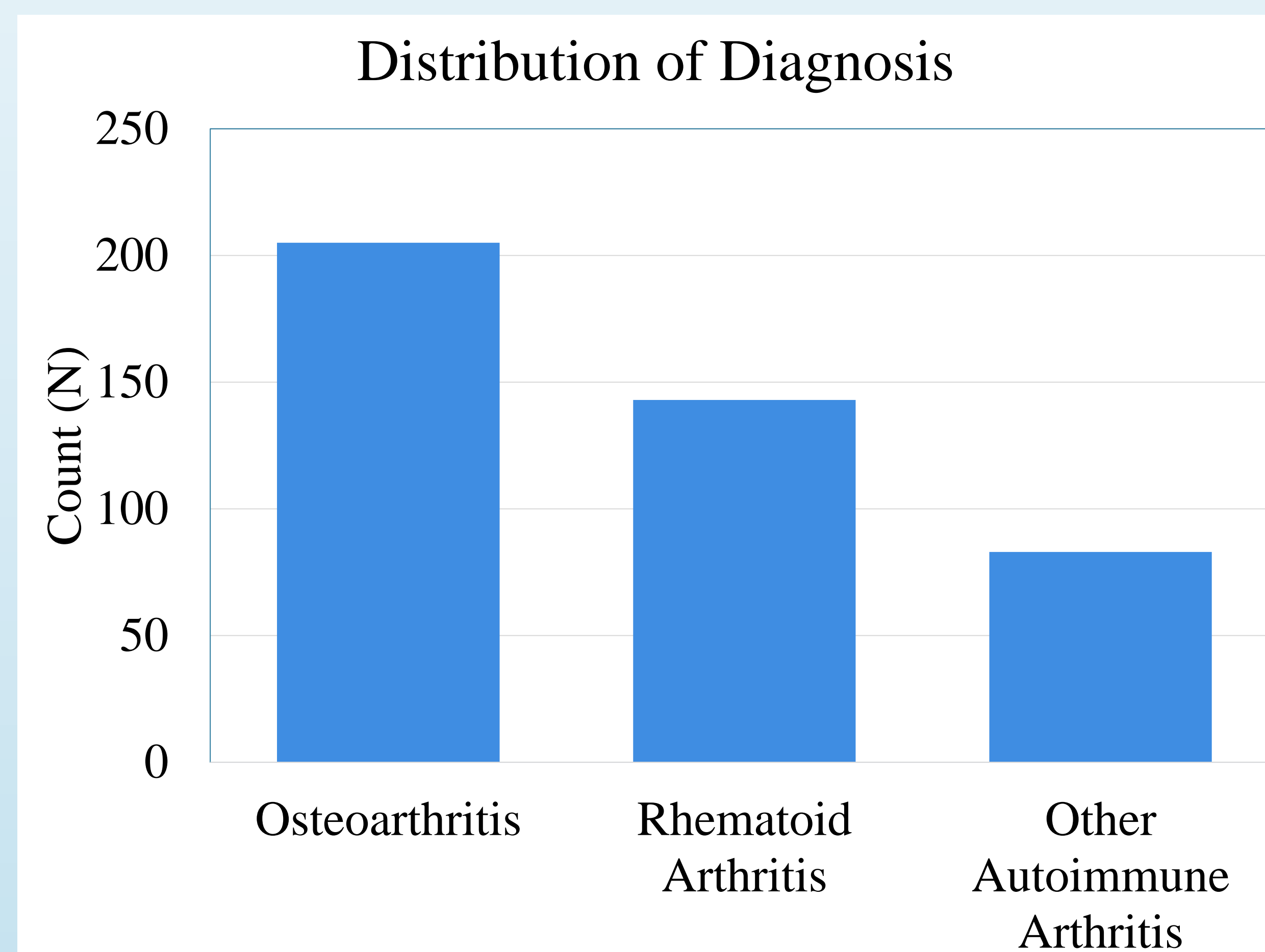
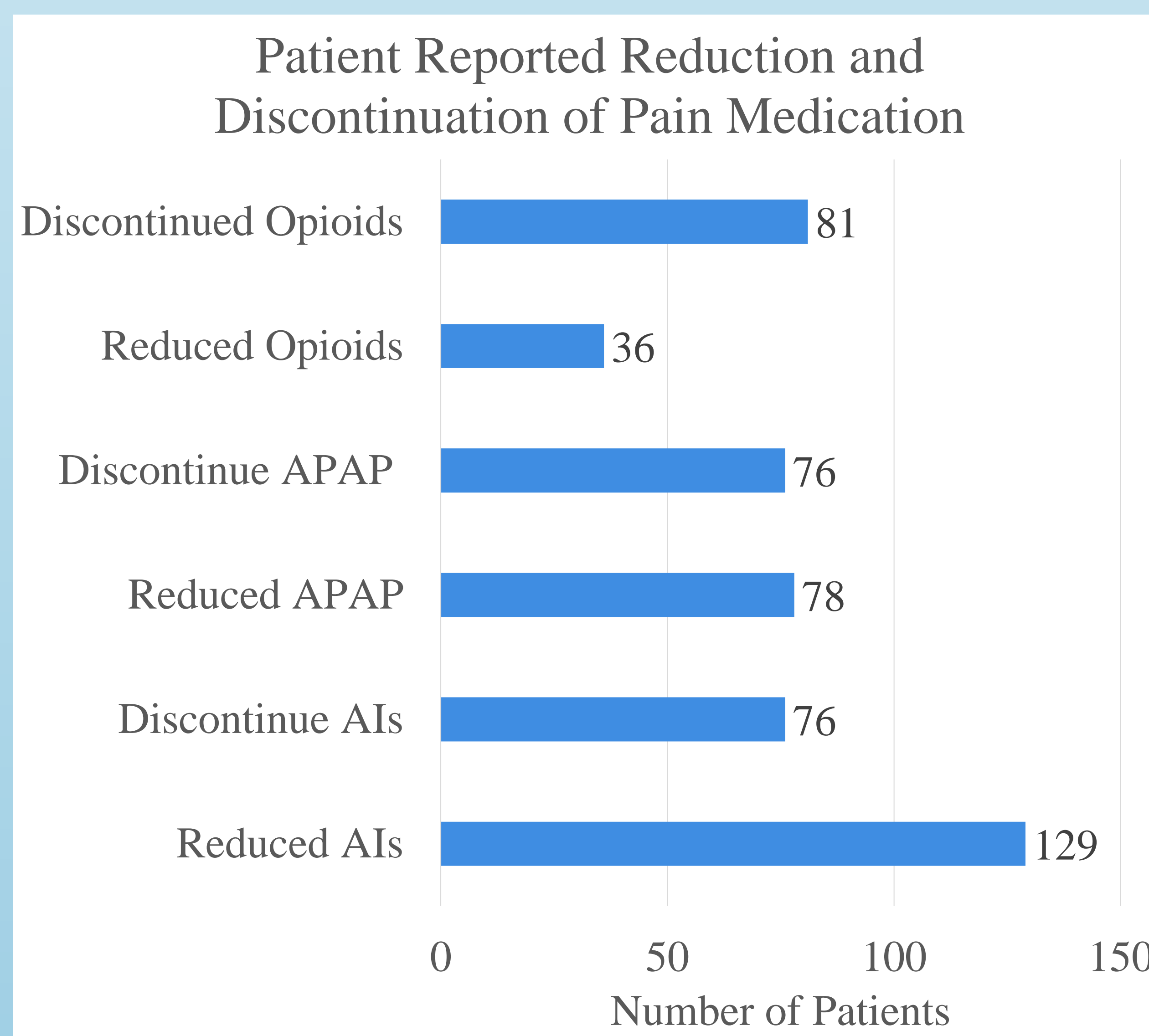


Figure 1



APAP: Acetaminophen; AI: Anti-inflammatories

Figure 2

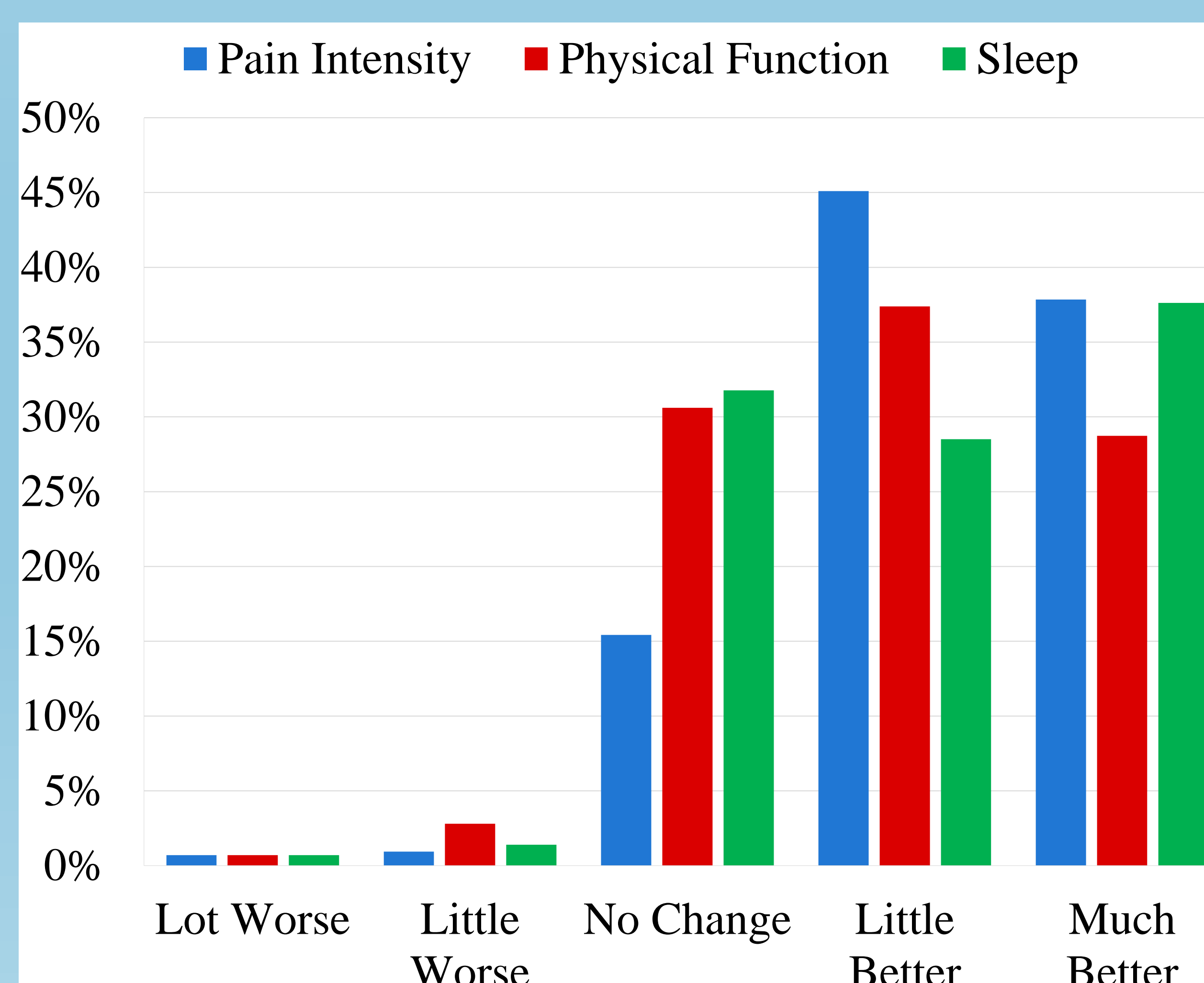


Figure 3

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## RESULTS

- Diagnosis distribution can be seen in **Figure 1**.
- Reported joints that cause them pain were: 227 (53%) knee, 221 (51.6%) hand, 179 (41.6%) hip, 168 (39.3%) shoulder, 143 (33.4%) wrist, 112 (26.2%) ankle, and 63 (14.7%) elbow.

### Prior Treatments:

- Anti-inflammatories (N=392, 91.4%), Acetaminophen (N=283, 66.0%), Physical Therapy (N=274, 60.7%), Intra Articular steroid injection (N=197, 45.9%), and Opioids (N=181, 42.19%).

### Concomitant Medication Reduction:

- 259 (64.4%) respondents reported “Reduction or cessation of other concomitant medications due to CBD use for their joint pain”:
- Reducing Anti-inflammatories (N=129, 31.1%)
- Discontinuing Anti-inflammatories (N=76, 17.8%),
- Reducing Acetaminophen (N=78, 18.2%)
- Discontinuing Acetaminophen (N=76, 17.8%)
- Reducing Opioids (N=36, 8.6%)
- Discontinuing opioids (N=81, 18.9%) (**Figure 2**).
- Patients reported either “little better” or “much better” improvement in pain intensity (83.0%), physical function (66.1%), and sleep (66.1%) (**Figure 3**).
- In terms of patients reporting any degree of worsening: <2% for pain intensity and sleep quality, <3% for physical function.

## CONCLUSIONS

- Patients utilizing cannabidiol reported:
- High rates of symptomatic relief
- Reductions in pharmacologic treatments including decreasing or cessation of opioids, acetaminophen, and anti-inflammatories.
- The present study provides valuable insight into the growing public perception of Cannabidiol as a treatment option for musculoskeletal conditions
- **Limitations:** Direct cause effect conclusions cannot be made based on the exploratory nature of the study.
- **Future Direction:** The authors plan to explore the use of CBD to treat knee osteoarthritis pain in a double-blinded, randomized, clinical trial, which is currently in development.

## References

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