

# Development and Evaluation of a Pain Management Program in Rural Nepal

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## Introduction

- Since 2015, the **UBC Nepal Health Education Partnership**, in collaboration with Creating Possibilities Nepal, has worked to improve healthcare outcomes for the Tharu community in rural Dang, Nepal. These initiatives have primarily focused on education and screening for Sickle Cell Disease (SCD), a condition with a regional prevalence of approximately 14.7%, associated with severe pain crises.
- Through community engagement activities, anecdotal reports highlighted **significant gaps in pain management** for SCD and broader healthcare accessibility challenges.
- A **16-question Pain Experience and Knowledge Survey** was conducted in 2023 to assess the need for pain management education. Responses from the community and healthcare workers revealed a high burden of chronic pain in Dang, along with widespread gaps in knowledge regarding pain management strategies and the use of medications.
- In response, our team developed a **targeted educational program** designed to improve the **recognition, assessment, and management** of pain, tailored to the specific needs and available resources in the Dang rural communities.

## Methodology

### 1. Program Development and Implementation

- Three modules related to pain **Recognition, Assessment, and Treatment**, followed by 3 case examples. Participants received a “How to Manage Pain” flowchart (Fig.1) and a program summary pamphlet.
- The program and flowchart were adapted from the **Essential Pain Management (EPM) Lite manual<sup>2</sup>** and modified to match the resources and needs of the area.
- Participants:** Local community health volunteers (**CHVs**) selected by the health authority
- Program delivery:** Conducted by a local physician in the Tharu language May and August 2024.

### 2. Program Evaluation and Feedback

- A 12-question pre- and post-workshop survey was developed and distributed to participants
- Themes:** comfort and perceived knowledge with pain management (**CPM**), attitudes and biases towards pain (**A&B**), and general knowledge of pain management strategies(**GN**), feedback.
- Statistical analysis: McNemar-Bowker test was used for CPM and A&B and paired t-test was used for GN. P<0.05 was considered statistically significant.

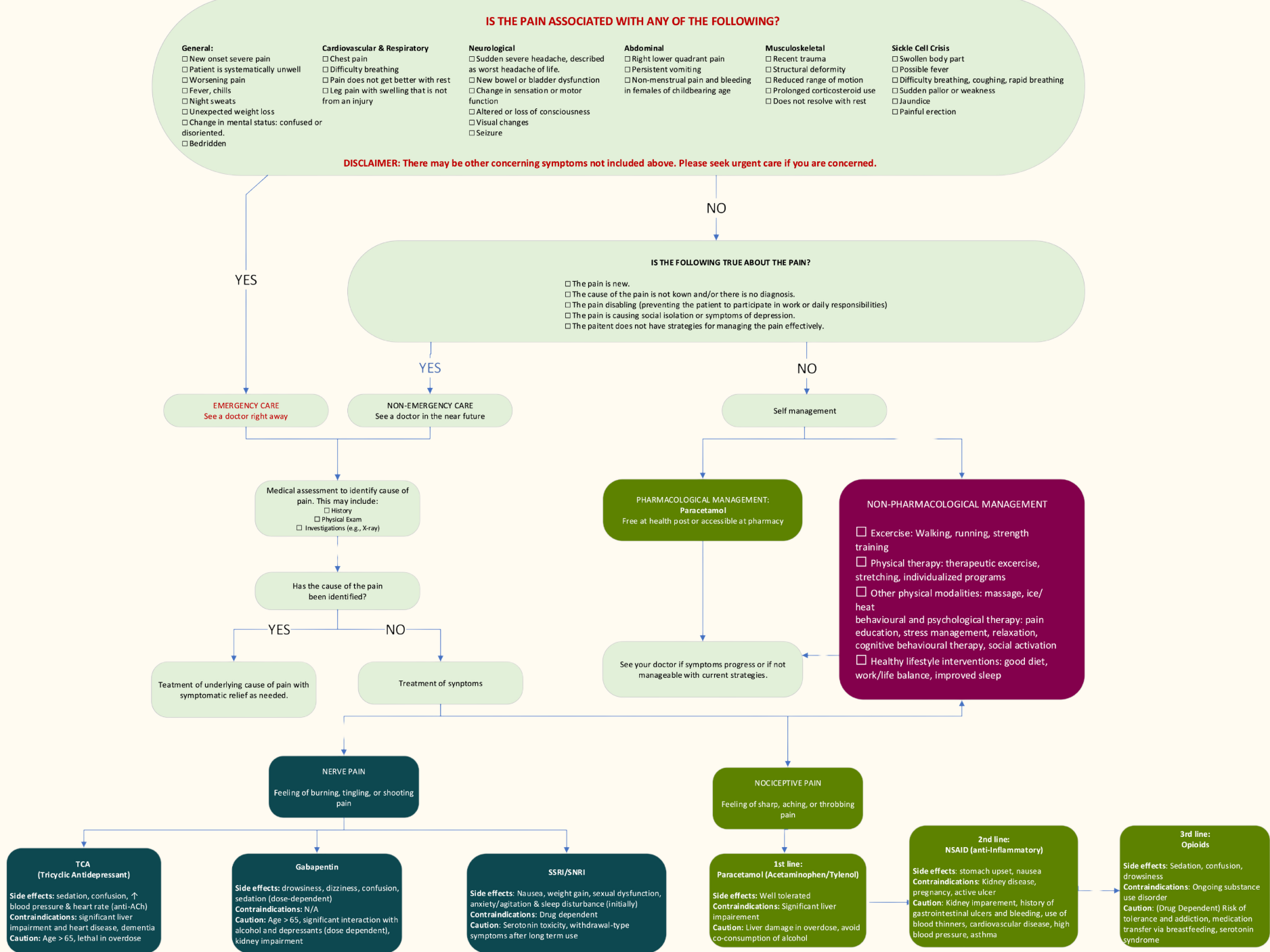


Figure 1. “How to manage pain”flow chart developed based on EPM manual and recommendations from local Physicians

## Results

### Demographics

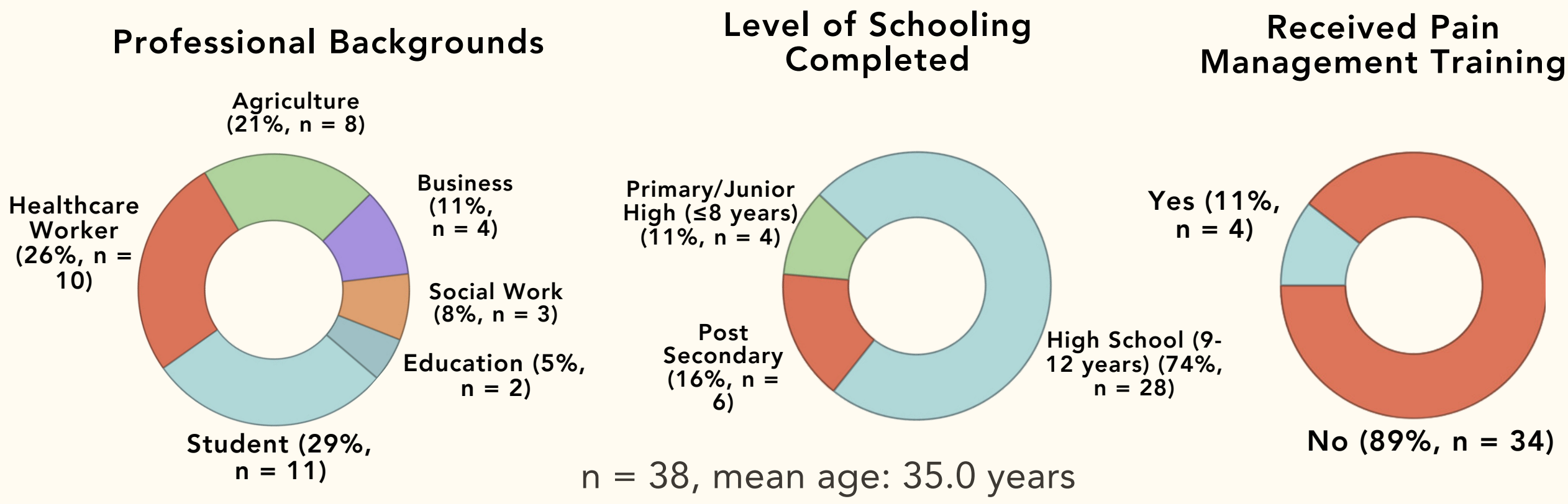


Figure 2. Participant backgrounds, education levels, and prior pain management training

### General Knowledge

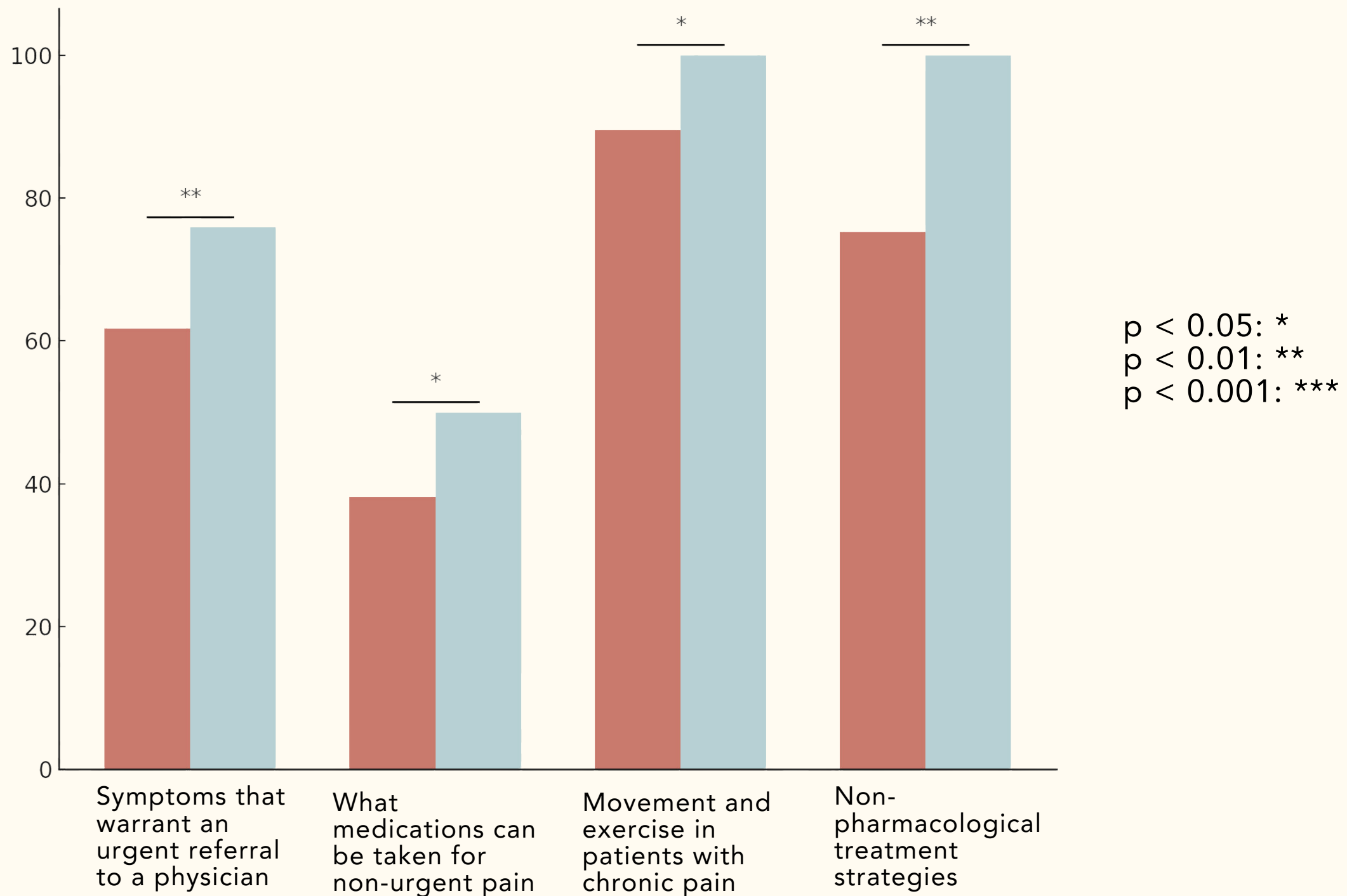
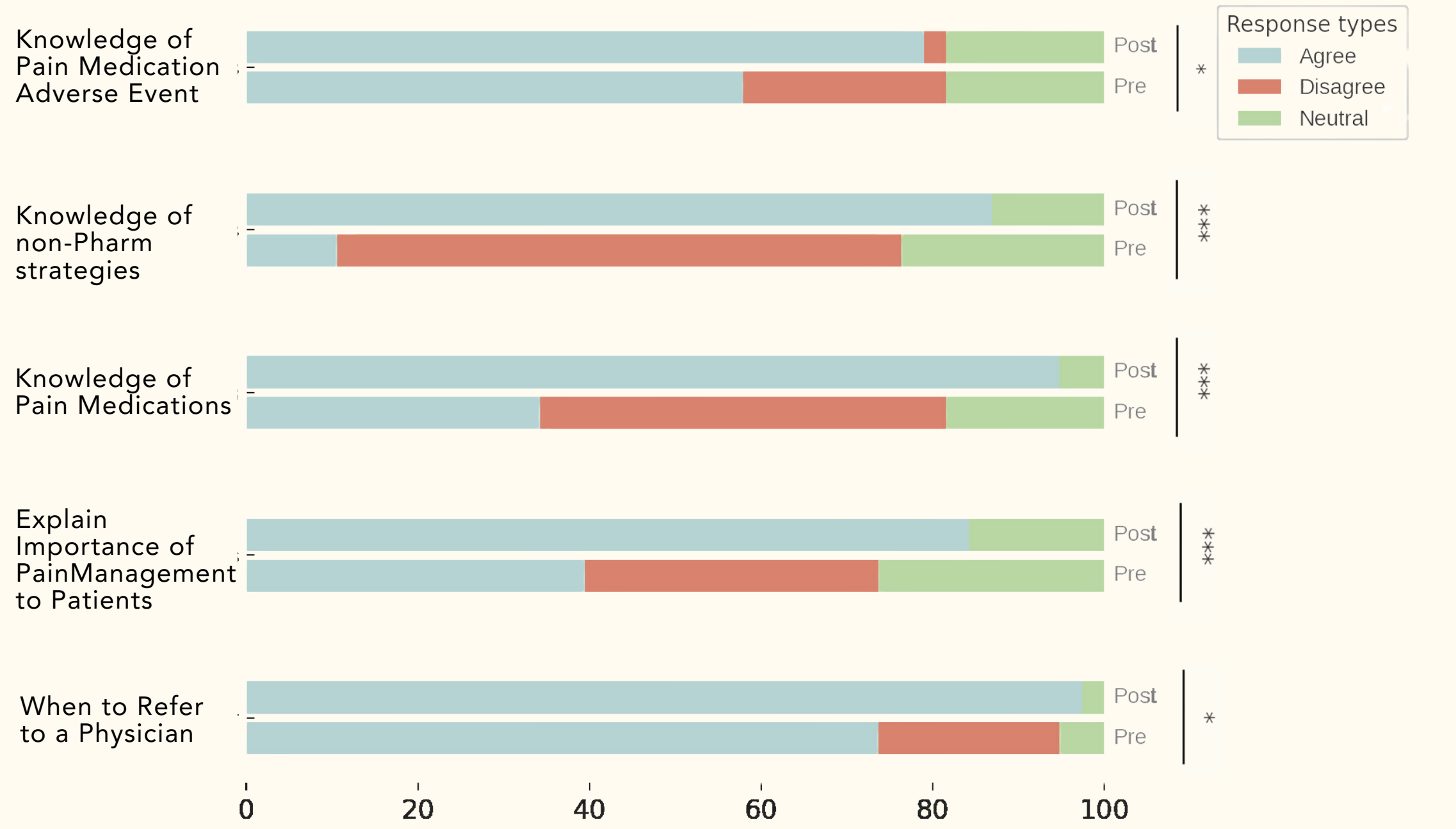
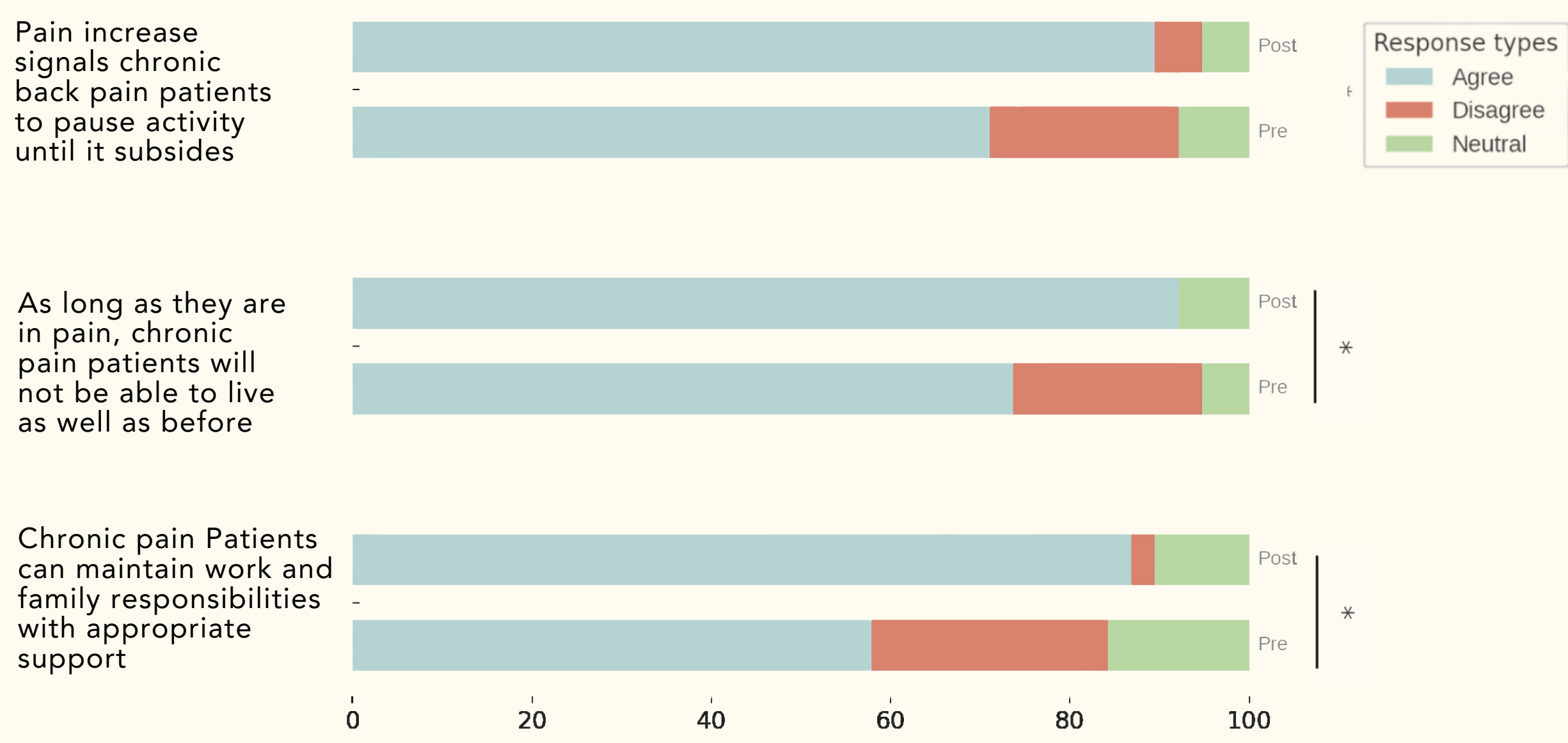


Figure 3. Pre- and post-program improvement in pain management knowledge. (red: pre, blue: post)

### Comfort and Perceived Knowledge



### Attitudes and Biases



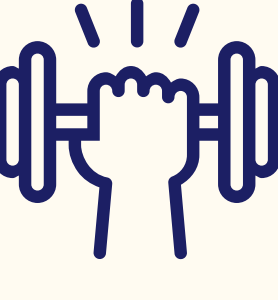
Figures 4 & 5. Pre- and post-program changes in perceived knowledge, comfort, and attitudes and biases toward pain management topics (p < 0.05).

## Discussion and Conclusions

### Participant Feedback Highlights



100% of participants agreed the program was useful, increased their knowledge, and recommended it to others.



1. Focus on non-pharmacological techniques
2. Concise presentation
3. Integration of sickle cell education
4. Insights into pain management strategies and medication side effects.



1. Expand workshops to grassroots levels
2. Involve more CHVs
3. Include additional health topics
4. Utilize videos to teach pain management methods.

- Significant improvements in scores were observed across 11 of the 12 survey questions, indicating a meaningful increase in correct responses post-program.
- In addition to enhancing knowledge, this program fostered engagement and dialogue around non-pharmacological and pharmacological pain management strategies, integrating cultural values and local practices.
- Our initiative addressed immediate educational gaps and provided a replicable pain education program framework that can be administered independently by local physicians in resource-limited settings given appropriate translations and culturally sensitive tailoring.
- Further research is important to identify whether post-test knowledge improvement leads to meaningful behavioral changes in the community.

## Acknowledgements

- We would like to acknowledge the important contributions of Creating Possibilities Nepal for their insights and ongoing support with survey administration and data collection.
- This project is supported by the Naiman Vickars Endowment Fund and the Rural Global Health Partnership Grant.

## References

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