

# Nurse Practitioner Knowledge, Attitudes, and Likelihood of CBD Use in Clinical Practice

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## PURPOSE

- To explore NP provider's Cannabidiol (CBD) knowledge, attitudes towards CBD, and likelihood of CBD use in various medical conditions with the intent to identify knowledge gaps, misconceptions, and barriers to use.

## BACKGROUND

- Many Americans have begun to seek alternative and natural remedies, for common medical conditions previously treated by prescription drugs.
- Despite an increase in CBD curiosity and use among the American population, there are no studies that assess Nurse Practitioner (NP) provider's knowledge and attitudes towards CBD or the factors affecting NP's decisions for its use.
- 2019 Gallup Poll on CBD use: 14% – about 1 in 7 – of U.S. adults personally use CBD products

## SAMPLE

- 504 Certified Nurse Practitioners
- Convenience sample recruited via email from nursing organizations, professional and personal networks, and snowball sampling through word of mouth and social networking sites.
- Inclusion criteria: a) licensed nurse practitioner, (b) English-speaking, and (c) ability to access the online questionnaire

Sample Demographics	N	%	Professional Characteristics	N	%
Gender (N= 504)			Certification (N= 504)		
• Female	478	99.6 %	• Family	305	60.5 %
• Male	24	4.8 %	• Adult/Geriatrics	65	12.9 %
• Non-Binary	2	0.4 %	• Psych/Mental Health	46	9.1 %
Ethnicity (N= 504)			• Acute/Care	40	7.9 %
• Caucasian	425	84.3 %	• Pediatrics	26	5.2 %
• African American	35	6.9 %	• Multiple	12	2.4 %
• Hispanic or Latino	18	3.6 %	• Women's Health	10	2.0 %
• Not Specified	14	2.8 %			
• Asian/ Pacific Islander	12	2.4 %			
Highest Level of Education (N= 504)			<b>Years as an NP (N=496)</b>		
• MSN	405	80.4 %	Mean: 7.3		
• DNP	87	17.3 %	Median : 5.0		
• PhD	12	2.4 %	Range: 0.0- 40.0		
			<b>Age (N=499)</b>		
			Mean: 44.0		
			Median : 43.0		
			Range: 25.0-73.0		

## METHOD

- Cross-sectional descriptive correlational survey design.
- Qualtrics® was used to distribute an online questionnaire and cover letter over a 12-week period.
- Researcher developed 5-part questionnaire tool: consists of various types of questions that assess demographic characteristics, knowledge regarding CBD, attitudes about CBD and its use, likelihood to use CBD, and questions about future educational preferences.
- The Old Dominion University Institutional Review Board (IRB) approved this research study.
- Data analyzed using SPSS 26 statistical software.

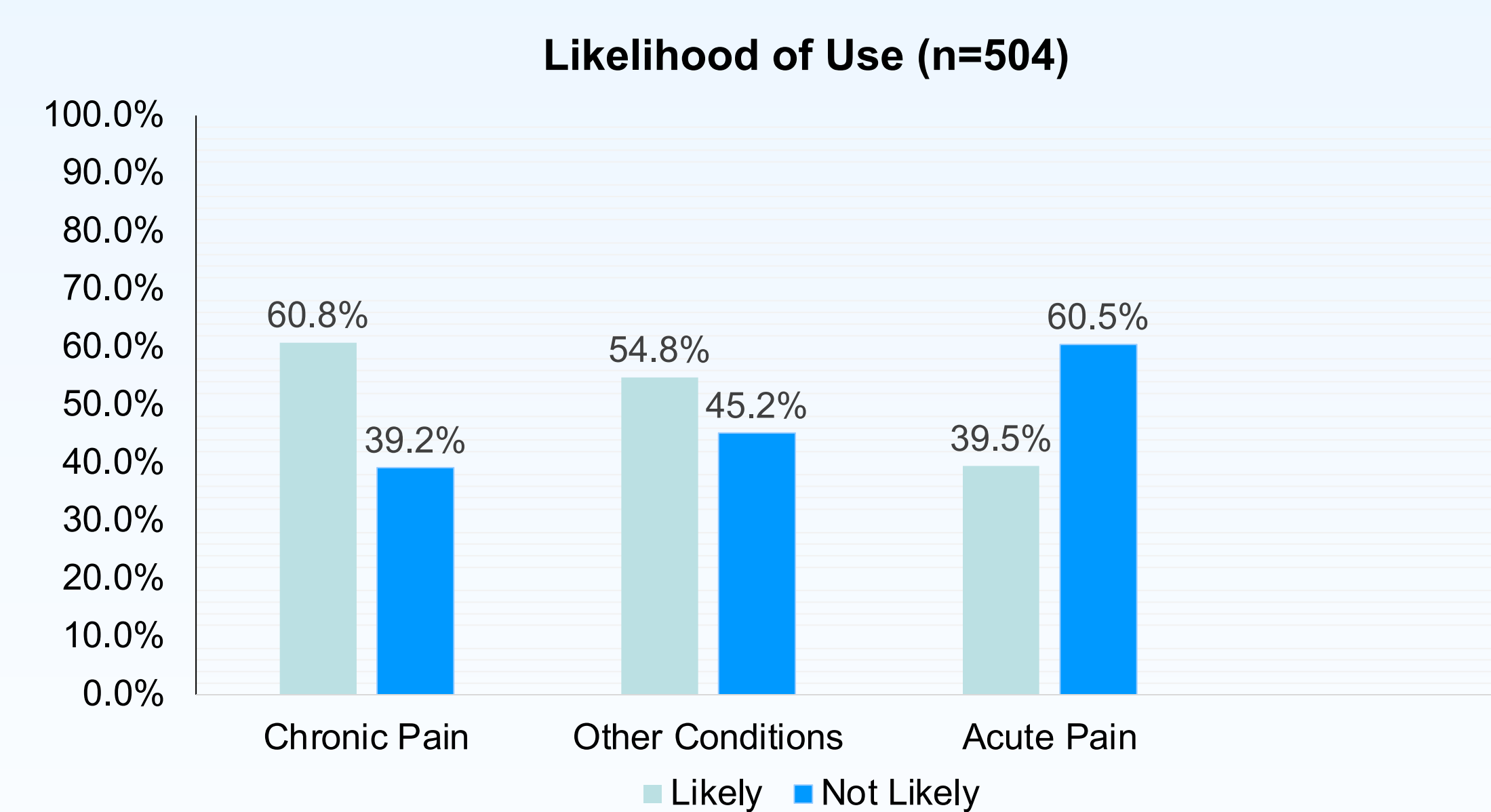
## RESULTS

RQ 1- What are NPs a) attitudes and b) knowledge regarding CBD and its usage in a clinical setting?

CBD Attitudes	Agree % N	Disagree % N
Importance of Additional Guidance (knowledge)	96.4 % (486)	3.6 % (18)
I would like to know more about CBD for recommending to my patients. (knowledge).	91.5 % (461)	8.5% (43)
I am comfortable with my knowledge level of CBD (knowledge).	33.1 % (167)	66.9 % (337)
I am satisfied with my ability to educate patients about risk, benefits, and drug interactions of CBD (knowledge).	29.8 % (150)	70.2 % (354)
CBD could potentially be an effective adjunctive treatment for pain (effectiveness).	94.4 % (476)	5.6% (28)
CBD could potentially be an effective adjunctive treatment for some other conditions (effectiveness).	94.8% (478)	5.2% (26)
The benefits of CBD for treatment in some conditions outweigh the potential risks of CBD (safety).	88.7% (447)	11.3 % (57)
There is sufficient research and information on CBD therapies in some conditions for use with patients (safety).	40.7 % (205)	59.3 % (299)
Current laws and regulations surrounding CBD manufacturing and packaging adequately support its use (safety).	24.0 % (121)	76.0 % (383)

Self-Rated CBD Knowledge Level	Excellent % N	Good % N	Fair % N	Poor % N	None % N
	4.8% (24)	21.2% (107)	41.9% (211)	29.0% (146)	3.2% (16)

Total Knowledge Score % / 100	Mean	Median	Minimum	Maximum	Standard Deviation
	65.69	70.00	0	100	14.99



RQ. 2- Is there a significant relationship between NPs' knowledge of CBD and their likelihood of using CBD?

- Statistically significant** positive correlation between overall knowledge scores and the likelihood of **use for chronic pain** ( $r_s = 0.14, p < .001$ ). And likelihood of **use for other conditions** ( $r_s = 0.18, p < .001$ ).
- Statistically non-significant** positive correlation between overall knowledge level score and likelihood of use for **acute pain** ( $r_s = 0.07, p = 0.11$ ).

## RESULTS (Continued)

RQ 3- Is there a significant relationship between NPs' attitudes about CBD and the likelihood of using CBD for chronic pain, acute pain, and other conditions in a clinical setting?

- Statistically significant** correlations between every individual attitude item regarding efficacy, safety, and knowledge ( $p < .000$ ) with all three **likelihood of use** variables including chronic pain, acute pain, and other conditions.

Relationships between Attitudes and Use	Chronic Pain Use		Acute Pain Use		Other Uses	
	$r_s$	p	$r_s$	p	$r_s$	p
<b>Attitudes</b>						
CBD could potentially be an effective adjunctive treatment for pain (efficacy).	.536	.000	.391	.000	.465	.000
CBD could potentially be an effective adjunctive treatment for some other conditions (efficacy).	.518	.000	.363	.000	.537	.000
The benefits of CBD for treatment in some conditions outweigh the potential risks of CBD (safety).	.459	.000	.375	.000	.456	.000
There is sufficient research and information on CBD therapies in some conditions for use with patients (safety).	.322	.000	.240	.000	.336	.000
Current laws and regulations surrounding CBD manufacturing and packaging adequately support its use (safety).	.180	.000	.211	.000	.155	.000
I am comfortable with my knowledge level of CBD (knowledge).	.348	.000	.273	.000	.371	.000
I am satisfied with my ability to educate patients about risk, benefits, and drug interactions of CBD (knowledge).	.325	.000	.271	.000	.338	.000
Rate knowledge level. (knowledge)	.389	.000	.279	.000	.389	.000
I would like to know more about CBD for recommending to my patients. (knowledge)	.329	.000	.259	.000	.295	.000
Importance of additional guidance	.340	.000	.250	.000	.283	.000

## CONCLUSIONS

- Findings suggest significant positive correlation between attitudes and knowledge and the likelihood of recommending CBD in clinical practice.
- Majority of NPs are more likely to recommend CBD as an adjunctive treatment option for chronic pain and other conditions and least likely to recommend CBD as an adjunctive treatment option for acute pain.
- NPs are open to recommending CBD as a treatment option and believe the benefits of CBD outweigh the risk for various conditions across the lifespan.
- 70% (354) of NPs are not satisfied with their ability to educate their patients about benefits and risks of CBD and 96% (486) of the respondents in this study felt it was important that all NPs receive additional guidance about CBD.
- Findings identify knowledge gaps, misconceptions, and barriers to use.
- Data provided encourages educational/training opportunities to promote CBD use, thereby improving the overall quality of life and health of patients.
- Data provided from this study explores the rationale for further research to better understand the therapeutic potential of CBD in treating chronic pain, anxiety, depression, sleep disorders, and other medical conditions.

