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## Symptom Relief and Quality of Life in Autistic Children Using Medical Cannabis: A Secondary Analysis

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## Objectives

- This study aimed to examine the experiences of parents and caregivers of autistic children who used medical cannabis (MMJ) for the treatment of core symptoms or co-occurring conditions
- Considered priorities and outcomes of medical cannabis use, including:
  - Quality of life (QoL) effects
  - Symptoms of interest
  - Symptoms of co-occurring conditions

## Background

### ASD

Autism spectrum disorder (ASD): A developmental condition that can impact communication, behavior, and social interaction. At present, 1 in 44 children in the U.S. receives a diagnosis of ASD by age 8.

### MMJ

Medical marijuana (MMJ): In many U.S. states, MMJ is an approved treatment for specific conditions, which in some cases includes ASD.

- Existing pharmaceutical interventions for ASD have several limitations
  - Side effects can also be a significant issue
- MMJ has become an increasingly common type of complementary and alternative medicine (CAM) for this population
- ASD is a qualifying condition for MMJ in 14 US states
  - It can also be recommended at the clinician's discretion in some others
- Existing research has established the potential for medical cannabis to address core symptoms, co-occurring conditions, and improve quality of life for autistic individuals
- Evidence is limited and more research is needed

## Methods

- Secondary analysis of a cross-sectional online survey of patients and caregivers of children with a diagnosis of ASD and who had used MMJ to treat symptoms
- Survey was provided by *Hope Grows for Autism*, a Pennsylvania-based cannabis medicine group dedicated to research, education, and advocacy supporting families with children who have autism.
- Asked about side effects, products used, effect on various symptoms, discontinuation of medical cannabis, and other self-reported clinical outcomes
- All data was self-reported by parents and caregivers

## Results

- N=50 participants
- N=18 reported having a child with severe autism
- N=13 reported having a child with moderate autism
- Majority of respondents seeking to treat 1+ symptom with medical cannabis
- Irritability was the #1 symptom parents reporting to treat with medical cannabis

**Table 1: Symptoms interested in treating with medical cannabis**

Symptom Interested in Treating	N (50)
Anxiety	18
Irritability	24
Meltdowns	16
Obsessive Compulsiveness	9
Focus and Attention / ADHD	17
Hyperactivity	12
Insomnia	14
Self-Injurious Behaviors	9
Self-Stimulatory Behaviors	13
Communication	14
Other	7

- Respondents generally reported improvement across symptoms
- No respondents reported worsening of existing symptoms
- Symptoms that at least 40% of participants reported improvement in included aggression, irritability, meltdowns, anxiety, agitation, and communication

**Table 2: Change in symptoms observed following initiation of medical cannabis**

Symptom	Aggression	Irritability	Meltdowns	Anxiety	OCD	Focus/ADHD	Communication	GI Issues	Insomnia	Self-Stimulatory Behaviors	Hyperactivity	Pain	Appetite	Agitation	Self-Injury	
Significantly Improved N (%)	24 (48)	30 (60)	26 (52)	22 (44)	13 (26)	15 (30)	20 (40)	11 (22)	13 (26)	12 (24)	14 (28)	10 (20)	9 (18)	15 (30)	20 (40)	17 (34)
Improved N (%)	6 (12)	7 (14)	4 (8)	6 (12)	6 (12)	5 (10)	1 (2)	3 (6)	11 (22)	10 (20)	10 (20)	0 (0)	5 (10)	4 (8)	8 (16)	4 (8)
No Change N (%)	11 (22)	7 (14)	10 (20)	14 (28)	20 (40)	17 (34)	20 (40)	19 (38)	11 (22)	12 (24)	12 (24)	10 (20)	18 (36)	10 (20)	9 (18)	6 (12)

## Limitations

- Small sample of online respondents who had interest in MMJ as a therapeutic option, reducing generalizability
- Survey was delivered by Hope Grows for Autism; participants would be aware of their role in developing MMJ products
- The survey data did not include all demographic information
- All data in the survey was self-reported

## Discussion & Next Steps

- Families of autistic children who have challenges with behavior and communication face significant barriers to finding treatment plans that work for them
- QoL is a major concern, both for autistic children and for their families
- MMJ is rising rapidly in popularity as a potential option
- It is clear from the literature that whether providers feel capable to discuss the topic or not, autistic individuals and families will continue to pursue MMJ as a possible complementary treatment
- Research on MMJ is progressing, but legal barriers mean that progress is slow
- Current research, including this study, suggests the possibility that MMJ could have significant benefits for at least some individuals in this population

## Conclusion

- The findings of our study have important implications for clinical practice and research
- Respondents reported using a variety of cannabis products including THC as well as improvement in a variety of symptoms
- Further understanding of which cannabis products relieve which symptoms is needed to inform future research as well as clinical practice

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