Cannabis and cannabinoids for the treatment of mental disorders and symptoms: A systematic review and meta-analysis

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Use of cannabis for therapeutical purposes is increasing, with mental health being one of the most common reasons behind non-cancer pain.
Methods

• Series of systematic reviews
  • Depression
  • Anxiety
  • ADHD
  • Tourette’s syndrome
  • PTSD
  • Psychosis
• Total of 83 studies identified (40 of which are RCTs)
Findings

• No significant differences within any depression, ADHD and Tourette’s syndrome outcomes
• Only a small number of outcomes found an effect of cannabis/cannabinoids, mostly THC
# Findings

<table>
<thead>
<tr>
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<th>Comparison</th>
<th>Pooled SMD</th>
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<tbody>
<tr>
<td><strong>Anxiety</strong></td>
<td></td>
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<tr>
<td>Change in anxiety symptoms</td>
<td>THC vs. Active</td>
<td>-0.12 (-0.30, 0.05)</td>
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<td></td>
<td>THC vs. Placebo</td>
<td>-0.25 (-0.49, -0.01)</td>
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<td><strong>PTSD</strong></td>
<td></td>
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<td>Change in global functioning</td>
<td>THC vs. Placebo</td>
<td>-1.13 (-1.48, -0.77)</td>
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<td>Change in nightmare frequency</td>
<td>THC vs. Placebo</td>
<td>-1.11 (-1.46, -0.76)</td>
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<td><strong>Psychosis</strong></td>
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<tr>
<td>Change in negative symptoms</td>
<td>THC vs. Placebo</td>
<td>0.36 (0.10, 0.62)</td>
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<td>Change in cognitive function</td>
<td>THC vs. Placebo</td>
<td>1.08 (0.71, 1.45)</td>
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<tr>
<td>Change in global functioning</td>
<td>CBD vs. Placebo</td>
<td>-0.62 (-1.14, -0.09)</td>
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Findings

• Compared to placebo, cannabinoids have:
  • Increased adverse events
  • Increased number of withdrawals
  • Increased number of withdrawals due to adverse events
Conclusion

• Overall, there is a lack of evidence indicating a beneficial effect of cannabinoids on mental health disorders and symptoms

• Though 40 RCTs were identified, only 1 study had depression as primary outcome and 4 studies had anxiety as primary outcome
  • No study had depression and only 3 had anxiety as the primary condition

• More research on the effectiveness of cannabinoids is needed, especially for depression and anxiety
THANK YOU!