



Effects of 3,4-Methamphetamine on Cognitive Empathy in Participants with Antisocial Personality Disorder



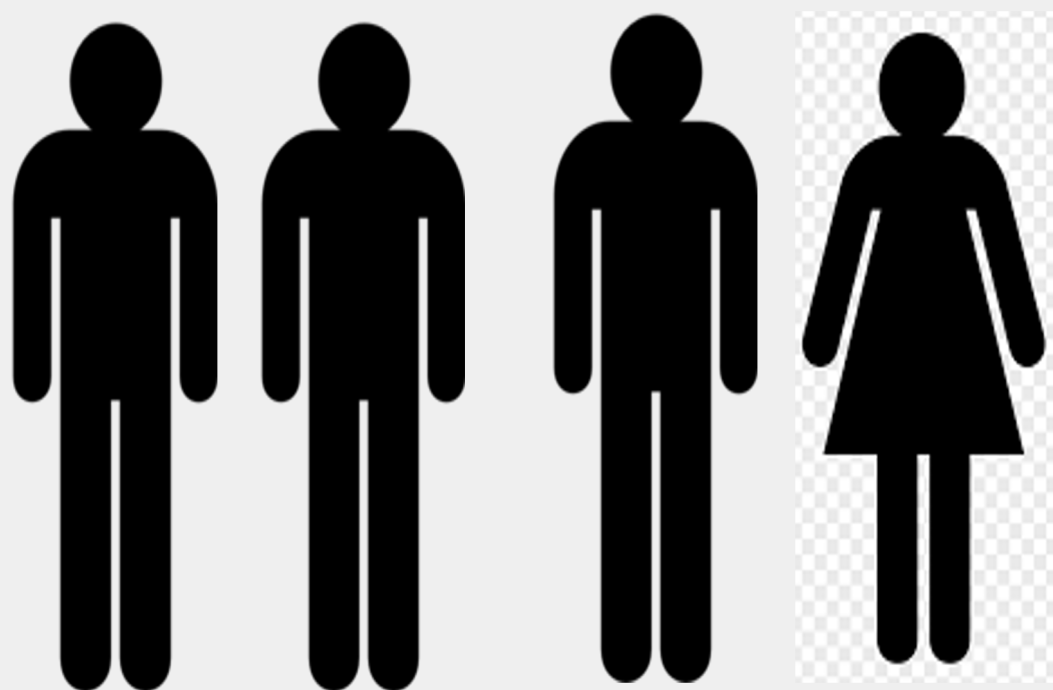
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Cognitive empathy is an important human trait that consists of the ability to communicate effectively with others through understanding how another person is feeling. People who have Antisocial Personality Disorder (ASPD) score lower on tests that determine levels of emotional and cognitive empathy. 3,4-Methamphetamine (METH) is an empathogen that increases sociability in those that use the drug. There is no research that looks at the effects of METH on ASPD symptoms. It is hypothesized that due to the increase in sociability of METH users, cognitive empathy will increase as well.

Control Group: Blue pill labelled 'M'. Will be a sugar pill given MWF during therapy sessions with a licensed psychologist. MET and EQ will be taken on F only.

Treatment Group: Blue pill labelled 'Me'. Will be 25mg of METH, given MWF during therapy sessions with a licensed psychologist. MET and EQ will be taken on F only.



3:1 (M to F) diagnosis of ASPD in general population of the 1-4% diagnosed. 100 participants will be recruited.



Control

M

Participants will continue to score <90 on the EQ and will report others emotions on the MET less than 50% correct.



Treatment

Me

Participants will score >90 on the EQ and progress each week as well as report others emotions on the MET at least 50% correct.

MET

EQ



	Strongly Agree	Slightly Agree	Slightly Disagree	Strongly Disagree
1. I can easily tell if someone else wants to enter a conversation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I prefer animals to humans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I try to keep up with the current trends and fashions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I find it difficult to explain to others things that I understand easily when they don't understand it the first time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I dream most nights.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I really enjoy caring for other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I try to solve my own problems rather than discussing them with others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I find it hard to know what to do in a social situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I am at my best first thing in the morning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. People often tell me that I am too far in driving my point home in a discussion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. It doesn't bother me too much if I am late meeting a friend.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Friendships and relationships are just too difficult, so I tend not to bother with them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. I would never break a law, no matter how minor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I often find it difficult to judge if something is vulgar or polite.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. I prefer practical jokes to verbal humor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. I live life for today rather than the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. When I was a child, I enjoyed cutting up worms to see what would happen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. I can pick up quickly if someone says one thing but means another.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. I tend to have very strong opinions about morality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. It is hard for me to see why some things upset people so much.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. I find it easy to put myself in somebody else's shoes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. I think that good manners are the most important thing a parent can teach their child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. I like to do things on the spur of the moment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. I am good at predicting how someone will feel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

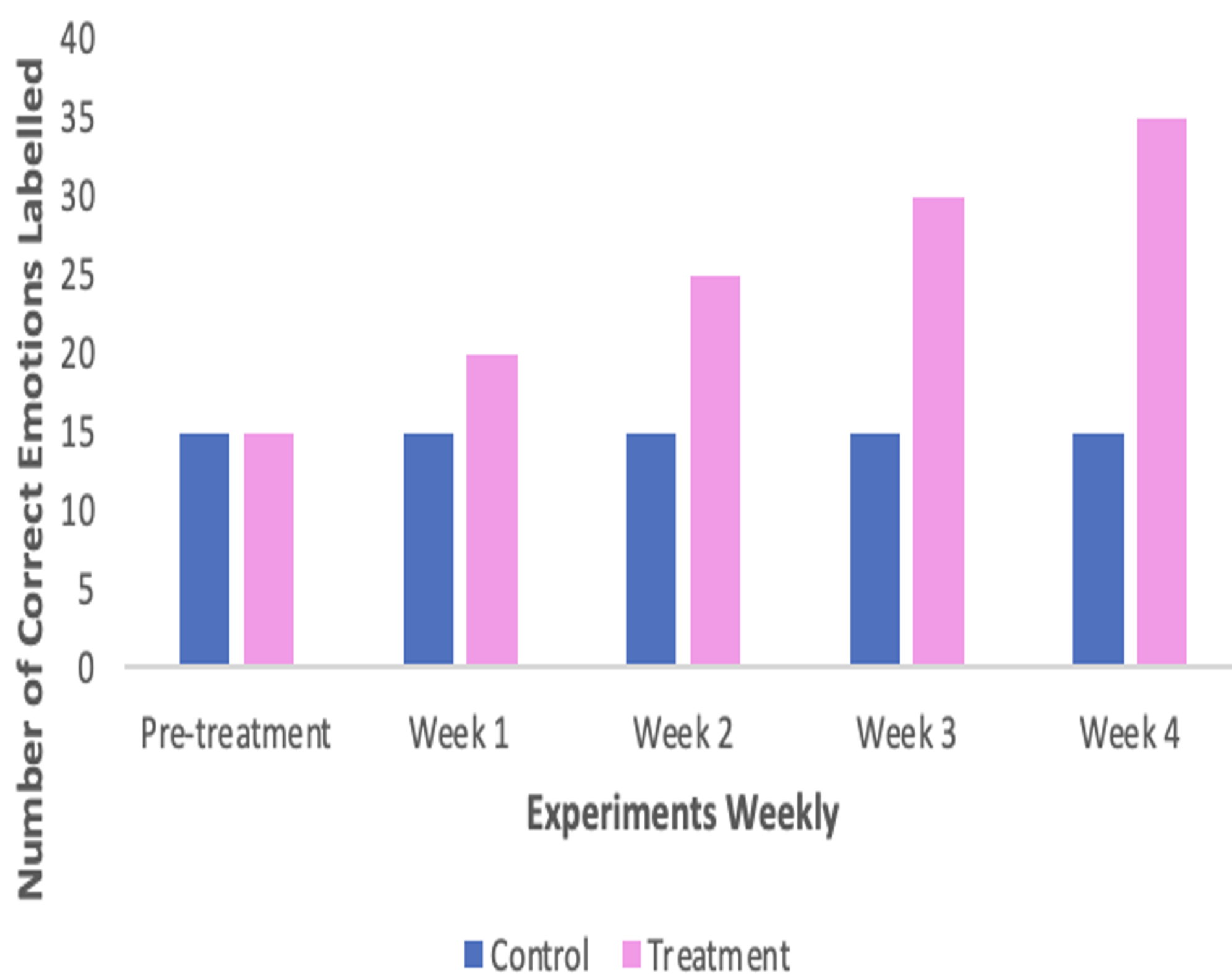
Increase in EQ and MET scores in treatment group while control group remains the same.

METH has a **positive effect** on cognitive empathy

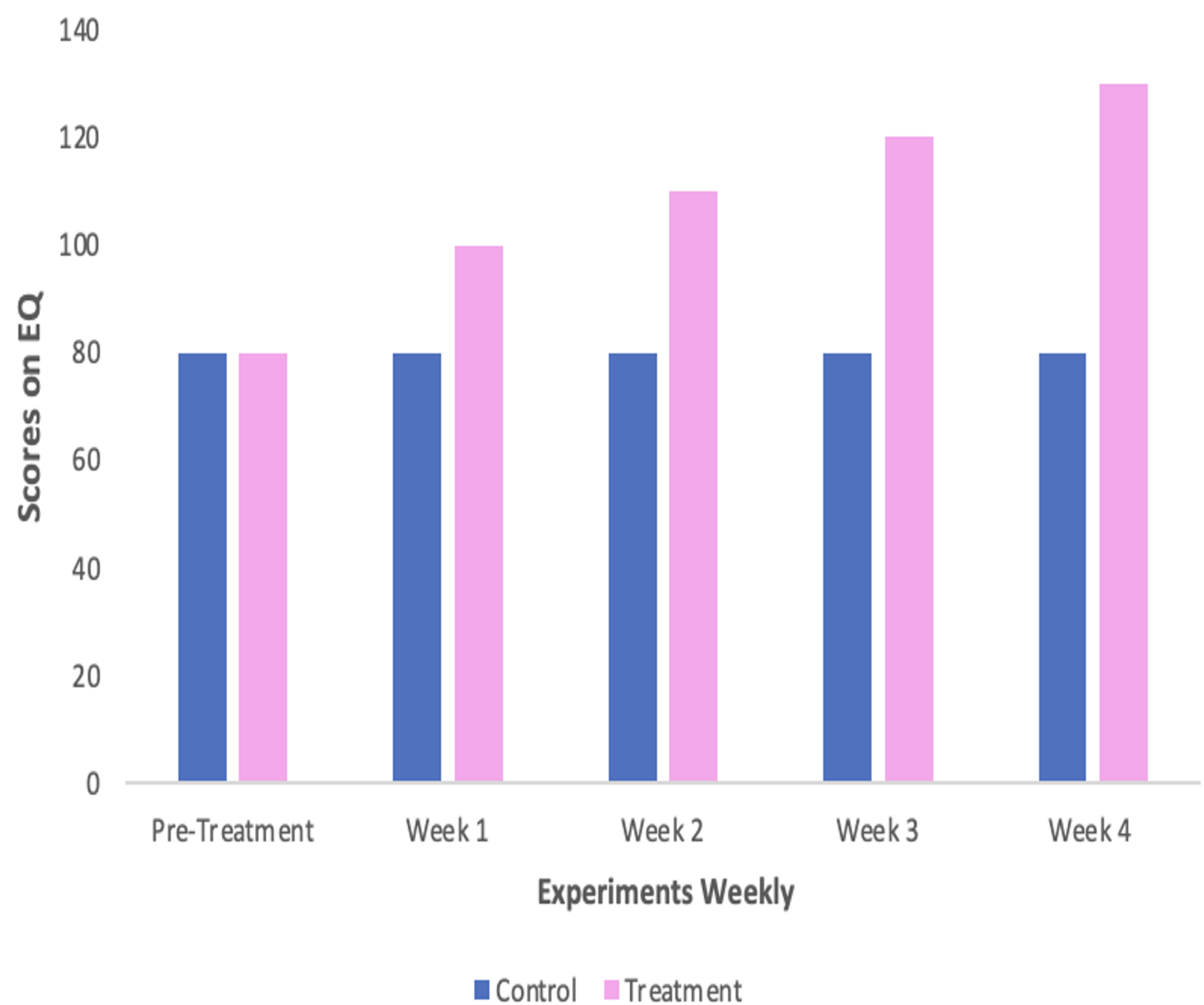
If the EQ and MET scores in treatment group and control group are **the same**, the null hypothesis is true.

METH has **no effect** on cognitive empathy

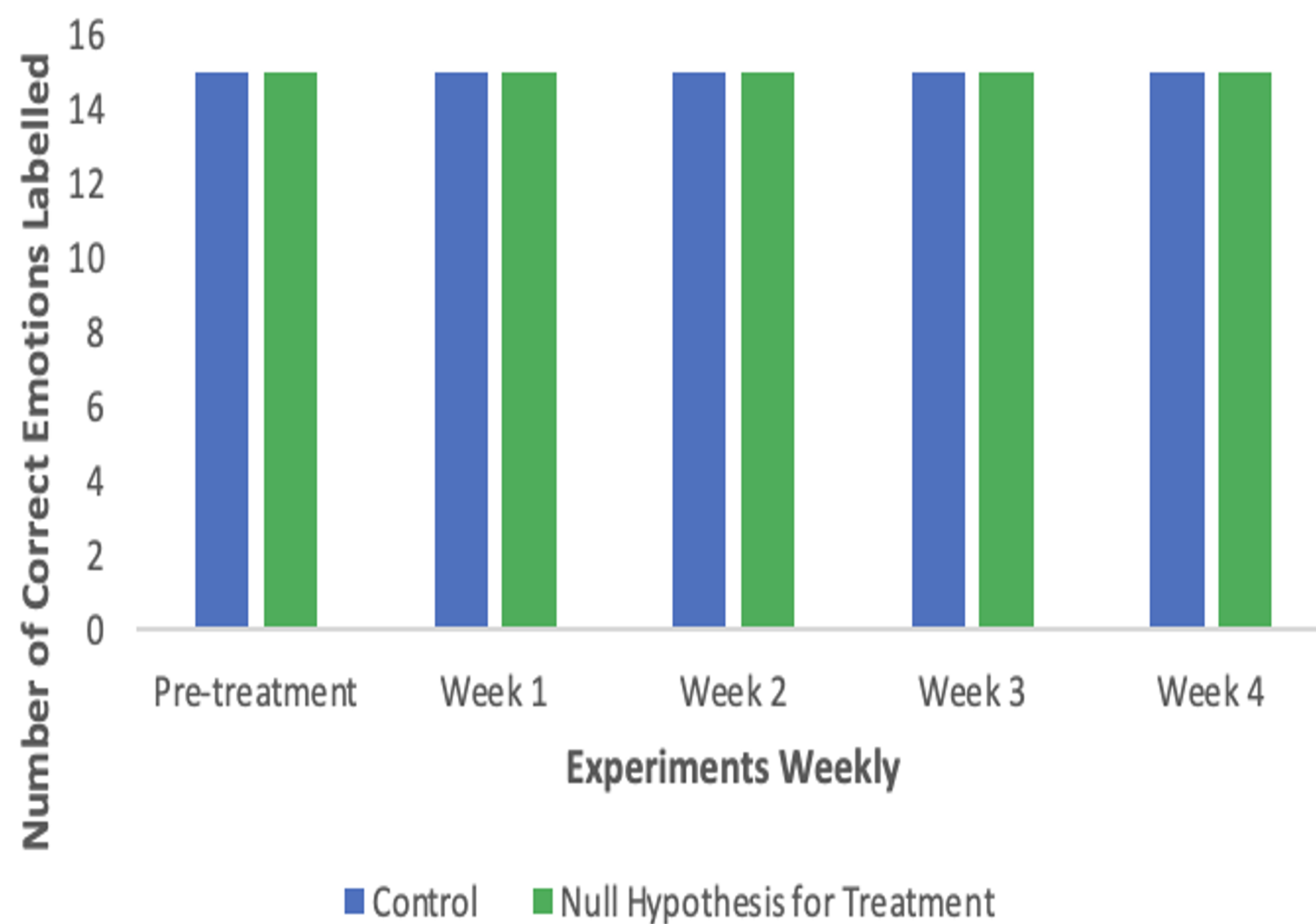
Weekly Scores on Multifaceted Empathy Test (MET)



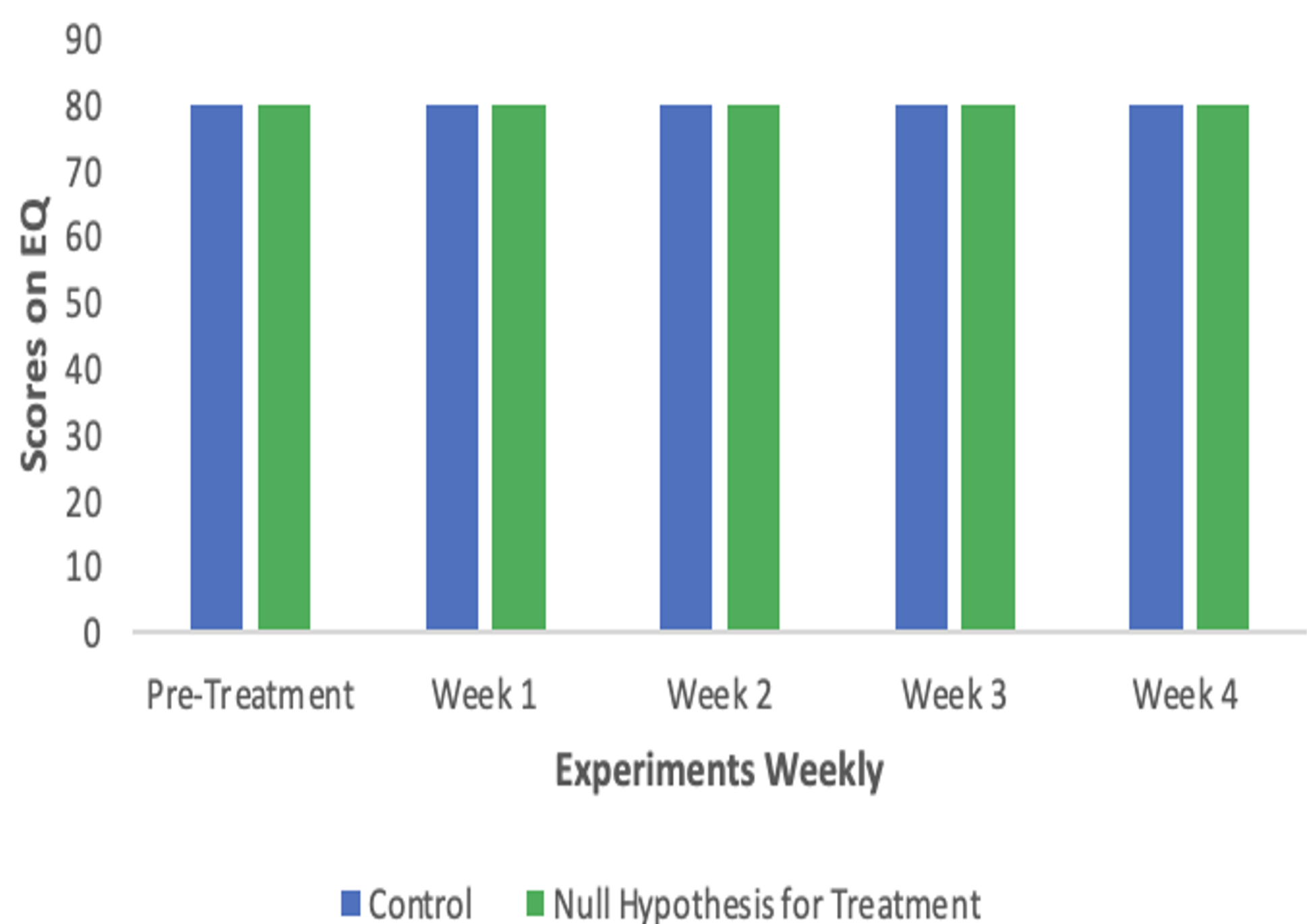
Weekly Scores on Empathy Quotient (EQ)



Weekly Scores on Multifaceted Empathy Test (MET)



Weekly Scores on Empathy Quotient (EQ)



Cognitive empathy is characterized by being able to effectively communicate with others therefore being able to understand their feelings, it is important to research the possible positive effects METH plays on cognitive empathy. No previous research has studied the effects of METH on cognitive empathy nor has it found a possible treatment method to improve cognitive empathy. A limitation for this experiment would be mortality rate due to this experiment being a month long and there is the possibility of addiction to METH in the treatment group.