

Cannabis Use is Related to Increased Physical Activity

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BACKGROUND

- Cannabis use has become more predominant as legalization laws change.¹
- Yet, little is known regarding its effects on health behaviors, such as physical activity (PA).²
- Insufficient PA can lead to negative health outcomes, such as cardiovascular diseases, and depression.^{3,4,5}
- Limited studies have utilized ecological momentary assessments (EMA) to examine proximal associations between cannabis use and PA.

STUDY AIMS

- Examine the effect of self-reported past cannabis use and self-reported PA at baseline.
- Examine the effects of same day cannabis use on same day self-reported PA using EMAs.
- Examine the effects of cannabis use yesterday on next day self-reported PA using EMAs.

STUDY DESIGN

Procedures:

- 28-day randomized control trial
- **Study design:** 32 groups (2x2x2x2x2)
- Per day: 4 vs 2
- Number of questions: 25 vs 15
- Timing: fixed vs random
- Payment method: % of EMA completed vs \$1 per survey
- First Item type (for 2 weeks): slider scale vs Likert scale

Measures (BL):

Daily Cannabis Use:

- “In the PAST 28 DAYS, on how many days did you use marijuana/cannabis for medical reasons (e.g., like to treat or decrease symptoms of a health condition).”
- “In the PAST 28 DAYS, on how many days did you use marijuana/cannabis for non-medical reasons (e.g., for pleasure or satisfaction, to have fun).”
 - Rating Scale: 0 (I have never used this) to 5 (4 or more times a week)

Physical Activity:

- “On average, how many minutes of MODERATE leisure time physical activity do you get each day?”
- “On average, how many minutes of VIGOROUS leisure time physical activity do you get each day?”
 - Rating Scale: 0 (0-9 minutes) to 7 (70 or more minutes)

Table 1. Sample Characteristics for the Baseline and EMA sub-study	% or mean (N or SD)	% or mean (N or SD)
Study sample	Baseline	EMA
Variable	(N=485)	(n=100)
Age (years)	48.2 (12.4)	46.5 (12.1)
Sex		
Female	396 (76.1%)	70 (70.0%)
Male	89 (23.9%)	30 (30.0%)
Race		
White	341 (70.3%)	68 (68.0%)
Non-White	144 (29.7%)	32 (32.0%)
Average number of cannabis use days (n=1232)		12.3 (9.2)

STUDY DESIGN CONT.

Measures (EMA):

Daily Cannabis Use:

- “Please select the substances that you used yesterday?”
- “In the past 24 hours, which of the following have you used?”
 - Rating Scale: check all that apply

Physical Activity:

- “How many minutes of MODERATE leisure time physical activity did you get yesterday?”
- “How many minutes of VIGOROUS leisure time physical activity did you get yesterday?”
 - Rating Scale: 0 (0-9 minutes) to 7 (70 or more minutes)

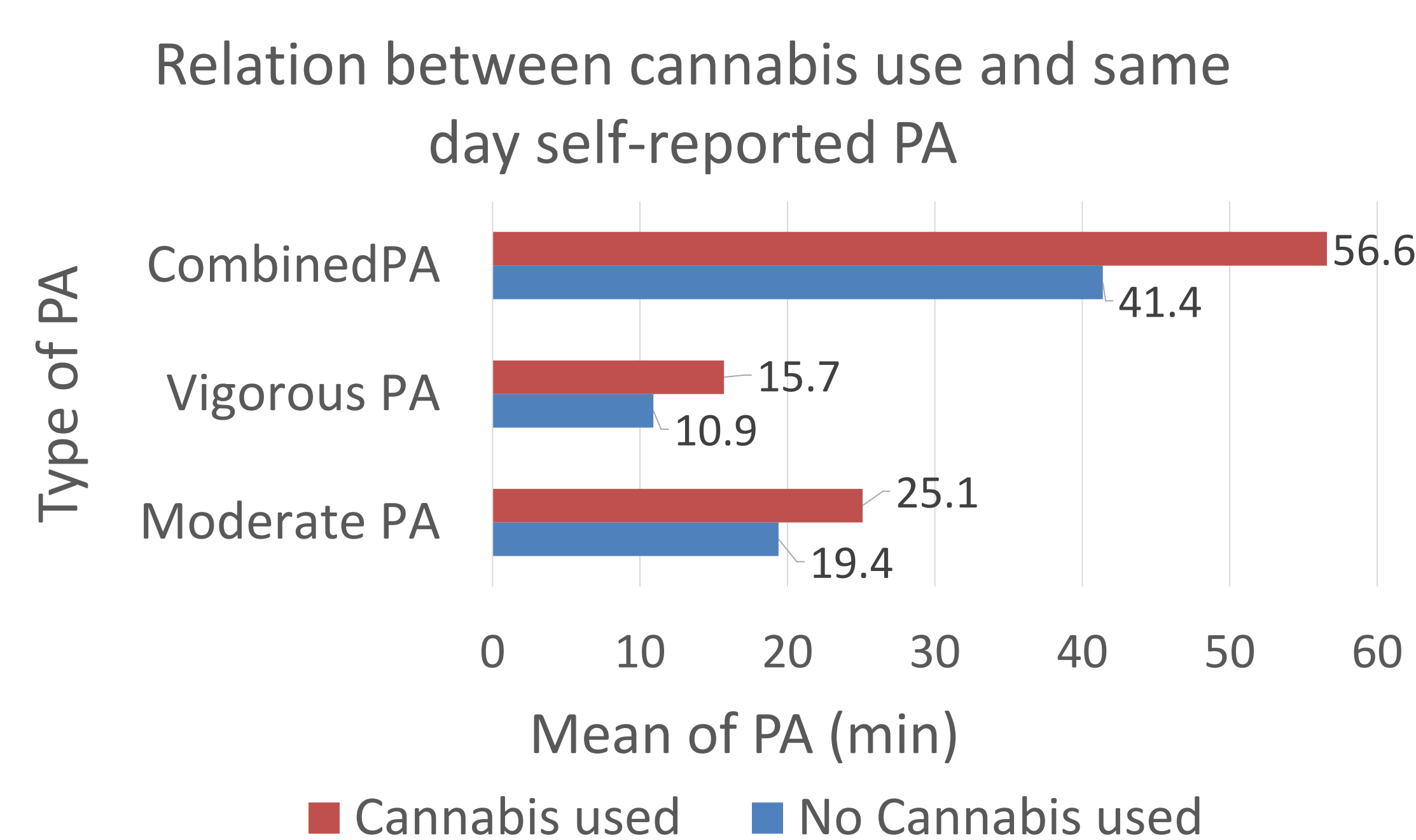
Analysis Plan:

- Inclusion criteria: Used cannabis at least once in the past 28-days.
- Linear mixed effects model was conducted to predict PA.
- PA minutes were recoded to midpoint of the answer choice range.
- Covariates: age, sex, race

RESULTS

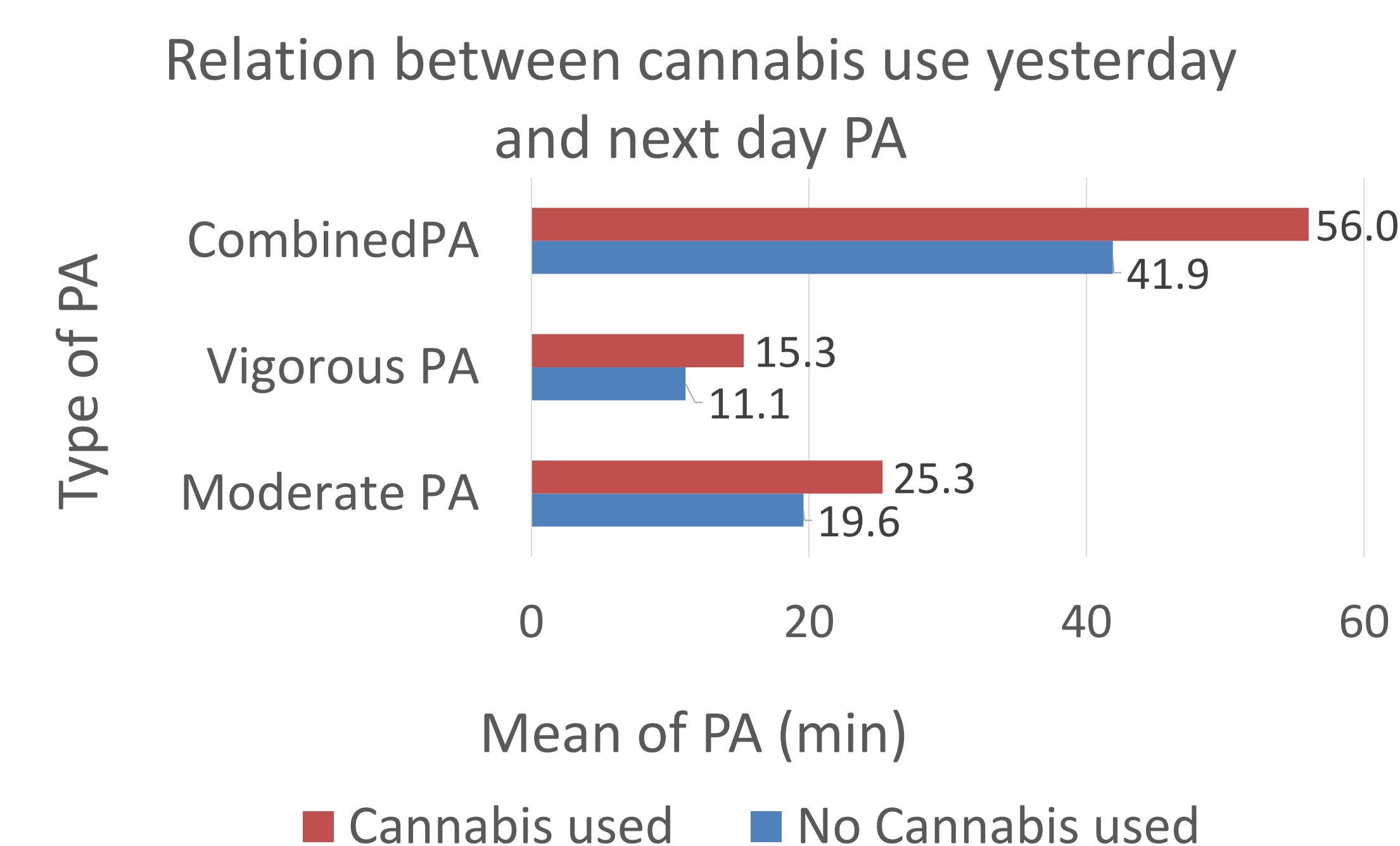
- Past 28 day cannabis use at baseline was associated with moderate (b=.461, t=1.99, p<0.05), vigorous (b=0.356, t=4.811, p<0.05), and combined PA (b=1.869, t=2.294, p<0.05) at baseline.

Figure 1.



- Cannabis use was associated with more same day vigorous PA (b=0.203, t=2.230, p=0.026), and combined PA (b=0.537, t=2.287, p=0.023) compared with non-use days after including covariates.

Figure 2.



- Cannabis use yesterday was related to more next day vigorous PA after including covariates (b=0.384, t=2.144, p=0.033).

- A sub-analysis of cannabis use yesterday and vigorous PA, showed that on days cannabis was not used, male participants had higher next day vigorous PA than female participants (b=-0.803, t=-4.089, p<0.01).

CONCLUSIONS

- Baseline and EMA data findings suggest cannabis use is associated with greater self-reported PA.
- EMA data showcases the value of using EMAs to examine daily associations between cannabis use days vs non-cannabis use days on next day PA.
- More research needs to be conducted to verify and better understand the association between cannabis use and PA.

Limitations:

- Small unrepresentative sample size.
- Self-reported measures with limited answer choices.
- Limited questions regarding cannabis use and PA.

Future Direction:

- Integrate objective measures to help distinguish the mechanisms through which cannabis effects PA.
- Examine whether cannabis is associated with PA in other samples.

References

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