

# Pet ownership and physical activity in adolescence

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## Introduction

- This study theorizes that if an adolescent lives in a house with a companion animal, especially an animal that requires active care (i.e., dogs, horses), they may have more opportunities—compared to those with no pets or passive pets (such as cats or small mammals)—to engage in physical activity in terms of play with and care of the animal, because the animal requires those activities more frequently.
- Meta-analyses have found positive associations between physical activity and both mental (Rodriguez-Ayllon et al., 2019) and physical (Hallal et al., 2006) health outcomes for adolescents.
- It is hypothesized that active pet ownership type will be associated with increases in youth engagement in moderate-to-vigorous physical activity (MVPA) and decreases in sedentary behavior, compared to passive and non-pet ownership.

## Methodology

- This study used data from the Adolescent Brain Cognitive Development (ABCD) Study®, a large, nationally representative data set of American adolescents to assess how pet type and pet ownership status relate to physical activity (measured using a Fitbit device).
- This study analyzed a subset of surveys from 1,556 participants who were included in the 4-year follow up data of the ABCD Annual Curated Release 5.0 (DOI: 10.15154/8873-zj65) and who completed the relevant survey measures.
- We conducted binary linear regression models to explore the relationship between types of pet ownership (active pets, passive pets, and no pets) and physical activity outcome variables.

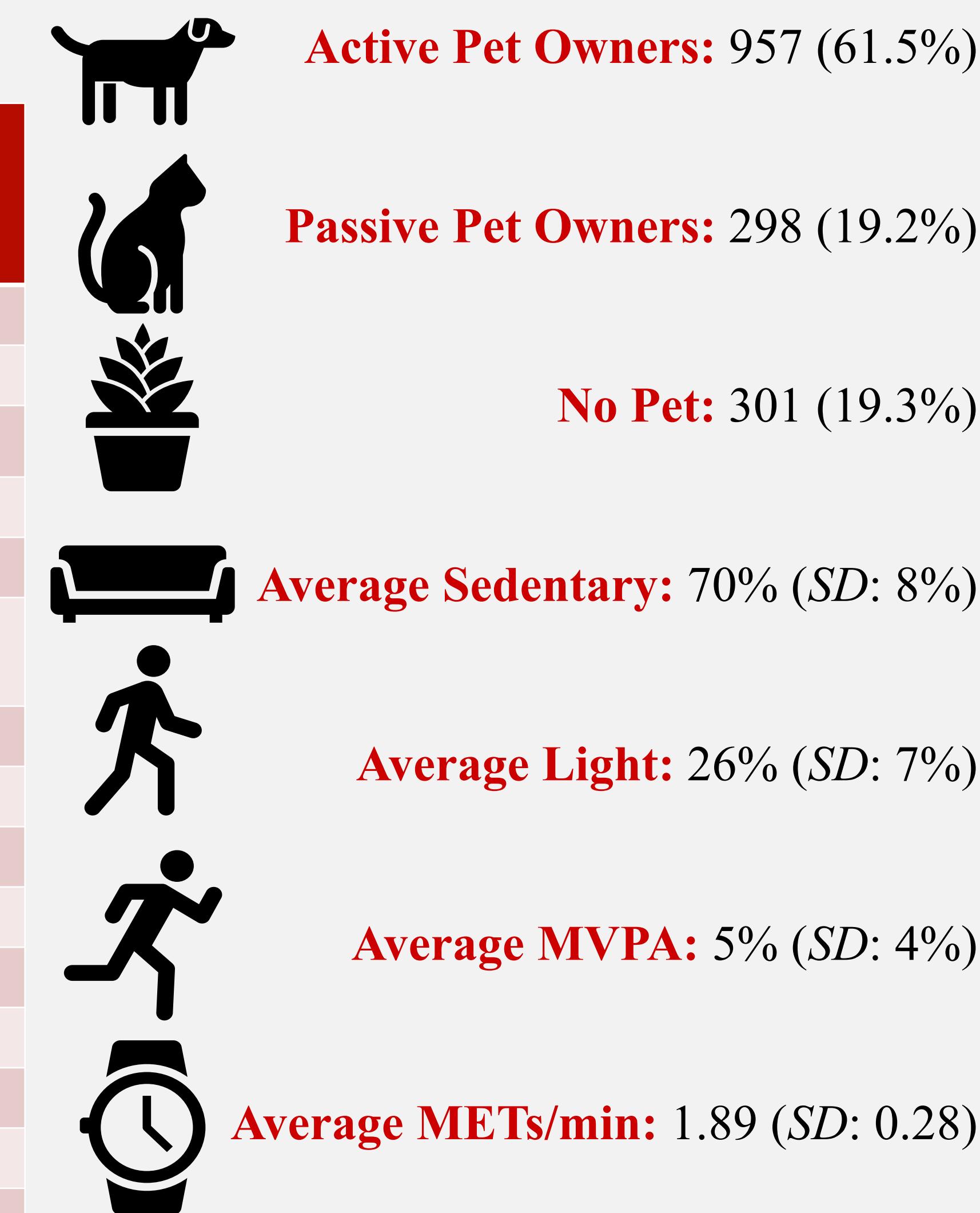
## Discussion

- In a cross-sectional sample of 1,556 adolescents, while adjusting for contextual covariates, we found that compared to adolescents with active pets, those with passive pets engaged in less MVPA (Standardized decrease of 0.23).
- Adolescents who did not own pets did not differ significantly from those with active pets. Our hypotheses were partially supported by these results.
- Overall, future research should explore how types of pet ownership may impact an adolescent's engagement in physical activity.

## Conclusions

- This study indicated that, within a large sample of adolescents and their families in the United States, companion animal ownership alone—that is, not accounting for relationship factors such as interaction quality or frequency, attitudes toward pets, or the specific emotional bond between adolescents and their companion animals—does not appear to be associated with meaningful changes in objectively-measured physical activity, while adjusting for context- and person-level covariates.

## Results



**Full Linear Regression Table:**



**Table 1**

Sociodemographic descriptive statistics

Sociodemographic characteristic	n (%)
Youth race	
Asian	42 (2.7)
Black/African American	139 (8.9)
Multiracial	178 (11.4)
Native American	18 (1.2)
Other Race, don't know, or refuse to answer	91 (5.9)
Pacific Islander	2 (0.1)
White	1,086 (69.8)
Youth ethnicity	
Hispanic	367 (23.6)
Non-Hispanic	1,189 (76.4)
Youth gender	
Boy	823 (52.9)
Girl	733 (47.1)
Locale	
Urbanized area	1,405 (90.3)
Urban cluster	33 (2.1)
Rural	118 (7.6)
	<i>m (sd); Median</i>
Youth age	12.4 (0.7); 12
Household income	7.6 (2.2); 8
Walkability	10.2 (3.5); 9.8
Population density	2,094.2 (2,229); 1,575.6

**Table 2**

Truncated linear regressions

Variable	Unstandardized $\beta$	Standardized $\beta$	SE	<i>t</i>	<i>p</i>
<b>Sedentary (Adjusted <math>R^2 = .03</math>)</b>					
Intercept	53.08%	-.32	4.02%	13.19	< .001***
Pet ownership					
No pets	-0.01%	< .01	0.55%	-0.02	0.98
Passive pets	1.19%	.15	0.54%	2.22	0.03
<b>Light (Adjusted <math>R^2 = .04</math>)</b>					
Intercept	42.18%	.03	3.24%	13.00	< .001***
Pet ownership					
No pets	0.27%	.04	0.44%	0.61	0.54
Passive pets	-0.36%	-.05	0.43%	-0.82	0.41
<b>MVPA (Adjusted <math>R^2 = .16</math>)</b>					
Intercept	19.46%	.58	3.95%	4.92	< .001***
Pet ownership					
No pets	-0.26%	-.03	0.54%	-0.49	0.63
Passive pets	-1.98%	-.23	0.53%	-3.76	< .001***
<b>METs/Minute (Adjusted <math>R^2 = .09</math>)</b>					
Intercept	2.20	.37	0.14	16.15	< .001***
Pet ownership					
No pets	-0.01	-.02	0.02	-0.32	0.75
Passive pets	-0.04	-.14	0.02	-2.18	0.03

## References

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