

Introduction

- Research within the field of human-animal interaction (HAI) has shown there to be an association between companion animal ownership and prosocial behaviors (Christian et al., 2020; Purewal et al., 2024; Wenden et al., 2021) as well as sleep disturbances (Medlin & Wisnieski, 2023; Mein & Grant, 2018).
- Many samples used in HAI research are not representative of the greater U.S. population (Rodriguez et al., 2021).
- The goals of this study were to:
 - Confirm the factor structure and test the invariance of a measure of prosocial behavior between pet owners and non-pet owners
 - Investigate the impact of pet ownership on sleep disturbances, while adjusting for contextual covariates in a nationally representative sample.

Methodology

- This research used data from the Adolescent Brain Cognitive Development (ABCD) Study®.
- N (prosocial) = 8,273
 - n (pet) = 6,265; n (non-pet) = 2,008
- N (sleep) = 8,507
 - n (pet) = 6,452; n (non-pet) = 2,055
- Prosocial measures were adapted from the Strength and Difficulties Questionnaire (SDQ; Goodman et al., 1998).
- Sleep disturbances were measured using parent responses to the Sleep Disturbances Scale for Children (SDSC; Bruni et al., 1996).
- The pet ownership survey is a youth report measure of pet ownership developed by the ABCD Study® team.

Results

Table 1

Prosocial Confirmatory Factor Analysis

Model	df	χ^2	p	RMSEA	90% CI	CFI	TLI
Two factor	8	33.7	< .001	.02	[.013, .027]	.999	.998
One factor	9	3,630	< .001	.221	[.215, .227]	.875	.791

Table 2

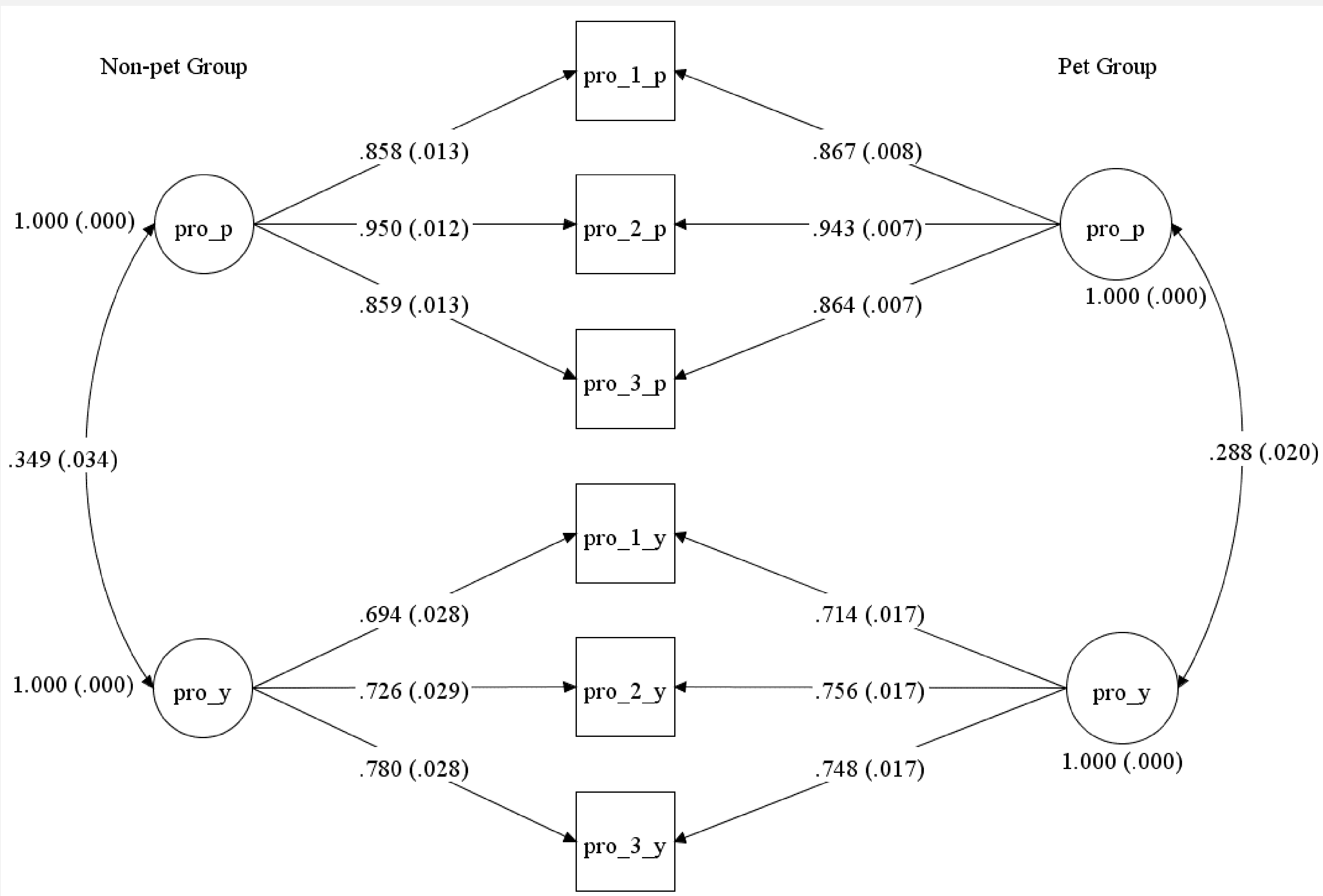
Truncated Sleep Regression Models

Model	OR	SE	95% CI	t	p
Total Sleep Problems	1.28	0.13	[1.00, 1.66]	1.91	.06
Disorders of initiating and maintaining sleep (DIMS)	1.23	0.09	[1.03, 1.47]	2.33	.01
Sleep breathing disorders (SBD)	1.03	0.17	[0.75, 1.43]	0.17	.86
Disorders of Arousal (DA)	0.98	0.23	[0.63, 1.56]	-0.08	.94
Sleep-Wake Transition Disorders (SWTD)	1.24	0.19	[0.87, 1.81]	1.15	.25
Disorders of excessive somnolence (DOES)	1.09	0.14	[0.84, 1.43]	0.63	.53
Sleep Hyperhydrosis (SHY)	1.78	0.32	[0.97, 3.49]	1.77	.08

Note. The reference group for each regression model is non-pet owners. Full models are laid out in the Supplemental Information.

Figure 1

Prosocial Behavior Item Structure



Note. This figure depicts standardized (STDYX standardization using Mplus version 8.10) item loadings for two separate baseline CFAs estimated using WLSMV in the non-pet and pet groups. Results from both CFAs are depicted here for the purpose of comparing differences across groups.

Discussion

- Youth prosocial behavior was equivalent across pet and non-pet owners (Table S1; Figure 1).
- Pet ownership was not significantly associated with total sleep problems, SBD, DA, SWTD, DOES, or SHY, but was associated with DIMS, however, perhaps not meaningfully so.

Conclusions

- The mean level of parent- and youth-reported youth prosocial behavior was shown to be invariant across non-pet and pet owners, in contrast to recent research.
- Additionally, pet ownership was not found to be meaningfully related to total sleep disturbances, pointing to the need for more granular research questions in the future.

Supplemental Information

Funding information, references, and full regression models can be found at the following QR code:

