Physical Activity Behaviour and Motives in Dog Agility Competitors

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BACKGROUND

- Dog ownership may be a source of physical activity motivation [1].
- Dog agility is an increasingly popular activity that demands a high level of physical fitness and a strong bond between dogs and their owners.
- It is unknown if competitors in dog agility are more physically active than other dog owners and if motives for physical activity differ between agility competitors and non-agility competitors.

PURPOSE

- Compare physical activity levels of agility competitors to dog owners who are non-agility competitors, and to examine motives for physical activity using Self-Determination Theory (SDT) [2].

METHODS

- **Participants.** Dog owners (N=280) completed an online survey.
- **Measures.**
- *Demographic characteristics and agility participation* were determined using closed- and open-ended items.
- *Physical Activity with a Dog* (e.g., walking, running, or biking with a dog) was determined using a modified version of the Godin Leisure Time Exercise Questionnaire that measures walking and other activity with dogs [3]. Weekly moderate-to-vigorous minutes of physical activity (MVPA) with a dog was calculated and used as the main physical activity outcome measure.
- *Motives for Physical Activity* was assessed using the Motives for Physical Activity Measure-Revised (MPAM-R) [4]. The MPAM-R taps into five motives for physical activity: *Fitness, Appearance, Competence, Social,* and *Enjoyment*, range 1-7.
- *Behavioural Regulation* was measured using the Dog Walking Behavioural Regulation in Exercise Questionnaire (DW-BREQ) [5]. The DW-BREQ measures the continuum of behavioural regulation in dog walking through five subscales: *Amotivation, External Regulation, Introjected Regulation, Identified Regulation,* and *Intrinsic Regulation*, range 1-5.
- *Dog Obligation* was determined using three items designed to assess the obligation dog owners have for walking their dog [3].

RESULTS

- Agility competitors indicated significantly more weekly MVPA with their dog (M=272.1, SD=227.1) compared to non-agility competitors (M=179.2, SD=201.4; p<.01).
- Agility competitors compared to non-agility competitors indicated higher means on the MPAM-R constructs of Enjoyment (p<.05), Competence (p<.01), and Social (p<.05; Figure 1).
- Agility competitors indicated significantly lower means on the DW-BREQ constructs of External Regulation (p<.05) and Introjected Regulation (p<.01) compared to non-agility competitors (Figure 2).

Table 1. Demographic information for sample.

	Age	Number of Dogs	Sex (% Female)	Income <$40,000 /year
Agility Competitors (N=173)	47.5 (±14.1)	3.0 (±1.8)	168 (97.1%)	35 (31.0%)
Non-Agility Competitors (N=107)	39.1 (±14.8)	1.9 (±1.2)	93 (86.9%)	38 (45.2%)

Figure 1. Mean scores and standard deviations on the MPAM-R motives.

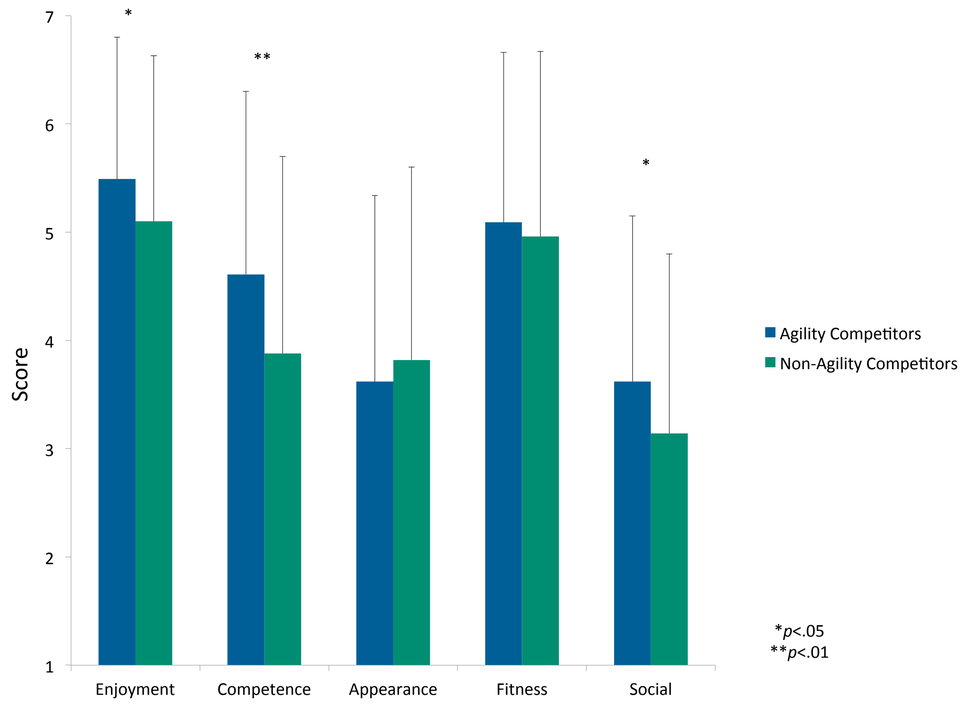
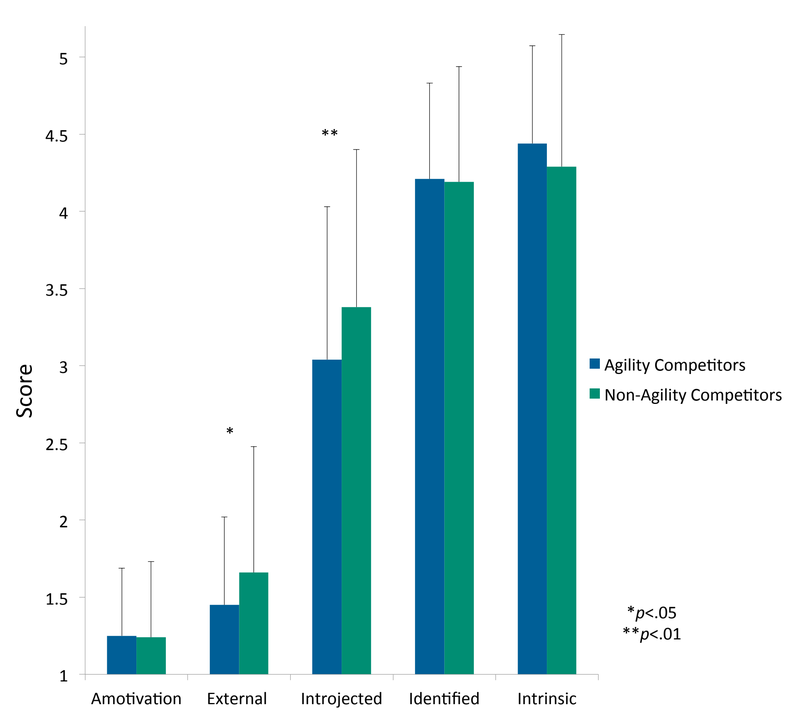


Table 2. Bivariate correlations between MVPA with a dog and SDT variables.

	1	2	3	4	5	6	7	8	9	10	11	12
1. MVPA with a Dog	1	.28**	.26**	.07	.21**	.14*	-.18**	-.13*	.03	.30**	.27**	.23**
2. Enjoyment		1	.67**	.25**	.49**	.51**	-.27**	-.18**	.23**	.54**	.67**	.24**
3. Competence			1	.49**	.65**	.52**	-.18**	-.10	.06	.38**	.32**	.14*
4. Appearance				1	.71**	.38**	-.08	.10	.21**	.22**	.06	.02
5. Fitness					1	.38**	-.26**	-.09	.16**	.45**	.30**	.16**
6. Social						1	.01	.09	.05	.19**	.18**	.04
7. Amotivation							1	.31**	-.18**	-.58**	-.41**	-.38**
8. External								1	.23**	-.16**	-.32**	-.02
9. Introjected									1	.41**	.18**	.36**
10. Identified										1	.65**	.52**
11. Intrinsic											1	.29**
12. Dog Obligation												1

- A hierarchical regression analysis, controlling for age and income, indicated that the DW-BREQ constructs explained 13.2% of the variability in MVPA with a dog (Step 1; $F(6,183)= 4.66$, R^2=.13.2, p<.001). Neither the addition of Dog Obligation (Step 2; $F_{change}(1,182)=1.42$, R^2_{change}=.007, p=.235), nor the MPAM-R motives (Step 3; $F_{change}(1,178)=1.60$, R^2_{change}=.030, p=.176) added any significant variability to the model. In the model, the sole independent correlate of MVPA with a dog was Identified Regulation (β=.25, p=.018). Type of dog ownership was not found to be a significant moderator of the relationship between any of the independent variables and MVPA with a dog (p<.05).
- Most agility competitors reported that their overall physical activity level (75.3%) and physical activity level outside of agility (57.9%) had increased as a result of their involvement in dog agility.

Figure 2. Mean scores and standard deviations on the DW-BREQ constructs.



DISCUSSION

- Participation in dog agility may have a positive effect on self-determined motives for physical activity and physical activity levels in dog owners.
- More intrinsic motives and forms of motivation were found to be associated with MVPA with a dog in both dog agility competitors and non-agility competitors.
- The further availability and promotion of dog agility programs to the public may serve as a means of getting dog owners more physically active with their dogs.

REFERENCES

[1] Westgarth C et al. (2014). How might we increase physical activity through dog walking? *Int J Behav Nutr Phys Act*, 11:83.
[2] Deci EL, Ryan RM (1985). *Intrinsic motivation and self-determination in human behavior.* New York, NY: Plenum.
[3] Brown FW, Rhodes RE (2006). Relationships among dog ownership and leisure-time walking in Western Canadian adults. *Am J Prev Med*, 30:131-6.
[4] Ryan RM et al. Intrinsic motivation and exercise adherence. *Int J Sport Psychol*, 28:335-54.
[5] Lim C, Rhodes RE (2016). Sizing up physical activity: the relationship between dog characteristics, dog owners' motivation, and dog walking. *Psychol Sport Exerc*, 24:65-71.

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