

Report for [1562337-1] The Self-as-Doer Identity: Predicting Physical Activity Above and Beyond Social Cognitive and Self-Determination Theories

The travel grant was for a conference in early April that was cancelled due to COVID-19. Although the grant money was spent on flight, conference registration fees, and lodging, refunds have been issued or are in the process of being issued.

The students did, however, complete their poster that was to be presented at the conference and submitted it to the conference mobile app which could be accessed by registrants. Attached is a copy of their presentation.

The Self-as-Doer Identity predicts vigorous physical activity behaviors above and beyond variables in the Social Cognitive and Self-Determination Theories.

The Self-as-Doer Identity: Predicting Physical Activity Above and Beyond Social Cognitive and Self-Determination Theories

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INTRODUCTION

Physical Activity (PA)


- Being physically active provides long term benefits including decreased risk for heart disease and obesity, and increased positive physical, mental, and emotional health.¹
- Specifically, moderate-to-vigorous PA increases sleep quality, reduces risk for high blood pressure, and other chronic health outcomes.²
- However, only 53.3% of adults are meeting PA guidelines for aerobic activity, and only 22.2% of adults are meeting PA guidelines for muscle-strengthening activity.³
- Psychosocial models like the SCT and SDT have offered strategies to increase rates of PA.⁴

Social Cognitive Theory (SCT)

- The SCT⁵ is a theoretical framework for understanding behavior which proposes that factors like self-efficacy, outcome expectancies, goals, and environmental factors influence behavior like physical activity.⁶
- SCT was both intrinsic and extrinsic factors to improve an individual's health and provides steps to enhance motivation and to accomplish goals.⁷
- SCT has been found to help explain a significant amount of variance in physical health.⁸
- Goal setting has been found to be the strongest predictor of PA.⁹
- Although research has determined that factors of the SCT predict PA, further research exploring these relationships with the self-as-doer identity and PA is warranted.¹⁰

Self-Determination Theory (SDT)

- According to SDT,¹¹ individuals are more likely to be persistent in behaviors when they feel autonomous in doing them.
- Intrinsic motivation promotes autonomy in that an individual is motivated to perform a task because it is internally rewarding, fun, or challenging.
- Intrinsic motivation has been associated with greater levels of PA, but less research has explored its relationship with the self-as-doer identity and PA.¹²



STUDY AIMS and HYPOTHESES

- Psychosocial interventions based on theoretical models like the SCT and SDT have had success in predicting PA, but some variability in the degree to which PA is adopted and maintained still exists. Therefore a recently developed construct, the self-as-doer identity, was explored in relationship to these theories.
- It was hypothesized that the self-as-doer identity would predict both moderate and vigorous PA above and beyond variables from the social cognitive and self-determination theories.

METHOD

Participants

- 40 undergraduates
- 50% male, 50% women
- 16.7% (N=7) non-Hispanic
- Age: 18-31 years (M=20.68, SD=3.87)

Measures

- Demographics: Age, gender, education, and ethnicity
- Self-Determination: The Behavioral Regulation in Exercise Questionnaire-3 (obtained a raw score)
- Social Cognitive Theory:
 - Exercise Self-efficacy: The Exercise Self-efficacy Scale (10-item)
 - Perceptions of support: The Social Support Scale (10-item)
 - Outcome Expectancies: The Outcome Expectancy Inventory (10-item)
 - Physical Activity Behaviors: International Physical Activity Questionnaire (10-item)

RESULTS

Vigorous PA

- The full model explained 63.1% of the variance in PA behaviors, with SCT and SDT variables explaining 60.7% of the variance in PA behaviors, $R^2 = .607$, $F(6, 40) = 12.34$, $p < .001$.
- Adding the Self-as-Doer identity contributed an additional 4.4% of variance to the model, $\Delta R^2 = .041$, $F(1, 40) = 5.90$, $p = .02$. This addition was a significant increase above and beyond SCT and SDT variables.

Moderate PA

- The full model explained 42.1% of the variance in PA behaviors, with SCT and SDT variables explaining 40.3% of the variance in PA behaviors, $R^2 = .403$, $F(6, 40) = 5.12$, $p < .001$.
- Adding the Self-as-Doer identity accounted for an additional 2.2% of the variance, but this was not a significant increase above and beyond the SCT and SDT variables, $\Delta R^2 = .022$, $F(1, 40) = 1.77$, $p = .19$.

DISCUSSION

The self-as-doer identity predicted vigorous PA above and beyond the SCT variables and controlled and intrinsic motivation. It did not, however, predict moderate PA above the tested theories. Findings suggest that the Self-as-Doer Identity may be a viable psychosocial factor to consider in efforts to predict vigorous PA behaviors. Adding identity-related activities that focus on seeing oneself as the doer of his/her vigorous behaviors is already existing PA interventions or programs may create further behavioral change, especially for vigorous activities. The Self-as-Doer Identity might be needed in a way that is not required of moderate PA behaviors. Previous research suggests that moderate PA may be more susceptible to external barriers, such as cost and lack of support, whereas vigorous PA may be more susceptible to internal barriers, such as personal issues and lack of self-discipline. Thus the Self-as-Doer Identity might be better suited for promoting vigorous behaviors given the internal nature of the Self-as-Doer Identity. The spirit of the self-as-doer identity makes it easily adaptable to other healthy behavior interventions, but more research is necessary to determine causal relationships. The study is limited by its cross-sectional design, homogenous sample, and self-reported PA behavior measures. Experimental research with a more diverse sample, using objective PA behavior measures is needed to validate the claims of the current study. Nonetheless, the current research supports the role of the Self-as-Doer Identity in predicting vigorous PA behaviors.

RESULTS

Variables	Mean (SD)	Median
Vigorous METs (weekly)	1,460.27 (1,686.99)	888.00
Moderate METs (weekly)	1,467.33 (1,650.72)	640.00
PA Self-efficacy	5.67 (70)	5.67
Outcome Expectancies	4.15 (47)	4.20
Exercise Goals	2.97 (80)	3.00
Exercise Plans	2.60 (79)	2.60
Controlled Motivation	2.13 (49)	2.17
Intrinsic Motivation	3.66 (89)	3.63
Self-as-Doer Identity	3.01 (57)	3.00

Vigorous PA

Block 1	Variables	B	SE B	β
Block 1	PA Self-efficacy	50.19	205.03	.02
	Outcome Expectancies	538.26	374.40	.16
	Exercise Goals	-153.23	241.66	-.08
	Exercise Plans	735.03	270.19	.38*
	Controlled Motivation	366.83	308.80	.11
	Intrinsic Motivation	364.82	266.06	.21
Block 2	Self-as-Doer Identity	739.29	304.26	.28*

Note: Block 1: $R^2 = .63$, Block 2: $\Delta R^2 = .04$, * $p < .05$

Moderate PA

Block 1	Variables	B	SE B	β
Block 1	PA Self-efficacy	2,092.32	460.80	-.56**
	Outcome Expectancies	1,205.19	841.46	.21
	Exercise Goals	-649.68	343.07	-.20
	Exercise Plans	-1,172.46	607.23	-.35
	Controlled Motivation	-1,233.31	494.03	-.22
	Intrinsic Motivation	2,100.72	397.93	.70**
Block 2	Self-as-Doer Identity	-909.19	463.82	-.20

Note: Block 1: $R^2 = .40$, Block 2: $\Delta R^2 = .02$, ** $p < .001$

DISCUSSION

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