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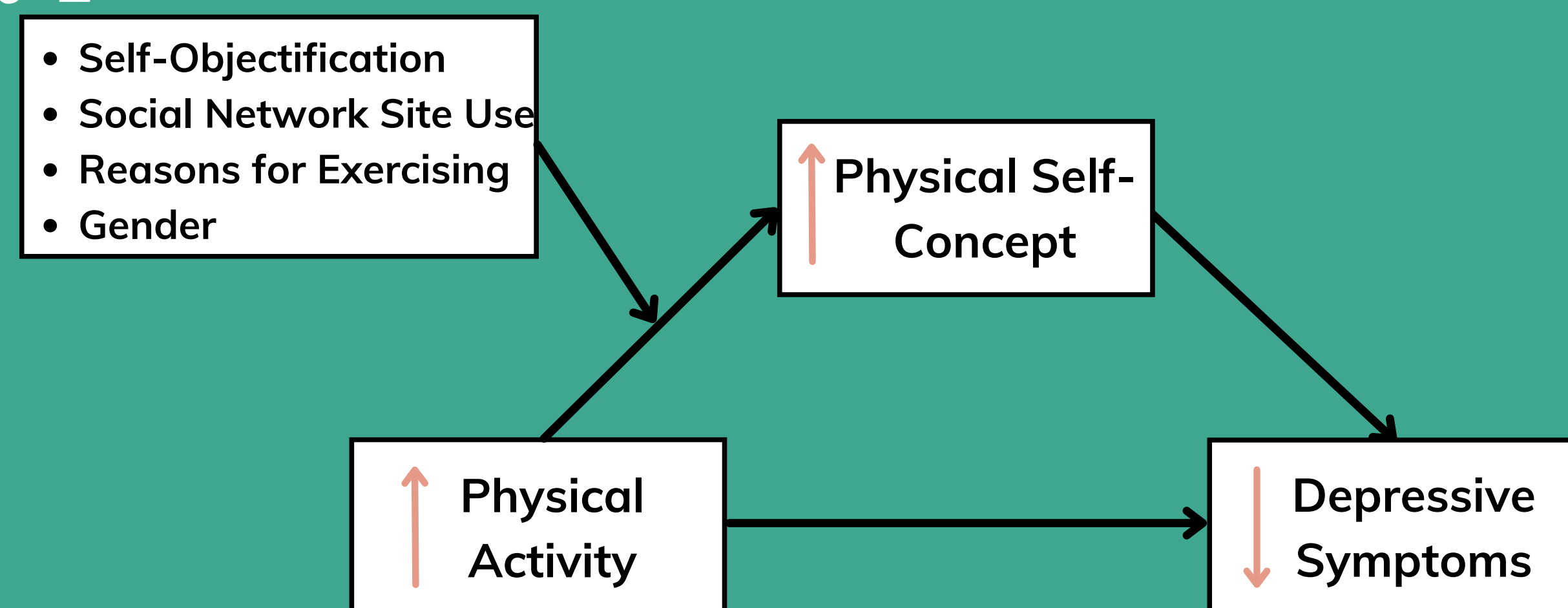
The Indirect Effect of Physical Activity on Depressive Symptoms Through Physical Self-Concept Among Emerging Adults

Jessica Ryan, Department of Psychology
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Supervised by Dr. Megan Ames, Department of Psychology

Introduction

- A negative correlation between physical activity (PA) and depressive symptoms is typically observed (Bailey et al., 2018)
 - Self-concept is frequently shown to be a significant mediator of this association (Sonstroem et al., 1994)
- It is worth investigating PA further as an intervention for depressive symptoms as it is cost-effective, accessible, improves physical health, and has minimal side-effects
- Better understanding the antidepressant mechanism of PA will help improve its effectiveness as an intervention
 - Currently, moderators of the PA, self-concept, and depressive symptom pathway are understudied

Hypothesized Models



Methods

Participants

- Canadian-residing emerging adults (N = 496, 81% women; 74% White; M age= 20.36, SD = 0.68)

Design

- Cross-sectional questionnaire hosted on Qualtrics

Measures

- PA: Godin Leisure-Time Exercise Questionnaire (Godin, 2011)
- Physical Self-Concept: PSDQ-S (Marsh et al., 2010)
- Social Network Site Use: SNAIS (Li et al., 2016)
- Self-Objectification: Objectified Body Consciousness Scale (McKinley and Hyde, 1996)
- Reasons for Exercise: Reasons for Exercise Inventory (REI) (Silberstein et al., 1988)
- Depressive Symptoms: CESD-D (Radloff, 1977)

Jessica E. H. Ryan, Travis Menuz, & Dr. Megan E. Ames

Analysis

- Bivariate correlations were computed between all study variables
- The mediation model was analyzed using PROCESS macro model 4

$$\text{Depressive Symptoms} = B0 + B1(\text{Physical Activity}) + B2(\text{Physical Self-Concept}) + e$$

Results

Table 1

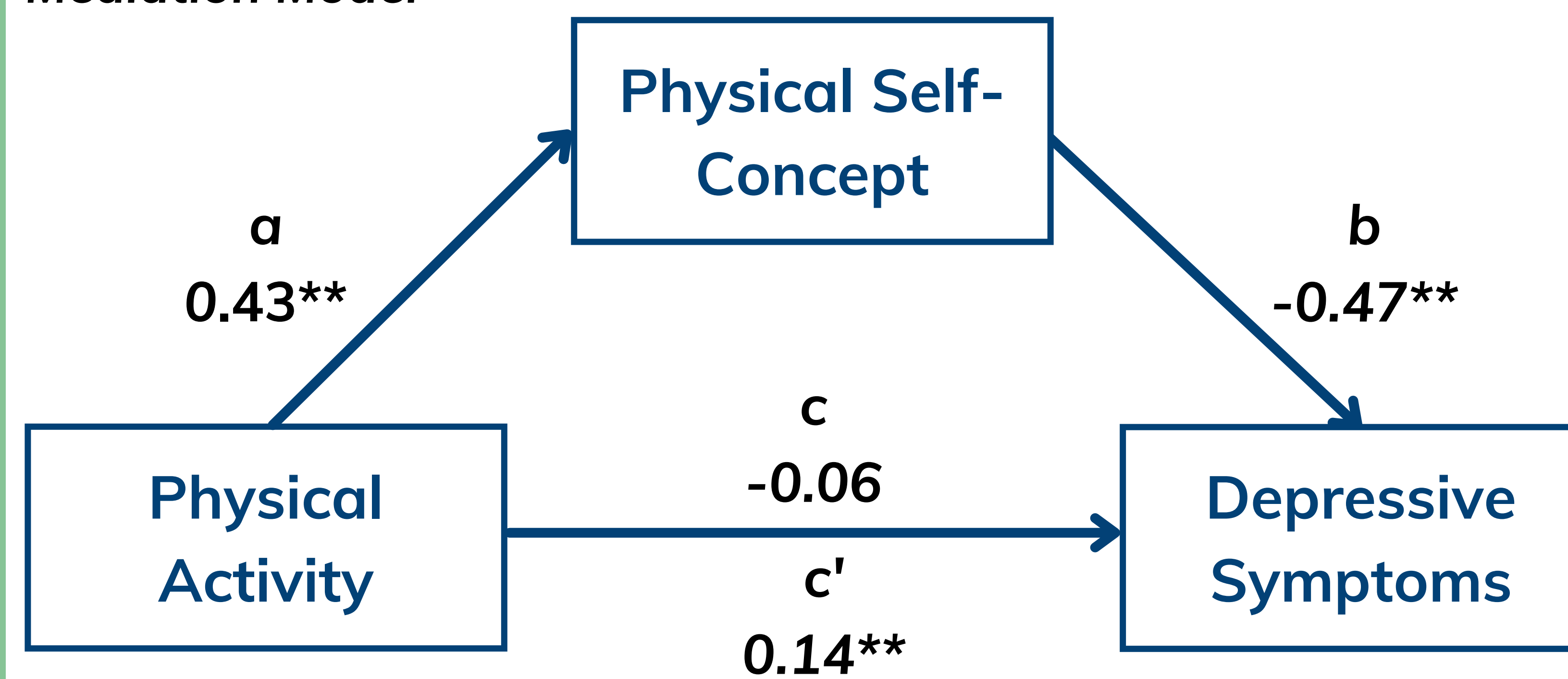
Bivariate Correlations

	Mean	SD	α	1	2	3	4	5	6	7	8	9
1. Physical Activity	50.60	26.29	0.75	1								
2. Physical Self-Concept	3.97	0.81	0.95	0.43**	1							
3. Social Network Site Use	1.84	0.68	0.85	0.18**	0.07	1						
4. Appearance-Related SNSU Cognitions	4.45	1.62	0.90	-0.08	-0.49**	0.11*	1					
5. Self-Objectification	4.1	0.92	0.87	-0.04	-0.36**	0.11*	0.62**	1				
6. Appearance-Motivated Exercise	4.51	1.3	0.88	-0.05	-0.21**	0.26**	0.55**	0.54**	1			
7. Physical Health-Motivated Exercise	5.49	1.12	0.89	0.24**	0.38**	0.10*	-0.12**	-0.20**	0.04	1		
8. Mental Health-Motivated Exercise	4.88	1.28	0.86	0.24**	0.33**	0.25**	-0.01	-0.07	0.09*	0.54**	1	
9. Depressive Symptoms	1.14	0.59	0.92	-0.06	-0.40**	0.01	0.40**	0.35**	0.25**	-0.18**	-0.03	1

Note. SD = standard deviation; α = Cronbach's alpha; * $p < .05$, ** $p < .01$.

Figure 1

Mediation Model



- The total effect of PA on depressive symptoms was not significant, however the direct effect was significant
- A significant indirect effect of PA on depressive symptoms was found through the mediating factor of physical self-concept

Discussion

- Contrary to the dominant pattern of findings within the literature, the total effect of PA on depressive symptoms was not significant
 - However, it supports Dishman et al. (2006), Ryan (2008), Pickett et al. (2012), and Colman et al. (2014) who similarly only found an indirect of PA on depressive symptoms through self-concept
- Interestingly, after accounting for physical self-concept the direct effect of PA on depressive symptoms was significant in the positive direction
 - This may be a result of inconsistent mediation
- These results suggest that for PA to be effective as an antidepressant intervention, an increase in physical self-concept must occur
- As physical self-concept is significantly correlated with all study variables, except for social network site use, we expect that these variables will further influence the pathway associations

Next Steps

- Further data analyses addressing the hypothesized moderated mediation model will continue
- PA had the lowest internal consistency and thus the use of more precise measures (e.g., wearables) should be explored

Acknowledgements

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