

Appendix A

Table 1

Zero-order correlations between social control, exercise motives, and MET-Minutes

	1	2	3	4	5
1. Persuasion	1.00	.15	.23	.29	.28
2. Pressure	.06	1.00	-.05	.05	-.12
3. Approach Motives	.11	-.06	1.00	.58	.24
4. Avoidance Motives	.05	.03	.38	1.00	.16
5. MET-minutes	—	—	—	—	1.00
<i>M</i>	3.36	2.01	5.46	4.68	1467.08
<i>SD</i>	1.07	.83	.95	1.16	916.30
Min, Max	1, 7	1, 7	1, 7	1, 7	0, 5000
ICC	.48	.40	.55	.54	—

Notes. Correlations below the diagonal are at the daily level and correlations above the diagonal are at the person level. *M* = mean. *SD* = standard deviation. Min = minimum score. Max = maximum score. ICC = intraclass correlation. Correlations significant at $p < .05$ are in boldface.

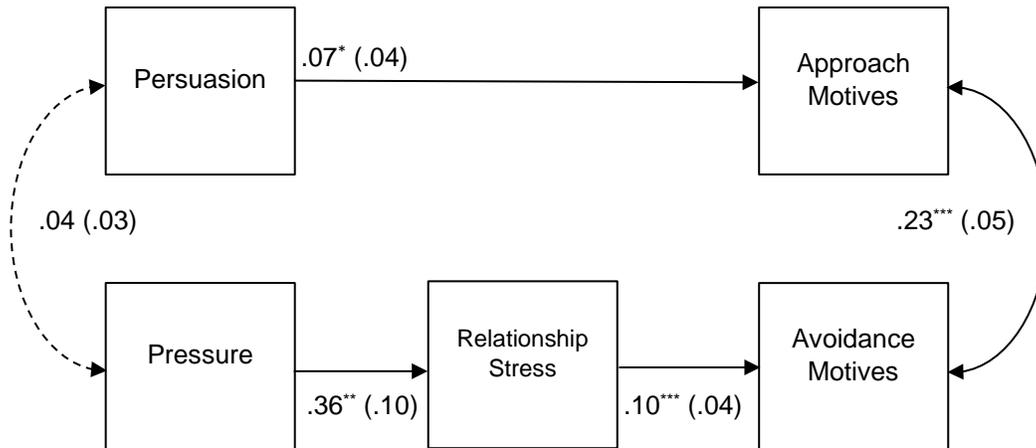
Alternate Path Models of Social Control, Stress, and Approach-Avoidance Motives

To better understand the pattern of results regarding pressure, we tested an alternate path model in which we investigated relationship-related stress as a mediator between pressure and exercise motives. Pressure may be related to higher relationship stress and, indirectly, higher avoidance motives. As shown in Figure 3, at the daily level, relationship-related stress was assessed using person-centered responses to the daily diary question, “Today, my partner/relationship stressed me out,” $M = 2.07$, $SD = 1.84$, $ICC = .23$, scaling: 1 = *strongly disagree* and 7 = *strongly agree*. At the person level, relationship-related stress was the grand mean-centered average for each person across diary days.

The overall model fit well: $\chi^2(22) = 35.67$, $p = .04$; $RMSEA = .03$; $CFI = .95$; Daily $SRMR = .04$; Person $SRMR = .10$. Pressure was related to higher stress and, in turn, stress was associated with stronger avoidance motives (specific indirect effects: daily level $B = .04$, $p = .04$; person level: $B = .18$, $p = .001$). Nevertheless, avoidance motives were unrelated to MET-minutes. Additionally, higher persuasion scores were linked to stronger approach motives, and stronger approach motives were linked to greater energy expenditure. The indirect effects from persuasion to MET-minutes were not significant,

however ($p = .17$). While persuasion is related to more productive, approach motives for MVPA, pressure is related to more unproductive, avoidance motives for MVPA ~~by~~ through its association with relationship-oriented stress.

Daily Level



Person Level

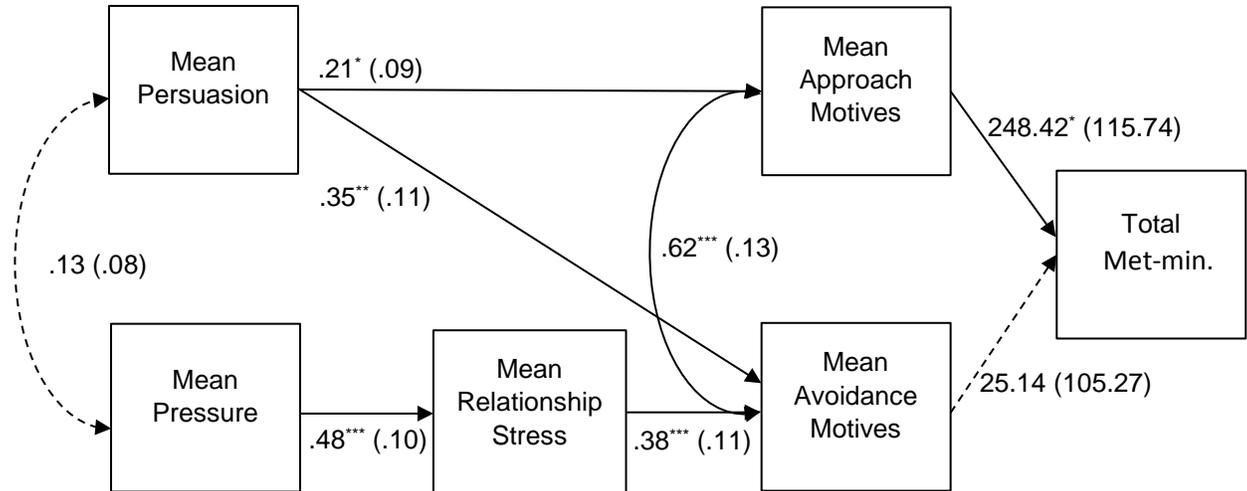


Figure 3. Figure shows results of a mediated multilevel path model. The top of the figure contains the results for the daily level analysis ($N = 550$ surveys). The bottom of the figure contains results for the person level analysis ($N = 98$ people). Values are unstandardized beta weights with standard errors in parentheses. Solid lines represent associations with $p \leq .05$. Total MET-min. = MET-minutes. * is $p \leq .05$. ** is $p \leq .01$. *** is $p \leq .001$.

Direct Associations between Social Control and Physical Activity

We next examined relations among social control and physical activity using same-day and next-day reports of exercise initiation with and without accounting for minutes of exercise. This analysis provides evidence that the persuasion and pressure variables in the current study produced results consistent with prior research (i.e., persuasion encourages healthy behavior and pressure discourages it). The analyses of initiation of exercise maximized statistical power by using the full sample of survey responses ($N = 1045$); the analyses including minutes of exercise restrict the sample to the 550 days on which participants exercised. We also included daily and person-average exercise intent as covariates to test if persuasion and pressure operate independently of intent (daily diary question: “Did you plan to exercise today?”).

We examined two multilevel models. The first model used exercise initiation and proportion of exercise completed during the daily and person level outcome variables, respectively. The second model used minutes of exercise as the daily level outcome and person-average minutes of daily exercise by days of exercise as the person level outcome. Table 2 contains the results of these analyses.

Exercise Initiation

We first tested if the partners' use of social control would be associated with whether the participant exercised, controlling for their initial plans. Because exercise is a dichotomous variable, a logit link function with Monte Carlo integration was used to compute the log likelihood that an individual would exercise on a given day. Together, the predictors accounted for 49% of the variance in daily exercise and 68% of the variance in total exercise. As shown in Table 2, results of the daily level of the model were consistent with our expectations. When participants reported their partners using more persuasion than usual, they were more likely to exercise. They were less likely to exercise when they reported their partners using more pressure than usual. These patterns were also reflected at the between-person level of the model. People whose romantic partners used higher levels of persuasion were likely to complete the most exercise days during the study, and correlational results for pressure trended in the opposite direction ($p = .07$).

MET-Minutes

We removed the covariance pathways between the predictors at the lower level of the model to achieve adequate model fit prior to interpreting the model: $\chi^2(11) = 13.69$, $p = .25$; RMSEA = .02; CFI = .93; L1 SRMR = .02; L2 SRMR = .01. The models of same-day exercise accounted for a significant amount of variance in MVPA. Consistent with

the prior results, on days that participants felt pressured, they also spent less metabolic energy on exercise. Persuasion was not associated with daily effort after accounting for intent and pressure, although it was associated with greater total energy expenditure.

Pressure did not influence overall energy expenditure.

Table 2
Multilevel models of intent, social control and exercise initiation and MVPA

Predictors	Exercise Initiation	MET-minutes
	B (SE)	B (SE)
Daily Level		
Exercise Intent	2.70*** (.22)	49.45*** (20.24)
Persuasion	.83*** (.08)	3.81 (8.66)
Pressure	-.35*** (.10)	-18.78* (7.75)
R^2	.43***	.03*
Person Level		
Exercise Intent	.60*** (.05)	1196.13*** (363.34)
Persuasion	.06*** (.01)	175.18* (90.38)
Pressure	-.03† (.02)	-133.48 (100.80)
R^2	.68***	.19***

Notes. Table shows results of two multilevel models. Covariances were specified between the exogenous variables. B= unstandardized point estimate. SE = standard error. MET-minutes = MET-minutes. N surveys = 1045 for model of exercise initiation. $N = 550$ for model of MET-minutes. N participants = 98. *** is $p \leq .001$. ** is $p \leq .01$. * is $p \leq .05$. † is $p \leq .10$.