

# Healthy Identity and Conscientiousness as Predictors of Co-occurring Health-Related Habits

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## Introduction

- **Healthy behaviors** are important for preventing and managing chronic illness and avoiding premature death. Very few individuals engaged in the **recommended amount** of health behaviors.
- Behaviors that occur automatically in response to a conditioned contextual cue are called **habits**. Habits are important for health because they occur **consistently** and resistant to change.
- Our research aimed to identify how **exercise habit** could be a predictor for other health related habits like **hand washing**, since interventions should promote multiple behaviors.
- Healthy behaviors may co-occur in individuals, but whether **habits co-occur** has not yet been studied and research has not yet evaluated **health behavior co-occurrence** in general.
- This study focuses on the two habits of exercise and hand washing and tests two potential mechanisms of co-occurrence: **conscientiousness** and a **healthy self-identity**

## Hypothesis

- Individuals with stronger exercise habits will have stronger hand washing habits and show a greater frequency of hand washing behavior because they will be conscientious and identify as a healthy individual.

## Measures

- **Conscientiousness** was measured using the Big 5 inventory scale (Mx=3.8; SD=.56;  $\alpha$  =.81)
- **Healthy Identity** which is modeled from the exercise identity scale (Mx=3.8; SD=.69;  $\alpha$  =.80)
- **Exercise Habit** ( $\alpha$  =.86) and **Hand Washing** ( $\alpha$  =.95) was measured using the self-reported behavioral automaticity index
- All measures were measured at baseline and were rated on a **5 point Likert scale**

- **Hand Washing** was reported for 2 weeks using weekly diaries

## Participants

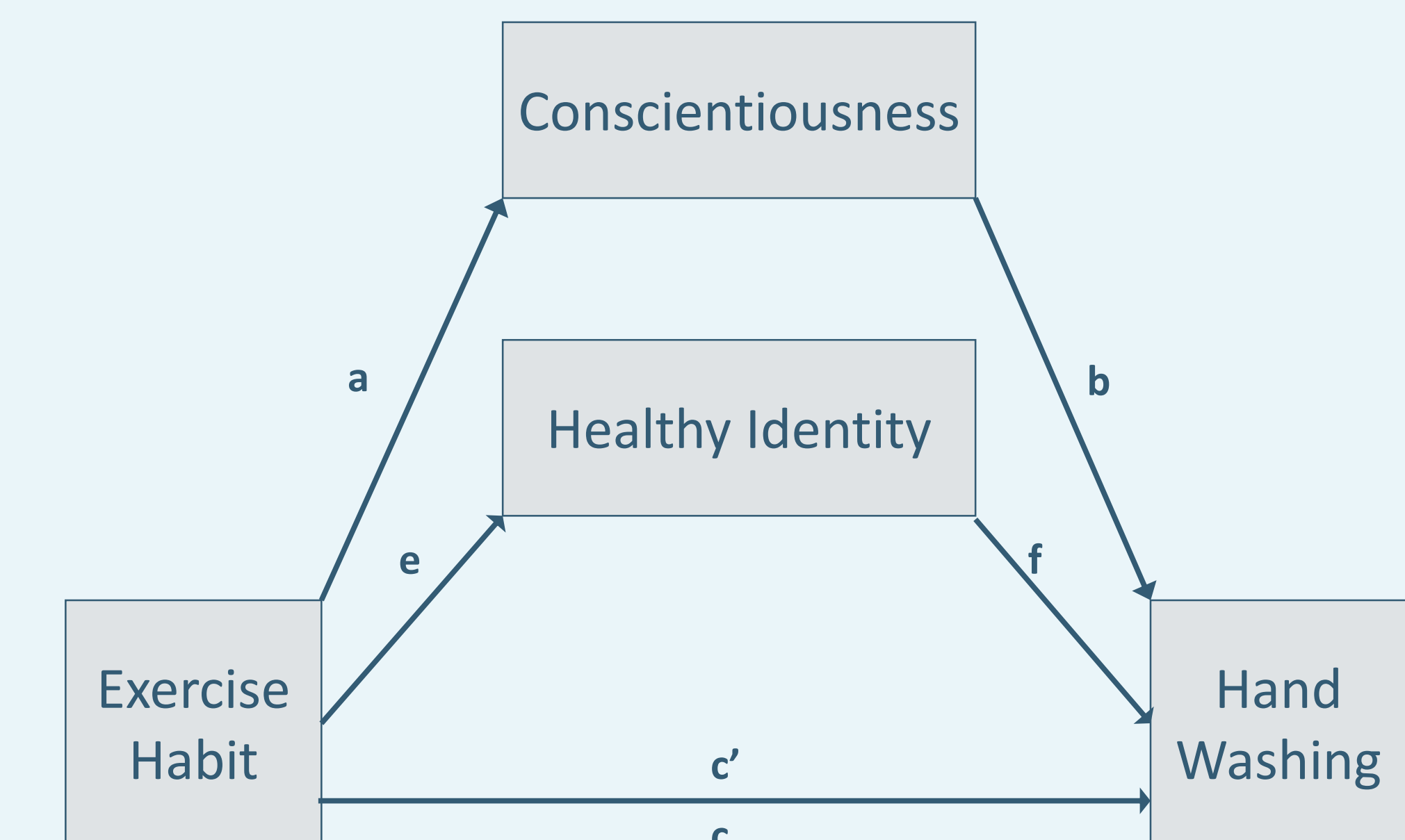
- N=494; M<sub>age</sub>=19.31; SD = 1.77 ; 54.7% female
- Participants were undergraduates who exercise are not NCAA athletes.

# Having an exercise habit corresponds with having a hand-washing habit, because of conscientiousness but not healthy identity.



## Results

Model 4. Andrew Hayes Process for Mediation with 1000 Bootstrapped Samples



- There is a significant completely standardized indirect effect for the mediator variable of conscientiousness 0.03, SE = 0.02, 95% CI [0.003, 0.066]
- There was no significant completely standardized indirect effect in hand washing habit by exercise habit when mediated by healthy identity 0.04, SE = 0.03, 95% CI [-0.014, 0.091]
- There was no significant difference in hand washing behavior at week 1 or week 2 as predicted by exercise habit when mediated by conscientiousness and healthy identity

Table 1. Mediation model for habit and (behavior)

Path	Path Coefficient	Standard Error	t-value	p-value	95% CI
a	.188 (.226)	.026(.036)	7.13(6.35)	.000(.000)	.136-.240(.156-.297)
b	.135(-5.63)	.063(6.26)	2.13(.900)	.034(.370)	.011-.260(-18.--6.70)
e	.326(.367)	.030(.039)	10.8(9.46)	.000(.000)	.266-.385(.291-.443)
f	.090(-1.32)	.055(5.76)	1.64(-.229)	.102(.820)	-.012-.198(-12.7-10.0)
c'	-.016(.968)	.040(4.15)	-.395(.233)	.693(.816)	-.094-.062(-7.21-9.15)
c	.039(-.789)	.035(3.50)	1.10(-.225)	.272(.822)	-.031-.109(-7.68-6.10)

## Discussion

- Exercise habit is related to hand washing habit through the mediator of conscientiousness but not healthy identity, and is not related to hand washing behavior.
- One limitation could be that the study was only done on college aged students who regularly participate in exercise which can not be applied to the general public
- Future research might include using conscientiousness and healthy identity for complex habits such as eating fruits and vegetables regularly because identity may be more important to these behaviors than to hand washing

## References

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- <sup>2</sup> Noar, S. M., Chabot, M., & Zimmerman, R. S. (2008). Applying health behavior theory to multiple behavior change: Considerations and approaches. *Preventive Medicine*, 46(3), 275-280. doi: 10.1016/j.ypmed.2007.08.001
- <sup>3</sup> Roberts, B. W., Walton, K. E., & Bogg, T. (2005). Conscientiousness and Health across the Life Course. *Review of General Psychology*, 9(2), 156-168. doi: 10.1037/1089-2680.9.2.156

