

# Coping behavior profiles across personality items

Elizabeth Dworak<sup>1</sup>, William Revelle<sup>1</sup>, and David Condon<sup>2</sup>

<sup>1</sup>Department of Psychology, Northwestern University, Evanston, IL, United States of America

<sup>2</sup>Department of Psychology, University of Oregon, Eugene, OR, United States of America



## INTRODUCTION

- Previous research on coping has traditionally focused on the Big Five Model and broader strategies (Carver & Connor-Smith, 2010).
- Coping research would be benefit by using nuances (aka items) (McCrae, 2015; Möttus et al., 2017).
- Using GWAS like techniques with items as “SNPs”, we can develop personality measures beyond the Big Five.
- Do profiles across hundreds of personality items show reliable patterns of coping behavior?
- Because resources to cope change across situations, do these patterns group to show us how individuals switch between coping behaviors?

## METHODS

### Database

- Synthetic Aperture Personality Assessment (SAPA) project
- Collected February 2017 - November 2017

### Participants

- n=26,770
- Age ranged from 11 to 86 with a median age of 22 ( $M=25.79$ ;  $SD=11.1$ )
- 62.0% female
- International sample from 193 countries
  - 50% of participants from U.S.

### Measures

- “How do you most often cope with stress?”
  - Distraction
  - Eating
  - Exercise
  - Ignoring stress
  - Meditation & mindfulness
  - Other
  - Sleeping
  - Spiritual practice
  - Substance use
- 135 item SAPA Personality Inventory (Condon, 2017)
  - How well does this question describe you?
  - Items factor into a scale of 27 personality facets
  - Broader than the traditional Big Five Traits

### Analyses

- Zero order correlations of dummy coded coping behaviors
- Coping profiles developed across 135 personality items for each coping behavior
- Correlations of coping behaviors with coping behavior profiles
- Exploratory cluster analysis of coping profiles using iclust
- Schmid-Leiman exploratory factor analysis of coping profiles

- All analyses completed in R (R Core Team, 2018) using the psych package (Revelle, 2019).

Email Elizabeth Dworak at: [elizabeth.knowlton@northwestern.edu](mailto:elizabeth.knowlton@northwestern.edu)  
 Take our test: <https://sapa-project.org/>  
 Review our research: <http://personality-project.org/sapa>  
 Partially supported by a grant from the National Science Foundation: SMA-1419324

## Coping Behavior Correlations and Profile Correlations

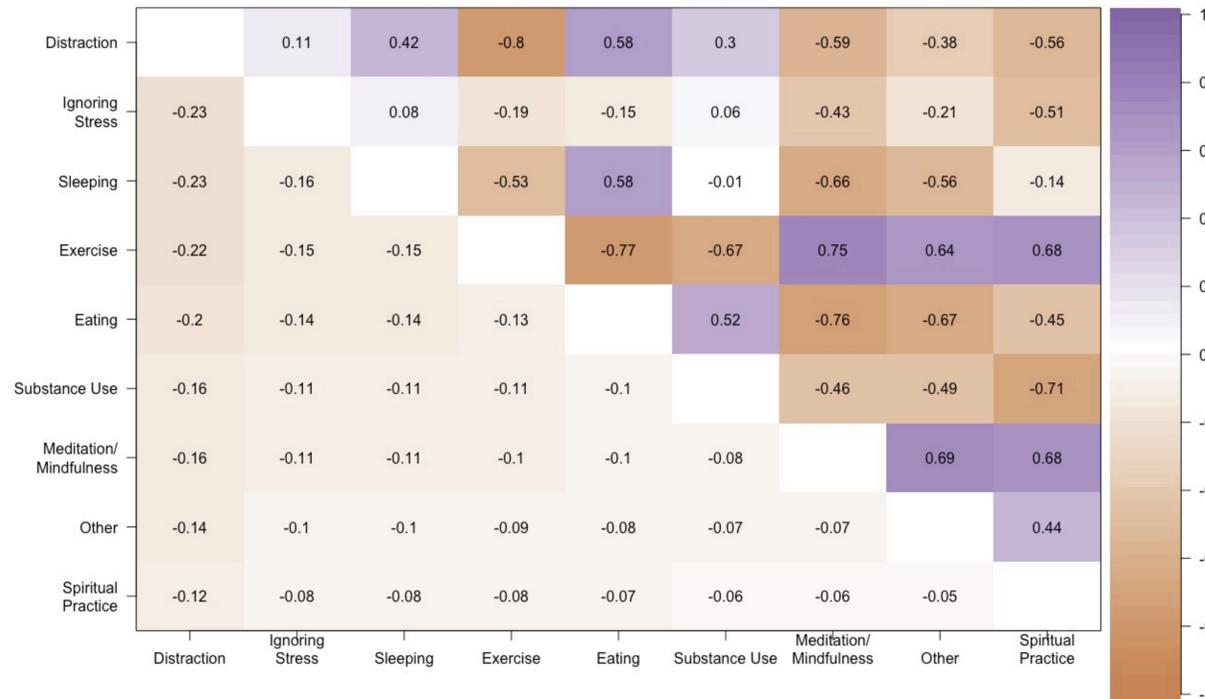


Figure 1. Coping behavior correlations and coping profile correlations. Lower off diagonal shows the zero order correlation between coping behaviors. The upper off diagonal shows the correlation between coping behaviors and coping profiles.

## Schmid-Leiman Solution of Coping Behavior Profiles

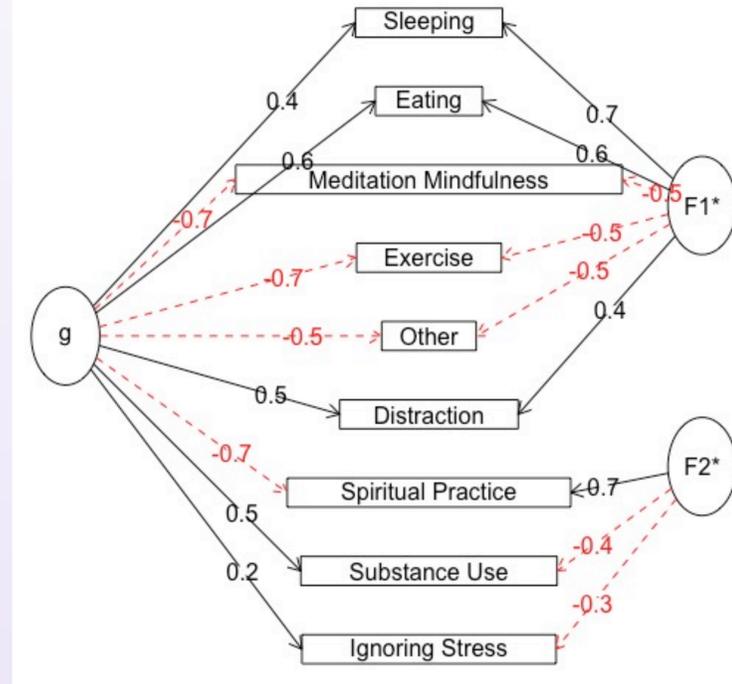


Figure 3. This figure shows a Schmid-Leiman solution of coping profiles. Factor loadings indicate that there is a general factor of coping that accounts for each of the behaviors and two lower level factors.

## Cluster Analysis Across Coping Behavior Profiles

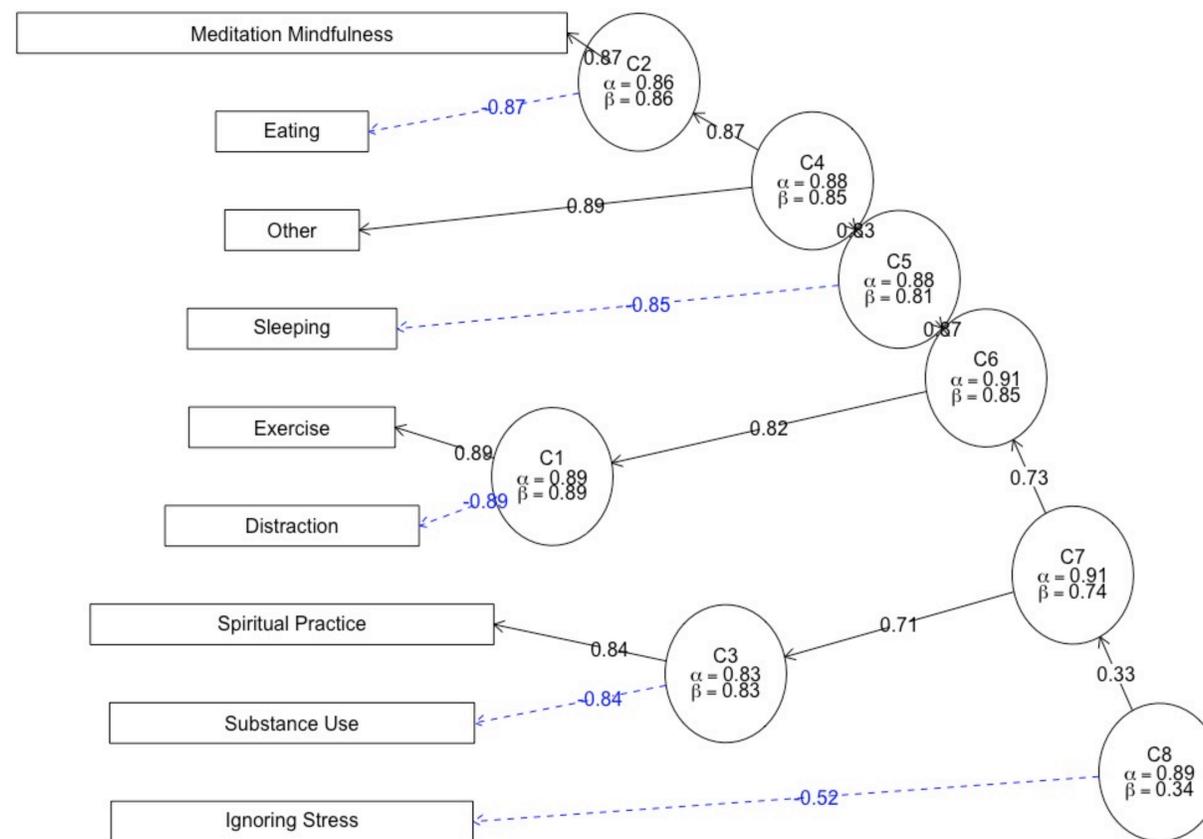


Figure 2. A cluster analysis of the coping profiles using iclust identified three profile clusters.

## RESULTS & CONCLUSION

- Correlations between coping behaviors ranged from -.23 to -.05.
- Profile correlations ranged between -.80 and .75.
- Factor analysis and cluster analysis identified three profile clusters
  - Schmid-Leiman solution showed a general factor of coping and two lower level factors
  - Lower level factor 1: Ambivalence/disengagement
    - Distance self and avoid situations that require addressing the stressful stimuli. (Carver et al., 1989)
    - Form of escapism or seek opportunities to be ambivalent towards a stressor (i.e. eating, not exercising, not meditating or being mindful, sleeping, distraction, and not engaging in other coping behaviors).
  - Lower level factor 2: Awareness/venting
    - Aware of feelings and seek ways to express emotions. (Carver et al., 1989)
    - Behavior used to let emotions out or to deal with feelings from stress (i.e. participating in spiritual practice, not using substances, and not ignoring stress).

## REFERENCES

Condon, D.M. (2017). The SAPA Personality Inventory: An empirically-derived, hierarchically-organized self-report personality assessment model. *Personality and Individual Differences*, 111, 679-704.

Carver, C. S., & Connor-Smith, J. (2010). Personality and Coping. *Annual Review of Psychology*, 61(1), 679-704.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56(2), 267-283.

McCrae, R.R. (2015). A more nuanced view of reliability: Specificity in the trait hierarchy. *Personality and Social Psychology Review*, 19(2), 97-112.

Möttus, R., Kandler, C., Bleidorn, W., Riemann, R., & McCrae, R.R. (2017). Personality traits below facets: The consensual validity, longitudinal stability, heritability, and utility of personality nuances. *Journal of Personality and Social Psychology*, 112(3), 474-490.

R Core Team (2018). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL: <https://www.R-project.org/>.

Revelle, W. (2019). psych: Procedures for Personality and Psychological Research, Northwestern University, Evanston, Illinois, USA, <https://CRAN.R-project.org/package=psych> Version = 1.9.4