Simple and Multiple Mediation

Simple mediation model specification:

income → financial.strain → depression.t2

Results of simple mediation model using the bootstrap approach:

I hypothesized that income lowers time 2 depressive symptoms because income covaries with financial strain. This mediational hypothesis was tested with a bootstrap

procedure to determine the significance of the indirect effect (Preacher & Hayes, 2004). 5000

bootstrap resamples were used to provide stable estimates of the direct, indirect, and total

effects using the mediation package (Tingley, Yamamoto, Hirose, Keele, & Imai, 2014) in R 3.4.1 (R Core Team, 2017). 95% confidence intervals were determined from the bootstrap resamples and any interval that did not include 0 was considered to be significantly different from 0.

This analysis revealed that income affected depressive symptoms at time 2 as a function of its relationship with financial strain, ab = -0.02, SE = 0.005, 95% CI [-0.03,-0.01]. Although the total effect of income on depressive symptoms at time 2 was significant, c = -0.05, SE = 0.02, 95% CI[-0.08, -0.02], the direct effect of income on depressive symptoms at time 2 was not significant when the indirect path through financial strain was taken into account, c’ = -0.03, SE = 0.02, 95% CI [-0.06, 0.00]. A Sobel Test revealed that this mediation was reliably different from zero, Sobel’s Z = -4.40, p < 0.001. As depicted in Figure 1, this analysis suggests that income predicts depressive symptoms at time 2 because of its co-occurrence with financial strain.

0.12\*\*\*

-0.19\*\*\*

Financial strain

Depression time 2

Income

-0.03(-0.05\*\*\*)

\*\*\**p* <.001

*Sobel’s* Z = -4.40*, p*< 0.001

*Figure 1:* Relationship between income and depressive symptoms at time 2 as mediated by financial strain.

Multiple mediation model specification:

income → [financial.strain, search.confidence] → depression.t2

Results of multiple mediation model:

I hypothesized that income decreases depressive symptoms at time 2 because income covaries with financial strain and search confidence. A multiple mediation analysis was

conducted by using bootstrapping to estimate the size and standard errors of both indirect

pathways (Preacher & Hayes, 2008). 5000 bootstrap resamples were used to provide stable

estimates.

This analysis revealed that income affected depressive symptoms at time 2 as a function of its relationship with financial strain, a1b1 = -0.01, SE = 0.004, 95% CI [-0.02, 0.00], and search confidence, a2b2 = -0.03, SE = 0.005, 95% CI [-0.04, -0.02]. Altogether, the total indirect effect for the set of mediators was significant, f = -0.04, SE = 0.007, 95% CI [-0.05, -0.03],

suggesting that both financial strain and search confidence are important for explaining

the relationship between income and depressive symptoms at time 2. Although the total

effect of income was significant, c = -0.05, SE = 0.02, 95% CI [-0.08, -0.02], the direct

effect of income on depressive symptoms at time 2 was not significant when the indirect paths

through financial strain and search confidence were taken into account, c’ = -0.01, SE = 0.02, 95% CI [-0.04, 0.02]. As depicted in Figure 2, this analysis suggests that income is related to the depressive symptoms at time 2 because of its co-occurrence with financial strain and search confidence.

Financial strain

Depression time 2

-0.01(-0.05\*\*\*)

dsd (RP, CF, S)

Income

dsd (RP, CF, S)

Search confidence

-0.19\*\*\*

0.05\*\*

-0.22\*\*

0.12\*\*\*

*\*p* < .05, \*\**p* < .01, \*\*\**p* <.001

*Figure 2:* Relationship between income and depressive symptoms at time 2 as mediated by financial strain and search confidence.