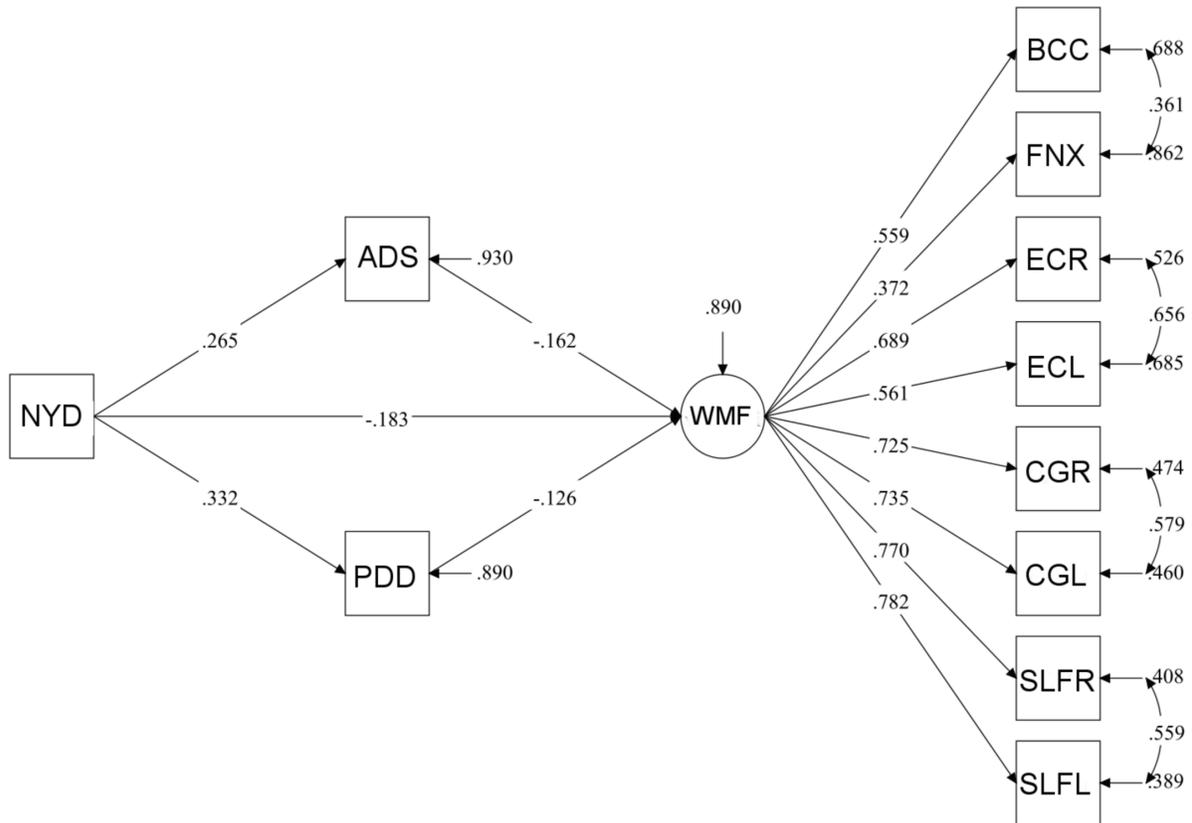


## Multiple mediation model for ADS and PDD

The two significant mediators in simple mediation analyses (ADS and PDD) were tested in a multiple mediator analysis. This analysis tested the association of ADS and PDD with WMF while controlling for the other. It included a contrast to test whether indirect effects for mediators differed from each other [1]. The bivariate correlation between ADS and PDD was significant but small ( $r = .211, p < .001$ ). The model (S1 Fig., below) had marginal to acceptable values for model fit, RMSEA = .093, CFI = .937, SRMR = .068. The total indirect effect was significant,  $p = 0.005$ . The CI around the indirect effect for ADS did not include 0 (unstandardized indirect effect = -0.005; 95% CI = -0.012 – -0.001), indicating significant mediation. The CI for the indirect effect of PDD did include zero, showing that it was not a significant mediator (unstandardized indirect effect = -0.005; 95% CI = -0.012 – 0.000). A  $z$ -test contrast of whether the indirect effects for ADS and PDD differed in magnitude [40] was non-significant ( $p = 0.974$ ). The variance accounted for by this model, at  $R^2 = .110$ , was comparable to either simple mediator model.



**S1 Fig. Partial multiple mediation of the path from years drinking to WMF by ADS and PDD.** Abbreviations: ADS = Alcohol Dependence Scale; BCC = body of corpus callosum; CGL = cingulate gyrus, left; CGR = cingulate gyrus, right; ECL = external capsule, left; ECR = external capsule, right; FNX = fornix; PDD = proportion of days drinking; NYD = number of years drinking; SLFL = superior longitudinal fasciculus, left; SLFR = superior longitudinal fasciculus, right.

### References

1. Preacher KJ, Hayes AF. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behav Res Methods*. 2008;40:879-91.