A retail store has developed a new financial incentive program to increase the amount each person working in the store sells. Half of the workers (condition 1) receive this intervention which includes a financial incentive to sell more, while the other half of the workers (condition 2) receive an active control (a written message of encouragement but no financial incentive). One week after the incentive program has begun, the company hires you to survey each worker and assess how excited they are about the incentive program (or message of encouragement). The workers report their excitement on a Likert scale ranging from (0) “not at all excited” to (4) “very excited.” 1 year after the incentive program begins, the store send you a data file including the workers’ assigned conditions, their excitement 1 week into the program, and how much they made that year. Note that earnings at this company are based on commission earned with each sale, thus they vary from worker to worker.

Fit the appropriate models to test the hypothesis that the relationship between incentive condition and the amount earned is mediated by the worker’s excitement about the incentive they received.

We found that those in the financial incentive condition had lower earnings (M = 36,220.01, SD = 1489.40) than those in the active control condition (M = 37631.43, SD = 1547.22), b = 1411.40, F(1, 498) = 107.95, p < .001, η2 = .18. We also found that those in the financial incentive condition tended to be less excited about the incentive program (M = 1.49, SD = 0.94) than those in the active control condition (M = 1.08, SD = 1.08), b = -0.41, F(1, 498) = 22.61, p < .001, η2 = .04.

In order to test for mediation, we estimated a multiple regression model in which we regressed the amount earned on both the incentive condition and excitement. The results revealed that both the effect of incentive condition, b = 1472.23, F(1, 497) = 3998.03, p < .001, η2 = .89, and the effect of expertise, b = 2020.48, F(1,497) = 1910.56, p < .001, η2 = .79, were statistically significant. [Note: the values obtained in this example are far larger than any one would expect to see when working with real data].

We followed the recommendations of Preacher and Hayes (2004), who suggest using a bootstrapping procedure to compute a confidence interval around the indirect effect (i.e., the path through the mediator). We used Rosseel’s (2012) lavaan package in R to estimate the confidence interval. Results revealed that the indirect effect via chunk size had a value of -609.06, the 95% confidence interval ranging from -866.23 to -366.36. The fact that zero falls outside the confidence interval indicates a statistically significant indirect effect, p < .05 (see also Fig. 1). The indirect effect accounts for \_\_\_\_\_\_\_\_ of the total effect of expertise on recall performance.

We conclude that our results are consistent with mediation, however not in the direction we initially anticipated. Rather than the financial incentive predicting greater excitement and therefore greater earnings, the financial incentive predicted less excitement. Higher excitement did however predict greater earnings.