Mothers’ Analysis - Multiverse report

To arrive at our main results, we had to make many decisions that were not fully justified by theoretical or statistical considerations — other competent researchers could have chosen differently and justified their choices equally well. To illustrate the variety of choices we made and examine the robustness of our results to these choices, we conducted a multiverse analysis, reported in this document. A multiverse analysis involves specifying different choice points in the preparation and analysis of data with respect to some question and running and reporting all analyses rather than a single path (Steegen et al., 2016). In this document, we first describe the analysis options that comprise our multiverse analysis, then describe some conclusions based on the analysis, and finally present the multiverse results in several graphs and tables.

# Analysis options

## Model for proportions

Our mediation analysis relies on two models, each of which predicts some proportion (the mediator model predicts the proportion of social support items the mother agreed with, and the outcome model predicts the mother’s IPV score, which can range from 0 to 24 when considering all items). This type of data is often modelled with a binomial GLM, where the outcome is the proportion itself, and a weights argument specifies how many trials the proportion is out of (3 for the social support outcome, and 24 for the total IPV outcome). However, the mediation package is not made to work with these models.

Another option is to use a “linear probability model”, which just means to model a proportion (which necessarily cannot be smaller than 0 or greater than 1) as if it was normally distributed (which by definition encompasses the entire real number line). These models come with advantages (e.g., interpretability of coefficients, ease of computation of mediation effects) and disadvantages (e.g., possibility of predicting data points outside the accepted range). In keeping with common practice for the Future of Families dataset, and because of the additional arbitrariness of binarizing these variables, our main manuscript reports the linear analysis. To complement our linear analysis, we also ran logistic regressions for the mediator and outcome models after first binarizing the variables. Binary IPV was 0 if the index was 0 and 1 if the index was above 0, while binary social support was 1 if the index was 1 and 0 if it was below 1.

Thus, for the sensitivity analyses relying on mediation models (those under the heading [Hypothesis 4: Indirect effect of race on IPV through informal support](#X7e4b33ecac01369ddaddfe8689cf9a0684a5e66)), we use two different options: “continuous” and “binary”. For all other sensitivity analyses we use three options: “continuous”, “binary”, and “binomial”.

## Missing data

One way to deal with missing data in the Future of Families dataset is by analysing only complete cases. However, this approach can result in a big loss of information and less precise estimates. Thus, we used a dataset where missing values were imputed using the missForest algorithm for our main analysis and complemented it with a complete case analysis in the multiverse, leading to the two options labelled “imputed” and “complete\_cases”.

A further option that could be explored would be a more principled missing data analysis, where the imputation method (or lack thereof) is decided based on documented assumptions about the causes of missingness (Daniel et al., 2012; Hughes et al., 2019).

## Sampling weights

The Future of Families survey has a complex design and is not representative of the US population, which is why the dataset comes with sampling weights which, in principle, should allow us to make the estimates nationally representative. It is clear that weights should be incorporated into the analysis when we are trying to estimate simple quantities (e.g, means or proportions) and use the sample to make inferences about the population. However, the use of survey weights for causal inference problems is not straightforward, and there is no guarantee that using the weights makes the estimate less rather than more biased (see, e.g., Schuessler & Selb, 2023; Solon et al., 2015). Thus, we ran our models with and without using the national weights provided in the Future of Families data. For our main analysis reported in the manuscript, we followed convention when analysing Future of Families data and did not weight our multivariable regressions.

A more laborious but also more principled approach would be to generate graphical causal models that incorporate our assumptions about the causal structure of the variables as well as the sampling design in order to determine how best to account for the sampling design for any given causal inference question (Schuessler & Selb, 2023).

## Covariate adjustment

It is common in the social sciences to statistically adjust for potential confounders when analyzing observational data. However, this likely does more harm than good (Wysocki et al., 2022), as a causal effect can just as easily be confounded as deconfounded by the addition of a covariate. Further, mediation analyses require even more care as there are two different relationships that should be deconfounded (for our case, between race and social support and between social support and IPV). Thus, in addition to running models with covariate adjustment, which are common practice when examining effects of race with the Future of Families data, we examined the effects without covariate adjustment.

## Outcome

Our primary interest was women’s total IPV scores, but we were also interested in exploring three IPV subscales (emotional, controlling, and physical IPV). Thus we ran each analysis specification three additional times, using each IPV subscale as an outcome at a time. (This analysis option is not relevant to the multiverse reported in section [Hypothesis 2: Effect of race on informal support (Black - White)](#X8d7150b61853dfc651d7761cb1462888d2b37d5) as the outcome variable for those models was social support and not IPV.)

All in all, our “multiverses” consisted of the following “universes”:

For the analyses with IPV as the outcome without relying on the mediation package:

| .universe | missing | proportion | weights | outcome | covariates |
| --- | --- | --- | --- | --- | --- |
| 1 | imputed | continuous | weighted | total | adjusted |
| 2 | imputed | continuous | weighted | total | unadjusted |
| 3 | imputed | continuous | weighted | physical | adjusted |
| 4 | imputed | continuous | weighted | physical | unadjusted |
| 5 | imputed | continuous | weighted | emotional | adjusted |
| 6 | imputed | continuous | weighted | emotional | unadjusted |
| 7 | imputed | continuous | weighted | controlling | adjusted |
| 8 | imputed | continuous | weighted | controlling | unadjusted |
| 9 | imputed | continuous | unweighted | total | adjusted |
| 10 | imputed | continuous | unweighted | total | unadjusted |
| 11 | imputed | continuous | unweighted | physical | adjusted |
| 12 | imputed | continuous | unweighted | physical | unadjusted |
| 13 | imputed | continuous | unweighted | emotional | adjusted |
| 14 | imputed | continuous | unweighted | emotional | unadjusted |
| 15 | imputed | continuous | unweighted | controlling | adjusted |
| 16 | imputed | continuous | unweighted | controlling | unadjusted |
| 17 | imputed | binomial | weighted | total | adjusted |
| 18 | imputed | binomial | weighted | total | unadjusted |
| 19 | imputed | binomial | weighted | physical | adjusted |
| 20 | imputed | binomial | weighted | physical | unadjusted |
| 21 | imputed | binomial | weighted | emotional | adjusted |
| 22 | imputed | binomial | weighted | emotional | unadjusted |
| 23 | imputed | binomial | weighted | controlling | adjusted |
| 24 | imputed | binomial | weighted | controlling | unadjusted |
| 25 | imputed | binomial | unweighted | total | adjusted |
| 26 | imputed | binomial | unweighted | total | unadjusted |
| 27 | imputed | binomial | unweighted | physical | adjusted |
| 28 | imputed | binomial | unweighted | physical | unadjusted |
| 29 | imputed | binomial | unweighted | emotional | adjusted |
| 30 | imputed | binomial | unweighted | emotional | unadjusted |
| 31 | imputed | binomial | unweighted | controlling | adjusted |
| 32 | imputed | binomial | unweighted | controlling | unadjusted |
| 33 | imputed | binary | weighted | total | adjusted |
| 34 | imputed | binary | weighted | total | unadjusted |
| 35 | imputed | binary | weighted | physical | adjusted |
| 36 | imputed | binary | weighted | physical | unadjusted |
| 37 | imputed | binary | weighted | emotional | adjusted |
| 38 | imputed | binary | weighted | emotional | unadjusted |
| 39 | imputed | binary | weighted | controlling | adjusted |
| 40 | imputed | binary | weighted | controlling | unadjusted |
| 41 | imputed | binary | unweighted | total | adjusted |
| 42 | imputed | binary | unweighted | total | unadjusted |
| 43 | imputed | binary | unweighted | physical | adjusted |
| 44 | imputed | binary | unweighted | physical | unadjusted |
| 45 | imputed | binary | unweighted | emotional | adjusted |
| 46 | imputed | binary | unweighted | emotional | unadjusted |
| 47 | imputed | binary | unweighted | controlling | adjusted |
| 48 | imputed | binary | unweighted | controlling | unadjusted |
| 49 | complete\_cases | continuous | weighted | total | adjusted |
| 50 | complete\_cases | continuous | weighted | total | unadjusted |
| 51 | complete\_cases | continuous | weighted | physical | adjusted |
| 52 | complete\_cases | continuous | weighted | physical | unadjusted |
| 53 | complete\_cases | continuous | weighted | emotional | adjusted |
| 54 | complete\_cases | continuous | weighted | emotional | unadjusted |
| 55 | complete\_cases | continuous | weighted | controlling | adjusted |
| 56 | complete\_cases | continuous | weighted | controlling | unadjusted |
| 57 | complete\_cases | continuous | unweighted | total | adjusted |
| 58 | complete\_cases | continuous | unweighted | total | unadjusted |
| 59 | complete\_cases | continuous | unweighted | physical | adjusted |
| 60 | complete\_cases | continuous | unweighted | physical | unadjusted |
| 61 | complete\_cases | continuous | unweighted | emotional | adjusted |
| 62 | complete\_cases | continuous | unweighted | emotional | unadjusted |
| 63 | complete\_cases | continuous | unweighted | controlling | adjusted |
| 64 | complete\_cases | continuous | unweighted | controlling | unadjusted |
| 65 | complete\_cases | binomial | weighted | total | adjusted |
| 66 | complete\_cases | binomial | weighted | total | unadjusted |
| 67 | complete\_cases | binomial | weighted | physical | adjusted |
| 68 | complete\_cases | binomial | weighted | physical | unadjusted |
| 69 | complete\_cases | binomial | weighted | emotional | adjusted |
| 70 | complete\_cases | binomial | weighted | emotional | unadjusted |
| 71 | complete\_cases | binomial | weighted | controlling | adjusted |
| 72 | complete\_cases | binomial | weighted | controlling | unadjusted |
| 73 | complete\_cases | binomial | unweighted | total | adjusted |
| 74 | complete\_cases | binomial | unweighted | total | unadjusted |
| 75 | complete\_cases | binomial | unweighted | physical | adjusted |
| 76 | complete\_cases | binomial | unweighted | physical | unadjusted |
| 77 | complete\_cases | binomial | unweighted | emotional | adjusted |
| 78 | complete\_cases | binomial | unweighted | emotional | unadjusted |
| 79 | complete\_cases | binomial | unweighted | controlling | adjusted |
| 80 | complete\_cases | binomial | unweighted | controlling | unadjusted |
| 81 | complete\_cases | binary | weighted | total | adjusted |
| 82 | complete\_cases | binary | weighted | total | unadjusted |
| 83 | complete\_cases | binary | weighted | physical | adjusted |
| 84 | complete\_cases | binary | weighted | physical | unadjusted |
| 85 | complete\_cases | binary | weighted | emotional | adjusted |
| 86 | complete\_cases | binary | weighted | emotional | unadjusted |
| 87 | complete\_cases | binary | weighted | controlling | adjusted |
| 88 | complete\_cases | binary | weighted | controlling | unadjusted |
| 89 | complete\_cases | binary | unweighted | total | adjusted |
| 90 | complete\_cases | binary | unweighted | total | unadjusted |
| 91 | complete\_cases | binary | unweighted | physical | adjusted |
| 92 | complete\_cases | binary | unweighted | physical | unadjusted |
| 93 | complete\_cases | binary | unweighted | emotional | adjusted |
| 94 | complete\_cases | binary | unweighted | emotional | unadjusted |
| 95 | complete\_cases | binary | unweighted | controlling | adjusted |
| 96 | complete\_cases | binary | unweighted | controlling | unadjusted |

For the analyses with social support as the outcome:

| .universe | missing | proportion | weights | covariates |
| --- | --- | --- | --- | --- |
| 1 | imputed | continuous | weighted | adjusted |
| 2 | imputed | continuous | weighted | unadjusted |
| 3 | imputed | continuous | unweighted | adjusted |
| 4 | imputed | continuous | unweighted | unadjusted |
| 5 | imputed | binomial | weighted | adjusted |
| 6 | imputed | binomial | weighted | unadjusted |
| 7 | imputed | binomial | unweighted | adjusted |
| 8 | imputed | binomial | unweighted | unadjusted |
| 9 | imputed | binary | weighted | adjusted |
| 10 | imputed | binary | weighted | unadjusted |
| 11 | imputed | binary | unweighted | adjusted |
| 12 | imputed | binary | unweighted | unadjusted |
| 13 | complete\_cases | continuous | weighted | adjusted |
| 14 | complete\_cases | continuous | weighted | unadjusted |
| 15 | complete\_cases | continuous | unweighted | adjusted |
| 16 | complete\_cases | continuous | unweighted | unadjusted |
| 17 | complete\_cases | binomial | weighted | adjusted |
| 18 | complete\_cases | binomial | weighted | unadjusted |
| 19 | complete\_cases | binomial | unweighted | adjusted |
| 20 | complete\_cases | binomial | unweighted | unadjusted |
| 21 | complete\_cases | binary | weighted | adjusted |
| 22 | complete\_cases | binary | weighted | unadjusted |
| 23 | complete\_cases | binary | unweighted | adjusted |
| 24 | complete\_cases | binary | unweighted | unadjusted |

For the analyses relying on the mediation package:

| .universe | missing | proportion | weights | covariates | outcome |
| --- | --- | --- | --- | --- | --- |
| 1 | imputed | continuous | weighted | adjusted | total |
| 2 | imputed | continuous | weighted | adjusted | physical |
| 3 | imputed | continuous | weighted | adjusted | emotional |
| 4 | imputed | continuous | weighted | adjusted | controlling |
| 5 | imputed | continuous | weighted | unadjusted | total |
| 6 | imputed | continuous | weighted | unadjusted | physical |
| 7 | imputed | continuous | weighted | unadjusted | emotional |
| 8 | imputed | continuous | weighted | unadjusted | controlling |
| 9 | imputed | continuous | unweighted | adjusted | total |
| 10 | imputed | continuous | unweighted | adjusted | physical |
| 11 | imputed | continuous | unweighted | adjusted | emotional |
| 12 | imputed | continuous | unweighted | adjusted | controlling |
| 13 | imputed | continuous | unweighted | unadjusted | total |
| 14 | imputed | continuous | unweighted | unadjusted | physical |
| 15 | imputed | continuous | unweighted | unadjusted | emotional |
| 16 | imputed | continuous | unweighted | unadjusted | controlling |
| 17 | imputed | binary | weighted | adjusted | total |
| 18 | imputed | binary | weighted | adjusted | physical |
| 19 | imputed | binary | weighted | adjusted | emotional |
| 20 | imputed | binary | weighted | adjusted | controlling |
| 21 | imputed | binary | weighted | unadjusted | total |
| 22 | imputed | binary | weighted | unadjusted | physical |
| 23 | imputed | binary | weighted | unadjusted | emotional |
| 24 | imputed | binary | weighted | unadjusted | controlling |
| 25 | imputed | binary | unweighted | adjusted | total |
| 26 | imputed | binary | unweighted | adjusted | physical |
| 27 | imputed | binary | unweighted | adjusted | emotional |
| 28 | imputed | binary | unweighted | adjusted | controlling |
| 29 | imputed | binary | unweighted | unadjusted | total |
| 30 | imputed | binary | unweighted | unadjusted | physical |
| 31 | imputed | binary | unweighted | unadjusted | emotional |
| 32 | imputed | binary | unweighted | unadjusted | controlling |
| 33 | complete\_cases | continuous | weighted | adjusted | total |
| 34 | complete\_cases | continuous | weighted | adjusted | physical |
| 35 | complete\_cases | continuous | weighted | adjusted | emotional |
| 36 | complete\_cases | continuous | weighted | adjusted | controlling |
| 37 | complete\_cases | continuous | weighted | unadjusted | total |
| 38 | complete\_cases | continuous | weighted | unadjusted | physical |
| 39 | complete\_cases | continuous | weighted | unadjusted | emotional |
| 40 | complete\_cases | continuous | weighted | unadjusted | controlling |
| 41 | complete\_cases | continuous | unweighted | adjusted | total |
| 42 | complete\_cases | continuous | unweighted | adjusted | physical |
| 43 | complete\_cases | continuous | unweighted | adjusted | emotional |
| 44 | complete\_cases | continuous | unweighted | adjusted | controlling |
| 45 | complete\_cases | continuous | unweighted | unadjusted | total |
| 46 | complete\_cases | continuous | unweighted | unadjusted | physical |
| 47 | complete\_cases | continuous | unweighted | unadjusted | emotional |
| 48 | complete\_cases | continuous | unweighted | unadjusted | controlling |
| 49 | complete\_cases | binary | weighted | adjusted | total |
| 50 | complete\_cases | binary | weighted | adjusted | physical |
| 51 | complete\_cases | binary | weighted | adjusted | emotional |
| 52 | complete\_cases | binary | weighted | adjusted | controlling |
| 53 | complete\_cases | binary | weighted | unadjusted | total |
| 54 | complete\_cases | binary | weighted | unadjusted | physical |
| 55 | complete\_cases | binary | weighted | unadjusted | emotional |
| 56 | complete\_cases | binary | weighted | unadjusted | controlling |
| 57 | complete\_cases | binary | unweighted | adjusted | total |
| 58 | complete\_cases | binary | unweighted | adjusted | physical |
| 59 | complete\_cases | binary | unweighted | adjusted | emotional |
| 60 | complete\_cases | binary | unweighted | adjusted | controlling |
| 61 | complete\_cases | binary | unweighted | unadjusted | total |
| 62 | complete\_cases | binary | unweighted | unadjusted | physical |
| 63 | complete\_cases | binary | unweighted | unadjusted | emotional |
| 64 | complete\_cases | binary | unweighted | unadjusted | controlling |

# Multiverse results - Summary

The multiverse analysis reveals that some of our results are indeed quite sensitive to different specifications. Estimates vary in their magnitude, direction, width of the confidence intervals, and significance. Regarding [Hypothesis 1: Effect of race on IPV (Black - White)](#Xd0ce5c00f99e66cc97afd35d0f6d55572a42613), we see effects in both directions (suggesting Black women report more or less IPV), with most signficant estimates pointing to a positive association between being Black and IPV victimization. The analysis for [Hypothesis 2: Effect of race on informal support (Black - White)](#X8d7150b61853dfc651d7761cb1462888d2b37d5) is much clearer, as all estimates point to Black women reporting less access to informal support, and almost all estimates are significant. For [Hypothesis 3: Effect of informal support on IPV](#X94a5215a9fbf5d81d6b38a025360018cd279a44) the picture is similar: many estimates are significant and all bar two are in the expected direction, suggesting that higher informal support is associated with less IPV victimization. Regarding [Hypothesis 4: Indirect effect of race on IPV through informal support](#X7e4b33ecac01369ddaddfe8689cf9a0684a5e66), we again see that most estimates are in the predicted direction (being Black is associated with higher IPV and that effect runs through informal support), and close to half of the estimates are significant.

Given the discussion above about the legitimacy of each analytic choice, we don’t think it sensible to summarize across specifications to arrive at an “overall” effect for each hypothesis. For example, summarizing the models which control for all covariates along with the models that don’t control for covariates does not make sense, as covariate adjustment changes the meaning of the estimate of the effect(s) of race on IPV, so there is no meaningful way they could be averaged. Instead, we consider this process as a pedagogical tool. As Julia Rohrer put it on the 100% CI blog (Rohrer, 2021):

In the end, the multiverse may prove to be most powerful as a pedagogical tool. […] Multiverse analysis can raise awareness of how data analytic flexibility can be exploited. It can also alert us to gaps in our knowledge. Gaps in our knowledge about the underlying causal web: Is including that covariate arbitrary or not? What does it mean if results hinge on it? Gaps in our knowledge about statistics: Can we expect these types of models to return the same answer? Under which conditions would they diverge? Gaps in our knowledge about measurement and conceptualization: Does it make sense to expect the same result for these different operationalizations of the outcome? What does it mean if results vary? We have now closed the loop and are [back to the original multiverse paper](https://journals.sagepub.com/doi/10.1177/1745691616658637), in which the authors write: “The real conclusion of the multiverse analysis is that there is a gaping hole in theory or in measurement.”

# Multiverse results - Visualizations

## Hypothesis 1: Effect of race on IPV (Black - White)

Specifically, our hypothesis was formulated this way:

*Black women are more at risk of IPV victimisation than White women.*

All models predict IPV and include race as the focal independent variable of interest.

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| Figure 1: Effect of Race on IPV by Specification |

The graph (and table below) reveal that there is some variability in the estimated effect, with significant estimates pointing in both directions.

Specifications for which there is a significant effect:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 1: Specifications with a significant effect of race on IPV   | universe | Specification option | | | | | estimate | *p* | | --- | --- | --- | --- | --- | --- | --- | --- | | *missing* | *proportion* | *weights* | *outcome* | *covariates* | | 47 | imputed | binary | unweighted | controlling | adjusted | -0.040 | .038\* | | 31 | imputed | binomial | unweighted | controlling | adjusted | -0.017 | .001\*\*\* | | 15 | imputed | continuous | unweighted | controlling | adjusted | -0.017 | .045\* | | 79 | complete\_cases | binomial | unweighted | controlling | adjusted | -0.014 | .022\* | | 28 | imputed | binomial | unweighted | physical | unadjusted | 0.007 | .004\*\* | | 73 | complete\_cases | binomial | unweighted | total | adjusted | 0.009 | .028\* | | 76 | complete\_cases | binomial | unweighted | physical | unadjusted | 0.010 | < .001\*\*\* | | 60 | complete\_cases | continuous | unweighted | physical | unadjusted | 0.010 | .031\* | | 26 | imputed | binomial | unweighted | total | unadjusted | 0.012 | < .001\*\*\* | | 30 | imputed | binomial | unweighted | emotional | unadjusted | 0.019 | < .001\*\*\* | | 14 | imputed | continuous | unweighted | emotional | unadjusted | 0.019 | .046\* | | 74 | complete\_cases | binomial | unweighted | total | unadjusted | 0.021 | < .001\*\*\* | | 58 | complete\_cases | continuous | unweighted | total | unadjusted | 0.021 | .007\*\* | | 77 | complete\_cases | binomial | unweighted | emotional | adjusted | 0.021 | .002\*\* | | 78 | complete\_cases | binomial | unweighted | emotional | unadjusted | 0.033 | < .001\*\*\* | | 62 | complete\_cases | continuous | unweighted | emotional | unadjusted | 0.033 | .003\*\* | | 89 | complete\_cases | binary | unweighted | total | adjusted | 0.051 | .048\* | | 93 | complete\_cases | binary | unweighted | emotional | adjusted | 0.058 | .026\* | | 90 | complete\_cases | binary | unweighted | total | unadjusted | 0.074 | .002\*\* | | 94 | complete\_cases | binary | unweighted | emotional | unadjusted | 0.076 | .001\*\* | | *Note.* \* p < .05, \*\* p < .01, \*\*\* p < .001 | | | | | | | | |

### Total IPV

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| Figure 2: Effect of Race on total IPV by Specification |

Looking at total IPV, three fourths of the estimates are in the positive direction (suggesting that Black women report higher IPV), and the six significant estimates are positive. Covariate adjusted models produce more negative estimates than models without adjustment, suggesting that some of the effect of race on IPV acts through the covariates. Weighted models produce more negative estimates than the equivalent unweighted models and have larger associated confidence intervals. Unweighted linear models produce larger confidence intervals than the corresponding binomial models, but otherwise estimates are comparable between linear and binomial models. Binary models tend to produce more positive estimates with greater associated uncertainty. Models run on complete cases tend to produce slightly more positive estimates, leading to some of them being significant even though they are not when imputed data is used.

### Emotional IPV

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| Figure 3: Effect of Race on emotional IPV by Specification |

Looking at emotional IPV, more than three fourths of the estimates are in the positive direction (suggesting that Black women report higher IPV), and the seven significant estimates are positive. Covariate adjusted models produce more negative estimates than models without adjustment, suggesting that some of the effect of race on IPV acts through the covariates. Weighted models produce more negative estimates than the equivalent unweighted models and have larger associated confidence intervals. Unweighted linear models produce larger confidence intervals than the corresponding binomial models, but otherwise estimates are comparable between linear and binomial models. Binary models tend to produce more positive estimates with greater associated uncertainty. Models run on complete cases tend to produce slightly more positive estimates, leading to some of them being significant even though they are not when imputed data is used.

### Controlling IPV

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| Figure 4: Effect of Race on controlling IPV by Specification |

Looking at controlling IPV, about half of the estimates are in the positive direction (suggesting that Black women report higher IPV), but the four significant estimates are positive. Covariate adjusted models produce more negative estimates than models without adjustment, suggesting that some of the effect of race on IPV acts through the covariates. Weighted models tend to produce more negative estimates than the equivalent unweighted models and have larger associated confidence intervals. Unweighted linear models produce larger confidence intervals than the corresponding binomial models, but otherwise estimates are comparable between linear and binomial models. Binary models tend to produce more positive estimates with greater associated uncertainty. Models run on imputed data tend to produce slightly tighter confidence intervals, leading to some of them being significant even though they are not when complete cases are used.

### Physical IPV

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| Figure 5: Effect of Race on physical IPV by Specification |

Looking at physical IPV, almost three fourths of the estimates are in the positive direction (suggesting that Black women report higher IPV), and the three significant estimates are positive. Covariate adjusted models produce more negative estimates than models without adjustment, suggesting that some of the effect of race on IPV acts through the covariates. Weighted models tend to produce more negative estimates than the equivalent unweighted models and have larger associated confidence intervals. Unweighted linear models produce larger confidence intervals than the corresponding binomial models, but otherwise estimates are comparable between linear and binomial models. Binary models tend to produce more extreme estimates with greater associated uncertainty. Models run on complete cases tend to produce slightly more positive estimates, leading to some of them being significant even though they are not when imputed data is used.

## Hypothesis 2: Effect of race on informal support (Black - White)

Specifically, our hypothesis was formulated this way:

*There is an association between race and the availability of material resources from informal social support sources. Specifically, Black women are less likely to have material resources available to them from their informal social supports than White women.*

All models predict informal support and include race as the focal independent variable of interest.

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| Figure 6: Effect of Race on informal support by Specification |

While there is some variation in the estimates, all indicate that Black women have less access to informal supports and three fourths are statistically significant.

Specifications for which there is a significant effect:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 2: Specifications with a significant effect of race on informal support   | universe | Specification option | | | | estimate | *p* | | --- | --- | --- | --- | --- | --- | --- | | *missing* | *proportion* | *weights* | *covariates* | | 10 | imputed | binary | weighted | unadjusted | -0.121 | < .001\*\*\* | | 22 | complete\_cases | binary | weighted | unadjusted | -0.101 | .002\*\* | | 24 | complete\_cases | binary | unweighted | unadjusted | -0.085 | < .001\*\*\* | | 12 | imputed | binary | unweighted | unadjusted | -0.073 | < .001\*\*\* | | 2 | imputed | continuous | weighted | unadjusted | -0.070 | < .001\*\*\* | | 6 | imputed | binomial | weighted | unadjusted | -0.070 | < .001\*\*\* | | 14 | complete\_cases | continuous | weighted | unadjusted | -0.063 | .003\*\* | | 18 | complete\_cases | binomial | weighted | unadjusted | -0.063 | .004\*\* | | 16 | complete\_cases | continuous | unweighted | unadjusted | -0.053 | < .001\*\*\* | | 20 | complete\_cases | binomial | unweighted | unadjusted | -0.053 | < .001\*\*\* | | 23 | complete\_cases | binary | unweighted | adjusted | -0.047 | .012\* | | 4 | imputed | continuous | unweighted | unadjusted | -0.044 | < .001\*\*\* | | 8 | imputed | binomial | unweighted | unadjusted | -0.044 | < .001\*\*\* | | 11 | imputed | binary | unweighted | adjusted | -0.036 | .025\* | | 15 | complete\_cases | continuous | unweighted | adjusted | -0.030 | .011\* | | 19 | complete\_cases | binomial | unweighted | adjusted | -0.029 | < .001\*\*\* | | 3 | imputed | continuous | unweighted | adjusted | -0.021 | .033\* | | 7 | imputed | binomial | unweighted | adjusted | -0.020 | .005\*\* | | *Note.* \* p < .05, \*\* p < .01, \*\*\* p < .001 | | | | | | | |

Plotting without ordering estimates by their magnitude:

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| --- |
| Figure 7: Effect of Race on informal support by Specification |

All of the estimates are in the negative direction (suggesting that Black women report less access to informal support), and three fourths of them are significant. Covariate adjusted models produce less negative estimates than models without adjustment, suggesting that some of the effect of race on informal support acts through the covariates. Weighted models produce more negative estimates than the equivalent unweighted models and have larger associated confidence intervals. Unweighted linear models produce larger confidence intervals than the corresponding binomial models, but otherwise estimates are comparable between linear and binomial models. Binary models tend to produce more negative estimates with greater associated uncertainty. Whether we use only complete cases or impute missing values doesn’t seem to make a systematic difference in our estimates.

## Hypothesis 3: Effect of informal support on IPV

Specifically, our hypothesis was formulated this way:

*There is an association between the availability of material resources from informal social support sources and a woman’s likelihood of IPV victimisation.*

All models predict IPV and include race and informal support as the focal independent variables of interest. We also ran a multiverse analysis focusing on the (controlled) effect of race in this model, and you can find the corresponding graphs in the section [Supplement to hypothesis 3: The effect of race on IPV, controlling for social support](#Xa8c23090415451fb20c18be760a2c0982bb5fcb).

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| --- |
| Figure 8: Effect of Informal Support on IPV by Specification |

The graph (and table below) reveal that there is some variability in the estimated effect, but the overwhelming majority of estimates are negative (suggesting that women with more access to informal support report experiencing less IPV) and the only two estimates in the other direction are not significant.

Specifications for which there is a significant effect:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 3: Specifications with a significant effect of informal support on IPV   | universe | Specification option | | | | | estimate | *p* | | --- | --- | --- | --- | --- | --- | --- | --- | | *missing* | *proportion* | *weights* | *outcome* | *covariates* | | 96 | complete\_cases | binary | unweighted | controlling | unadjusted | -0.144 | < .001\*\*\* | | 48 | imputed | binary | unweighted | controlling | unadjusted | -0.144 | < .001\*\*\* | | 6 | imputed | continuous | weighted | emotional | unadjusted | -0.131 | .008\*\* | | 14 | imputed | continuous | unweighted | emotional | unadjusted | -0.120 | < .001\*\*\* | | 62 | complete\_cases | continuous | unweighted | emotional | unadjusted | -0.112 | .001\*\*\* | | 95 | complete\_cases | binary | unweighted | controlling | adjusted | -0.106 | .003\*\* | | 40 | imputed | binary | weighted | controlling | unadjusted | -0.104 | .050\* | | 47 | imputed | binary | unweighted | controlling | adjusted | -0.104 | < .001\*\*\* | | 13 | imputed | continuous | unweighted | emotional | adjusted | -0.096 | .001\*\*\* | | 16 | imputed | continuous | unweighted | controlling | unadjusted | -0.096 | < .001\*\*\* | | 10 | imputed | continuous | unweighted | total | unadjusted | -0.094 | < .001\*\*\* | | 61 | complete\_cases | continuous | unweighted | emotional | adjusted | -0.093 | .008\*\* | | 36 | imputed | binary | weighted | physical | unadjusted | -0.091 | .027\* | | 2 | imputed | continuous | weighted | total | unadjusted | -0.090 | .004\*\* | | 64 | complete\_cases | continuous | unweighted | controlling | unadjusted | -0.089 | .002\*\* | | 58 | complete\_cases | continuous | unweighted | total | unadjusted | -0.087 | .001\*\*\* | | 22 | imputed | binomial | weighted | emotional | unadjusted | -0.087 | < .001\*\*\* | | 30 | imputed | binomial | unweighted | emotional | unadjusted | -0.084 | < .001\*\*\* | | 78 | complete\_cases | binomial | unweighted | emotional | unadjusted | -0.080 | < .001\*\*\* | | 70 | complete\_cases | binomial | weighted | emotional | unadjusted | -0.076 | .025\* | | 46 | imputed | binary | unweighted | emotional | unadjusted | -0.076 | .010\*\* | | 9 | imputed | continuous | unweighted | total | adjusted | -0.074 | < .001\*\*\* | | 90 | complete\_cases | binary | unweighted | total | unadjusted | -0.074 | .030\* | | 42 | imputed | binary | unweighted | total | unadjusted | -0.074 | .012\* | | 15 | imputed | continuous | unweighted | controlling | adjusted | -0.071 | .004\*\* | | 57 | complete\_cases | continuous | unweighted | total | adjusted | -0.070 | .008\*\* | | 29 | imputed | binomial | unweighted | emotional | adjusted | -0.069 | < .001\*\*\* | | 77 | complete\_cases | binomial | unweighted | emotional | adjusted | -0.068 | < .001\*\*\* | | 63 | complete\_cases | continuous | unweighted | controlling | adjusted | -0.063 | .033\* | | 44 | imputed | binary | unweighted | physical | unadjusted | -0.060 | .002\*\* | | 21 | imputed | binomial | weighted | emotional | adjusted | -0.058 | .020\* | | 26 | imputed | binomial | unweighted | total | unadjusted | -0.058 | < .001\*\*\* | | 74 | complete\_cases | binomial | unweighted | total | unadjusted | -0.055 | < .001\*\*\* | | 18 | imputed | binomial | weighted | total | unadjusted | -0.054 | < .001\*\*\* | | 92 | complete\_cases | binary | unweighted | physical | unadjusted | -0.048 | .035\* | | 25 | imputed | binomial | unweighted | total | adjusted | -0.047 | < .001\*\*\* | | 73 | complete\_cases | binomial | unweighted | total | adjusted | -0.046 | < .001\*\*\* | | 66 | complete\_cases | binomial | weighted | total | unadjusted | -0.044 | .035\* | | 32 | imputed | binomial | unweighted | controlling | unadjusted | -0.044 | < .001\*\*\* | | 80 | complete\_cases | binomial | unweighted | controlling | unadjusted | -0.042 | < .001\*\*\* | | 12 | imputed | continuous | unweighted | physical | unadjusted | -0.041 | .011\* | | 43 | imputed | binary | unweighted | physical | adjusted | -0.039 | .024\* | | 17 | imputed | binomial | weighted | total | adjusted | -0.035 | .014\* | | 31 | imputed | binomial | unweighted | controlling | adjusted | -0.034 | < .001\*\*\* | | 24 | imputed | binomial | weighted | controlling | unadjusted | -0.032 | < .001\*\*\* | | 79 | complete\_cases | binomial | unweighted | controlling | adjusted | -0.031 | < .001\*\*\* | | 28 | imputed | binomial | unweighted | physical | unadjusted | -0.013 | < .001\*\*\* | | 76 | complete\_cases | binomial | unweighted | physical | unadjusted | -0.012 | < .001\*\*\* | | 27 | imputed | binomial | unweighted | physical | adjusted | -0.011 | < .001\*\*\* | | 75 | complete\_cases | binomial | unweighted | physical | adjusted | -0.010 | < .001\*\*\* | | 20 | imputed | binomial | weighted | physical | unadjusted | -0.009 | .003\*\* | | *Note.* \* p < .05, \*\* p < .01, \*\*\* p < .001 | | | | | | | | |

### Total IPV

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| Figure 9: Effect of Informal Support on total IPV by Specification |

Looking at total IPV, all of the estimates are in the negative direction (suggesting that women with more access to informal support report lower IPV), and more than half are significant. Covariate adjusted models produce less negative estimates than models without adjustment, suggesting that some of the effect of informal support on IPV acts through the covariates. Weighted models tend to produce more positive estimates than the equivalent unweighted models and have larger associated confidence intervals. Unweighted linear models produce larger confidence intervals than the corresponding binomial models, and in general estimates from linear models tend to be more positive than those from binomial models. Binary models sometimes produce more positive estimates than linear models, always with greater associated uncertainty. Models run on complete cases tend to produce slightly more positive estimates with larger confidence intervals, leading to some of them not being significant even though they are when imputed data is used.

### Emotional IPV

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| Figure 10: Effect of Informal Support on emotional IPV by Specification |

Looking at emotional IPV, all of the estimates are in the negative direction (suggesting that women with more access to informal support report lower IPV), and more than half are significant. Covariate adjusted models produce less negative estimates than models without adjustment, suggesting that some of the effect of informal support on IPV acts through the covariates. Weighted models tend to produce more positive estimates than the equivalent unweighted models and have larger associated confidence intervals. Unweighted linear models produce larger confidence intervals than the corresponding binomial models, and in general estimates from linear models tend to be more negative than those from binomial models. Binary models sometimes produce more positive estimates than binomial models, always with greater associated uncertainty. Models run on complete cases tend to produce slightly more positive estimates with larger confidence intervals, leading to some of them not being significant even though they are when imputed data is used.

### Controlling IPV

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| Figure 11: Effect of Informal Support on controlling IPV by Specification |

Looking at controlling IPV, all but two of the estimates are in the negative direction (suggesting that women with more access to informal support report lower IPV), and more than half are significant. Covariate adjusted models produce less negative estimates than models without adjustment, suggesting that some of the effect of informal support on IPV acts through the covariates. Weighted models tend to produce more positive estimates than the equivalent unweighted models and have larger associated confidence intervals. Unweighted linear models produce larger confidence intervals than the corresponding binomial models, and in general estimates from linear models tend to be more negative than those from binomial models. Binary models produce more negative estimates than linear or binomial models, always with greater associated uncertainty. Models run on complete cases tend to produce similar estimates with larger confidence intervals as compared to models using imputed data.

### Physical IPV

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| Figure 12: Effect of Informal Support on physical IPV by Specification |

Looking at physical IPV, all of the estimates are in the negative direction (suggesting that women with more access to informal support report lower IPV), and almost half are significant. Covariate adjusted models produce less negative estimates than models without adjustment, suggesting that some of the effect of informal support on IPV acts through the covariates. Weighted models tend to produce more positive estimates than the equivalent unweighted models and have larger associated confidence intervals. Unweighted linear models produce larger confidence intervals than the corresponding binomial models, and in general estimates from linear models tend to be more negative than those from binomial models. Binary models tend to produce more negative estimates than binomia or linear models, always with greater associated uncertainty. Models run on complete cases tend to produce slightly more positive estimates with larger confidence intervals, leading to some of them not being significant even though they are when imputed data is used.

## Hypothesis 4: Indirect effect of race on IPV through informal support

Specifically, our hypothesis was formulated this way:

*The availability of material resources from informal social support sources partially mediates the effect of race on IPV.*

The indirect effect is estimated using the mediation package. We also ran a multiverse analysis focusing on the estimated total and direct effects of race in the mediation models, and the corresponding graphs can be found in the section [Supplement to hypothesis 4: Total and direct effect of race on IPV according to mediation model](#X45edb71e5290b3df839db019f07fb9dc69b0a5d).

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| Figure 13: Indirect Effect of Race on IPV through Informal Support by Specification |

The graph (and table below) reveal that there is some variability in the estimated effect, but only one (non-significant) estimate is negative while all others are positive (indicating that part of the effect of race on IPV is mediated through its effect on informal support).

Specifications for which there is a significant effect:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table 4: Specifications with a significant indirect effect of race on IPV through informal support   | universe | Specification option | | | | | estimate | *p* | | --- | --- | --- | --- | --- | --- | --- | --- | | *missing* | *proportion* | *weights* | *covariates* | *outcome* | | 12 | imputed | continuous | unweighted | adjusted | controlling | 0.001 | .041\* | | 9 | imputed | continuous | unweighted | adjusted | total | 0.002 | .030\* | | 14 | imputed | continuous | unweighted | unadjusted | physical | 0.002 | .006\*\* | | 11 | imputed | continuous | unweighted | adjusted | emotional | 0.002 | .037\* | | 41 | complete\_cases | continuous | unweighted | adjusted | total | 0.002 | .022\* | | 43 | complete\_cases | continuous | unweighted | adjusted | emotional | 0.003 | .026\* | | 13 | imputed | continuous | unweighted | unadjusted | total | 0.004 | < .001\*\*\* | | 16 | imputed | continuous | unweighted | unadjusted | controlling | 0.004 | < .001\*\*\* | | 62 | complete\_cases | binary | unweighted | unadjusted | physical | 0.004 | .006\*\* | | 30 | imputed | binary | unweighted | unadjusted | physical | 0.004 | < .001\*\*\* | | 45 | complete\_cases | continuous | unweighted | unadjusted | total | 0.005 | .001\*\* | | 48 | complete\_cases | continuous | unweighted | unadjusted | controlling | 0.005 | < .001\*\*\* | | 15 | imputed | continuous | unweighted | unadjusted | emotional | 0.005 | < .001\*\*\* | | 29 | imputed | binary | unweighted | unadjusted | total | 0.005 | .023\* | | 60 | complete\_cases | binary | unweighted | adjusted | controlling | 0.005 | .039\* | | 31 | imputed | binary | unweighted | unadjusted | emotional | 0.005 | .014\* | | 47 | complete\_cases | continuous | unweighted | unadjusted | emotional | 0.006 | < .001\*\*\* | | 5 | imputed | continuous | weighted | unadjusted | total | 0.006 | .001\*\* | | 7 | imputed | continuous | weighted | unadjusted | emotional | 0.009 | .009\*\* | | 32 | imputed | binary | unweighted | unadjusted | controlling | 0.011 | < .001\*\*\* | | 22 | imputed | binary | weighted | unadjusted | physical | 0.012 | .003\*\* | | 64 | complete\_cases | binary | unweighted | unadjusted | controlling | 0.012 | < .001\*\*\* | | 24 | imputed | binary | weighted | unadjusted | controlling | 0.013 | .044\* | | *Note.* \* p < .05, \*\* p < .01, \*\*\* p < .001 | | | | | | | | |

### Total IPV

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| Figure 14: Indirect Effect of Race on total IPV through Informal Support by Specification |

Looking at total IPV, all of the estimates are in the positive direction (suggesting that Black race contributes to IPV partly through it’s effect on informal support), and almost half are significant. Covariate adjusted models produce more negative estimates than models without adjustment, suggesting that some of the effect of race on IPV acts through the covariates. Weighted models sometimes produce more positive estimates than the equivalent unweighted models and have larger associated confidence intervals. Binary models sometimes produce more positive estimates than linear models, always with greater associated uncertainty. Models run on complete cases sometimes produce slightly more positive estimates but with larger confidence intervals, leading to some of them not being significant even though they are when imputed data is used.

### Emotional IPV

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| Figure 15: Indirect Effect of Race on emotional IPV through Informal Support by Specification |

Looking at emotional IPV, all of the estimates are in the positive direction (suggesting that Black race contributes to IPV partly through it’s effect on informal support), and almost half are significant. Covariate adjusted models produce more negative estimates than models without adjustment, suggesting that some of the effect of race on IPV acts through the covariates. Weighted models sometimes produce more positive estimates than the equivalent unweighted models and have larger associated confidence intervals. Binary models sometimes produce more positive estimates than linear models when run on imputed data, but the opposite it true when run on complete cases, always with greater associated uncertainty. Models run on complete cases produce similar estimates to those run on imputed data but with larger confidence intervals, leading to some of the estimates not being significant even though they are when imputed data is used.

### Controlling IPV

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| Figure 16: Indirect Effect of Race on controlling IPV through Informal Support by Specification |

Looking at controlling IPV, all but one of the estimates are in the positive direction (suggesting that Black race contributes to IPV partly through it’s effect on informal support), and almost half are significant. Covariate adjusted models produce more negative estimates than models without adjustment, suggesting that some of the effect of race on IPV acts through the covariates. Weighted models sometimes produce more negative estimates than the equivalent unweighted models and have larger associated confidence intervals. Binary models produce more positive estimates than linear models, always with greater associated uncertainty. Models run on complete cases sometimes produce more positive estimates than those run on imputed data but with larger confidence intervals, leading to some of the estimates not being significant even though they are when imputed data is used.

### Physical IPV

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| Figure 17: Indirect Effect of Race on physical IPV through Informal Support by Specification |

Looking at physical IPV, all of the estimates are in the positive direction (suggesting that Black race contributes to IPV partly through it’s effect on informal support), but only a third are significant. Covariate adjusted models produce more negative estimates than models without adjustment, suggesting that some of the effect of race on IPV acts through the covariates. Weighted models sometimes produce more positive estimates than the equivalent unweighted models and have larger associated confidence intervals. Binary models produce more positive estimates than linear models, always with greater associated uncertainty. Models run on complete cases tend to produce more negative estimates than those run on imputed data, sometimes with narrower confidence intervals, leading to some of the estimates not being significant even though they are when imputed data is used.

# Supplementary figures

## Supplement to hypothesis 3: The effect of race on IPV, controlling for social support

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| Figure 18: Controlled Effect of Race on IPV by Specification |

### Total IPV

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| --- |
| Figure 19: Controlled Effect of Race on total IPV by Specification |

### Emotional IPV

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| Figure 20: Controlled Effect of Race on emotional IPV by Specification |

### Controlling IPV

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| Figure 21: Controlled Effect of Race on controlling IPV by Specification |

### Physical IPV

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| Figure 22: Controlled Effect of Race on physical IPV by Specification |

## Supplement to hypothesis 4: Total and direct effect of race on IPV according to mediation model

### Total effect

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| Figure 23: Total Effect of Race on IPV by Specification |

#### Total IPV

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| Figure 24: Total Effect of Race on total IPV through Informal Support by Specification |

#### Emotional IPV

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| Figure 25: Total Effect of Race on emotional IPV through Informal Support by Specification |

#### Controlling IPV

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| Figure 26: Total Effect of Race on controlling IPV through Informal Support by Specification |

#### Physical IPV

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| Figure 27: Total Effect of Race on physical IPV through Informal Support by Specification |

### Direct effect

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| Figure 28: Direct Effect of Race on IPV by Specification |

#### Total IPV

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| Figure 29: Direct Effect of Race on total IPV through Informal Support by Specification |

#### Emotional IPV

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| Figure 30: Direct Effect of Race on emotional IPV through Informal Support by Specification |

#### Controlling IPV

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| --- |
| Figure 31: Direct Effect of Race on controlling IPV through Informal Support by Specification |

#### Physical IPV

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| Figure 32: Direct Effect of Race on physical IPV through Informal Support by Specification |

# Supplementary tables

## Effect of race on IPV (Black - White)

All specifications, focusing on the inference about the direction of the effect:

| universe | Specification option | | | | | estimate | *p* | inference |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *missing* | *proportion* | *weights* | *outcome* | *covariates* |
| 47 | imputed | binary | unweighted | controlling | adjusted | -0.040 | .038\* | White higher IPV |
| 95 | complete\_cases | binary | unweighted | controlling | adjusted | -0.038 | .090 | No difference |
| 69 | complete\_cases | binomial | weighted | emotional | adjusted | -0.038 | .164 | No difference |
| 53 | complete\_cases | continuous | weighted | emotional | adjusted | -0.036 | .187 | No difference |
| 83 | complete\_cases | binary | weighted | physical | adjusted | -0.029 | .155 | No difference |
| 35 | imputed | binary | weighted | physical | adjusted | -0.027 | .221 | No difference |
| 21 | imputed | binomial | weighted | emotional | adjusted | -0.025 | .296 | No difference |
| 5 | imputed | continuous | weighted | emotional | adjusted | -0.024 | .315 | No difference |
| 65 | complete\_cases | binomial | weighted | total | adjusted | -0.024 | .265 | No difference |
| 49 | complete\_cases | continuous | weighted | total | adjusted | -0.022 | .302 | No difference |
| 33 | imputed | binary | weighted | total | adjusted | -0.021 | .703 | No difference |
| 37 | imputed | binary | weighted | emotional | adjusted | -0.018 | .752 | No difference |
| 31 | imputed | binomial | unweighted | controlling | adjusted | -0.017 | .001\*\*\* | White higher IPV |
| 17 | imputed | binomial | weighted | total | adjusted | -0.017 | .336 | No difference |
| 15 | imputed | continuous | unweighted | controlling | adjusted | -0.017 | .045\* | White higher IPV |
| 1 | imputed | continuous | weighted | total | adjusted | -0.016 | .356 | No difference |
| 79 | complete\_cases | binomial | unweighted | controlling | adjusted | -0.014 | .022\* | White higher IPV |
| 63 | complete\_cases | continuous | unweighted | controlling | adjusted | -0.013 | .173 | No difference |
| 23 | imputed | binomial | weighted | controlling | adjusted | -0.012 | .657 | No difference |
| 71 | complete\_cases | binomial | weighted | controlling | adjusted | -0.011 | .729 | No difference |
| 7 | imputed | continuous | weighted | controlling | adjusted | -0.011 | .666 | No difference |
| 55 | complete\_cases | continuous | weighted | controlling | adjusted | -0.011 | .752 | No difference |
| 19 | imputed | binomial | weighted | physical | adjusted | -0.007 | .341 | No difference |
| 67 | complete\_cases | binomial | weighted | physical | adjusted | -0.007 | .305 | No difference |
| 51 | complete\_cases | continuous | weighted | physical | adjusted | -0.006 | .222 | No difference |
| 3 | imputed | continuous | weighted | physical | adjusted | -0.006 | .291 | No difference |
| 81 | complete\_cases | binary | weighted | total | adjusted | -0.006 | .922 | No difference |
| 43 | imputed | binary | unweighted | physical | adjusted | -0.005 | .668 | No difference |
| 87 | complete\_cases | binary | weighted | controlling | adjusted | -0.001 | .981 | No difference |
| 48 | imputed | binary | unweighted | controlling | unadjusted | -0.001 | .949 | No difference |
| 84 | complete\_cases | binary | weighted | physical | unadjusted | 0.000 | 1.00 | No difference |
| 11 | imputed | continuous | unweighted | physical | adjusted | 0.000 | .955 | No difference |
| 27 | imputed | binomial | unweighted | physical | adjusted | 0.000 | .902 | No difference |
| 16 | imputed | continuous | unweighted | controlling | unadjusted | 0.001 | .920 | No difference |
| 32 | imputed | binomial | unweighted | controlling | unadjusted | 0.001 | .869 | No difference |
| 25 | imputed | binomial | unweighted | total | adjusted | 0.001 | .714 | No difference |
| 9 | imputed | continuous | unweighted | total | adjusted | 0.001 | .854 | No difference |
| 39 | imputed | binary | weighted | controlling | adjusted | 0.001 | .975 | No difference |
| 91 | complete\_cases | binary | unweighted | physical | adjusted | 0.002 | .875 | No difference |
| 68 | complete\_cases | binomial | weighted | physical | unadjusted | 0.003 | .640 | No difference |
| 52 | complete\_cases | continuous | weighted | physical | unadjusted | 0.003 | .596 | No difference |
| 85 | complete\_cases | binary | weighted | emotional | adjusted | 0.003 | .957 | No difference |
| 22 | imputed | binomial | weighted | emotional | unadjusted | 0.005 | .800 | No difference |
| 6 | imputed | continuous | weighted | emotional | unadjusted | 0.005 | .799 | No difference |
| 20 | imputed | binomial | weighted | physical | unadjusted | 0.005 | .402 | No difference |
| 4 | imputed | continuous | weighted | physical | unadjusted | 0.005 | .354 | No difference |
| 59 | complete\_cases | continuous | unweighted | physical | adjusted | 0.005 | .311 | No difference |
| 75 | complete\_cases | binomial | unweighted | physical | adjusted | 0.006 | .059 | No difference |
| 64 | complete\_cases | continuous | unweighted | controlling | unadjusted | 0.006 | .502 | No difference |
| 80 | complete\_cases | binomial | unweighted | controlling | unadjusted | 0.006 | .269 | No difference |
| 70 | complete\_cases | binomial | weighted | emotional | unadjusted | 0.006 | .764 | No difference |
| 54 | complete\_cases | continuous | weighted | emotional | unadjusted | 0.006 | .763 | No difference |
| 28 | imputed | binomial | unweighted | physical | unadjusted | 0.007 | .004\*\* | Black higher IPV |
| 12 | imputed | continuous | unweighted | physical | unadjusted | 0.007 | .085 | No difference |
| 96 | complete\_cases | binary | unweighted | controlling | unadjusted | 0.007 | .741 | No difference |
| 36 | imputed | binary | weighted | physical | unadjusted | 0.007 | .618 | No difference |
| 2 | imputed | continuous | weighted | total | unadjusted | 0.008 | .549 | No difference |
| 18 | imputed | binomial | weighted | total | unadjusted | 0.008 | .551 | No difference |
| 57 | complete\_cases | continuous | unweighted | total | adjusted | 0.009 | .325 | No difference |
| 73 | complete\_cases | binomial | unweighted | total | adjusted | 0.009 | .028\* | Black higher IPV |
| 50 | complete\_cases | continuous | weighted | total | unadjusted | 0.010 | .564 | No difference |
| 66 | complete\_cases | binomial | weighted | total | unadjusted | 0.010 | .567 | No difference |
| 44 | imputed | binary | unweighted | physical | unadjusted | 0.010 | .326 | No difference |
| 76 | complete\_cases | binomial | unweighted | physical | unadjusted | 0.010 | < .001\*\*\* | Black higher IPV |
| 60 | complete\_cases | continuous | unweighted | physical | unadjusted | 0.010 | .031\* | Black higher IPV |
| 29 | imputed | binomial | unweighted | emotional | adjusted | 0.011 | .050 | No difference |
| 13 | imputed | continuous | unweighted | emotional | adjusted | 0.011 | .313 | No difference |
| 26 | imputed | binomial | unweighted | total | unadjusted | 0.012 | < .001\*\*\* | Black higher IPV |
| 10 | imputed | continuous | unweighted | total | unadjusted | 0.012 | .079 | No difference |
| 92 | complete\_cases | binary | unweighted | physical | unadjusted | 0.013 | .278 | No difference |
| 38 | imputed | binary | weighted | emotional | unadjusted | 0.016 | .743 | No difference |
| 8 | imputed | continuous | weighted | controlling | unadjusted | 0.018 | .384 | No difference |
| 24 | imputed | binomial | weighted | controlling | unadjusted | 0.018 | .398 | No difference |
| 30 | imputed | binomial | unweighted | emotional | unadjusted | 0.019 | < .001\*\*\* | Black higher IPV |
| 14 | imputed | continuous | unweighted | emotional | unadjusted | 0.019 | .046\* | Black higher IPV |
| 34 | imputed | binary | weighted | total | unadjusted | 0.020 | .668 | No difference |
| 74 | complete\_cases | binomial | unweighted | total | unadjusted | 0.021 | < .001\*\*\* | Black higher IPV |
| 58 | complete\_cases | continuous | unweighted | total | unadjusted | 0.021 | .007\*\* | Black higher IPV |
| 61 | complete\_cases | continuous | unweighted | emotional | adjusted | 0.021 | .095 | No difference |
| 77 | complete\_cases | binomial | unweighted | emotional | adjusted | 0.021 | .002\*\* | Black higher IPV |
| 72 | complete\_cases | binomial | weighted | controlling | unadjusted | 0.023 | .414 | No difference |
| 56 | complete\_cases | continuous | weighted | controlling | unadjusted | 0.023 | .393 | No difference |
| 41 | imputed | binary | unweighted | total | adjusted | 0.027 | .240 | No difference |
| 42 | imputed | binary | unweighted | total | unadjusted | 0.029 | .174 | No difference |
| 46 | imputed | binary | unweighted | emotional | unadjusted | 0.030 | .152 | No difference |
| 45 | imputed | binary | unweighted | emotional | adjusted | 0.033 | .148 | No difference |
| 78 | complete\_cases | binomial | unweighted | emotional | unadjusted | 0.033 | < .001\*\*\* | Black higher IPV |
| 62 | complete\_cases | continuous | unweighted | emotional | unadjusted | 0.033 | .003\*\* | Black higher IPV |
| 89 | complete\_cases | binary | unweighted | total | adjusted | 0.051 | .048\* | Black higher IPV |
| 93 | complete\_cases | binary | unweighted | emotional | adjusted | 0.058 | .026\* | Black higher IPV |
| 82 | complete\_cases | binary | weighted | total | unadjusted | 0.070 | .164 | No difference |
| 40 | imputed | binary | weighted | controlling | unadjusted | 0.071 | .078 | No difference |
| 90 | complete\_cases | binary | unweighted | total | unadjusted | 0.074 | .002\*\* | Black higher IPV |
| 86 | complete\_cases | binary | weighted | emotional | unadjusted | 0.075 | .133 | No difference |
| 94 | complete\_cases | binary | unweighted | emotional | unadjusted | 0.076 | .001\*\* | Black higher IPV |
| 88 | complete\_cases | binary | weighted | controlling | unadjusted | 0.088 | .086 | No difference |
| *Note.* \* p < .05, \*\* p < .01, \*\*\* p < .001 | | | | | | | | |

## Effect of race on informal support

All specifications, focusing on the inference about the direction of the effect:

| universe | Specification option | | | | estimate | *p* | inference |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *missing* | *proportion* | *weights* | *covariates* |
| 10 | imputed | binary | weighted | unadjusted | -0.121 | < .001\*\*\* | White higher informal support |
| 22 | complete\_cases | binary | weighted | unadjusted | -0.101 | .002\*\* | White higher informal support |
| 24 | complete\_cases | binary | unweighted | unadjusted | -0.085 | < .001\*\*\* | White higher informal support |
| 12 | imputed | binary | unweighted | unadjusted | -0.073 | < .001\*\*\* | White higher informal support |
| 2 | imputed | continuous | weighted | unadjusted | -0.070 | < .001\*\*\* | White higher informal support |
| 6 | imputed | binomial | weighted | unadjusted | -0.070 | < .001\*\*\* | White higher informal support |
| 9 | imputed | binary | weighted | adjusted | -0.064 | .075 | No difference |
| 14 | complete\_cases | continuous | weighted | unadjusted | -0.063 | .003\*\* | White higher informal support |
| 18 | complete\_cases | binomial | weighted | unadjusted | -0.063 | .004\*\* | White higher informal support |
| 21 | complete\_cases | binary | weighted | adjusted | -0.055 | .218 | No difference |
| 16 | complete\_cases | continuous | unweighted | unadjusted | -0.053 | < .001\*\*\* | White higher informal support |
| 20 | complete\_cases | binomial | unweighted | unadjusted | -0.053 | < .001\*\*\* | White higher informal support |
| 23 | complete\_cases | binary | unweighted | adjusted | -0.047 | .012\* | White higher informal support |
| 4 | imputed | continuous | unweighted | unadjusted | -0.044 | < .001\*\*\* | White higher informal support |
| 8 | imputed | binomial | unweighted | unadjusted | -0.044 | < .001\*\*\* | White higher informal support |
| 5 | imputed | binomial | weighted | adjusted | -0.036 | .113 | No difference |
| 11 | imputed | binary | unweighted | adjusted | -0.036 | .025\* | White higher informal support |
| 1 | imputed | continuous | weighted | adjusted | -0.032 | .115 | No difference |
| 17 | complete\_cases | binomial | weighted | adjusted | -0.032 | .265 | No difference |
| 13 | complete\_cases | continuous | weighted | adjusted | -0.031 | .192 | No difference |
| 15 | complete\_cases | continuous | unweighted | adjusted | -0.030 | .011\* | White higher informal support |
| 19 | complete\_cases | binomial | unweighted | adjusted | -0.029 | < .001\*\*\* | White higher informal support |
| 3 | imputed | continuous | unweighted | adjusted | -0.021 | .033\* | White higher informal support |
| 7 | imputed | binomial | unweighted | adjusted | -0.020 | .005\*\* | White higher informal support |
| *Note.* \* p < .05, \*\* p < .01, \*\*\* p < .001 | | | | | | | |

## Controlled effect of informal support on IPV

All specifications, focusing on the inference about the direction of the effect:

| universe | Specification option | | | | | estimate | *p* | inference |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *missing* | *proportion* | *weights* | *outcome* | *covariates* |
| 96 | complete\_cases | binary | unweighted | controlling | unadjusted | -0.144 | < .001\*\*\* | Support associated with less IPV |
| 48 | imputed | binary | unweighted | controlling | unadjusted | -0.144 | < .001\*\*\* | Support associated with less IPV |
| 6 | imputed | continuous | weighted | emotional | unadjusted | -0.131 | .008\*\* | Support associated with less IPV |
| 14 | imputed | continuous | unweighted | emotional | unadjusted | -0.120 | < .001\*\*\* | Support associated with less IPV |
| 62 | complete\_cases | continuous | unweighted | emotional | unadjusted | -0.112 | .001\*\*\* | Support associated with less IPV |
| 88 | complete\_cases | binary | weighted | controlling | unadjusted | -0.112 | .105 | No difference |
| 54 | complete\_cases | continuous | weighted | emotional | unadjusted | -0.108 | .109 | No difference |
| 95 | complete\_cases | binary | unweighted | controlling | adjusted | -0.106 | .003\*\* | Support associated with less IPV |
| 40 | imputed | binary | weighted | controlling | unadjusted | -0.104 | .050\* | Support associated with less IPV |
| 47 | imputed | binary | unweighted | controlling | adjusted | -0.104 | < .001\*\*\* | Support associated with less IPV |
| 13 | imputed | continuous | unweighted | emotional | adjusted | -0.096 | .001\*\*\* | Support associated with less IPV |
| 16 | imputed | continuous | unweighted | controlling | unadjusted | -0.096 | < .001\*\*\* | Support associated with less IPV |
| 10 | imputed | continuous | unweighted | total | unadjusted | -0.094 | < .001\*\*\* | Support associated with less IPV |
| 61 | complete\_cases | continuous | unweighted | emotional | adjusted | -0.093 | .008\*\* | Support associated with less IPV |
| 36 | imputed | binary | weighted | physical | unadjusted | -0.091 | .027\* | Support associated with less IPV |
| 2 | imputed | continuous | weighted | total | unadjusted | -0.090 | .004\*\* | Support associated with less IPV |
| 64 | complete\_cases | continuous | unweighted | controlling | unadjusted | -0.089 | .002\*\* | Support associated with less IPV |
| 58 | complete\_cases | continuous | unweighted | total | unadjusted | -0.087 | .001\*\*\* | Support associated with less IPV |
| 22 | imputed | binomial | weighted | emotional | unadjusted | -0.087 | < .001\*\*\* | Support associated with less IPV |
| 38 | imputed | binary | weighted | emotional | unadjusted | -0.085 | .125 | No difference |
| 5 | imputed | continuous | weighted | emotional | adjusted | -0.084 | .064 | No difference |
| 30 | imputed | binomial | unweighted | emotional | unadjusted | -0.084 | < .001\*\*\* | Support associated with less IPV |
| 78 | complete\_cases | binomial | unweighted | emotional | unadjusted | -0.080 | < .001\*\*\* | Support associated with less IPV |
| 34 | imputed | binary | weighted | total | unadjusted | -0.079 | .153 | No difference |
| 70 | complete\_cases | binomial | weighted | emotional | unadjusted | -0.076 | .025\* | Support associated with less IPV |
| 46 | imputed | binary | unweighted | emotional | unadjusted | -0.076 | .010\*\* | Support associated with less IPV |
| 9 | imputed | continuous | unweighted | total | adjusted | -0.074 | < .001\*\*\* | Support associated with less IPV |
| 90 | complete\_cases | binary | unweighted | total | unadjusted | -0.074 | .030\* | Support associated with less IPV |
| 42 | imputed | binary | unweighted | total | unadjusted | -0.074 | .012\* | Support associated with less IPV |
| 15 | imputed | continuous | unweighted | controlling | adjusted | -0.071 | .004\*\* | Support associated with less IPV |
| 57 | complete\_cases | continuous | unweighted | total | adjusted | -0.070 | .008\*\* | Support associated with less IPV |
| 29 | imputed | binomial | unweighted | emotional | adjusted | -0.069 | < .001\*\*\* | Support associated with less IPV |
| 77 | complete\_cases | binomial | unweighted | emotional | adjusted | -0.068 | < .001\*\*\* | Support associated with less IPV |
| 94 | complete\_cases | binary | unweighted | emotional | unadjusted | -0.068 | .050 | No difference |
| 50 | complete\_cases | continuous | weighted | total | unadjusted | -0.065 | .137 | No difference |
| 63 | complete\_cases | continuous | unweighted | controlling | adjusted | -0.063 | .033\* | Support associated with less IPV |
| 87 | complete\_cases | binary | weighted | controlling | adjusted | -0.061 | .292 | No difference |
| 82 | complete\_cases | binary | weighted | total | unadjusted | -0.061 | .411 | No difference |
| 44 | imputed | binary | unweighted | physical | unadjusted | -0.060 | .002\*\* | Support associated with less IPV |
| 8 | imputed | continuous | weighted | controlling | unadjusted | -0.059 | .061 | No difference |
| 21 | imputed | binomial | weighted | emotional | adjusted | -0.058 | .020\* | Support associated with less IPV |
| 26 | imputed | binomial | unweighted | total | unadjusted | -0.058 | < .001\*\*\* | Support associated with less IPV |
| 45 | imputed | binary | unweighted | emotional | adjusted | -0.058 | .068 | No difference |
| 89 | complete\_cases | binary | unweighted | total | adjusted | -0.056 | .120 | No difference |
| 53 | complete\_cases | continuous | weighted | emotional | adjusted | -0.056 | .280 | No difference |
| 74 | complete\_cases | binomial | unweighted | total | unadjusted | -0.055 | < .001\*\*\* | Support associated with less IPV |
| 18 | imputed | binomial | weighted | total | unadjusted | -0.054 | < .001\*\*\* | Support associated with less IPV |
| 1 | imputed | continuous | weighted | total | adjusted | -0.054 | .058 | No difference |
| 86 | complete\_cases | binary | weighted | emotional | unadjusted | -0.053 | .477 | No difference |
| 41 | imputed | binary | unweighted | total | adjusted | -0.052 | .099 | No difference |
| 37 | imputed | binary | weighted | emotional | adjusted | -0.052 | .401 | No difference |
| 93 | complete\_cases | binary | unweighted | emotional | adjusted | -0.052 | .160 | No difference |
| 39 | imputed | binary | weighted | controlling | adjusted | -0.050 | .353 | No difference |
| 92 | complete\_cases | binary | unweighted | physical | unadjusted | -0.048 | .035\* | Support associated with less IPV |
| 25 | imputed | binomial | unweighted | total | adjusted | -0.047 | < .001\*\*\* | Support associated with less IPV |
| 35 | imputed | binary | weighted | physical | adjusted | -0.047 | .095 | No difference |
| 73 | complete\_cases | binomial | unweighted | total | adjusted | -0.046 | < .001\*\*\* | Support associated with less IPV |
| 69 | complete\_cases | binomial | weighted | emotional | adjusted | -0.044 | .194 | No difference |
| 66 | complete\_cases | binomial | weighted | total | unadjusted | -0.044 | .035\* | Support associated with less IPV |
| 32 | imputed | binomial | unweighted | controlling | unadjusted | -0.044 | < .001\*\*\* | Support associated with less IPV |
| 33 | imputed | binary | weighted | total | adjusted | -0.043 | .481 | No difference |
| 80 | complete\_cases | binomial | unweighted | controlling | unadjusted | -0.042 | < .001\*\*\* | Support associated with less IPV |
| 12 | imputed | continuous | unweighted | physical | unadjusted | -0.041 | .011\* | Support associated with less IPV |
| 4 | imputed | continuous | weighted | physical | unadjusted | -0.041 | .077 | No difference |
| 43 | imputed | binary | unweighted | physical | adjusted | -0.039 | .024\* | Support associated with less IPV |
| 84 | complete\_cases | binary | weighted | physical | unadjusted | -0.038 | .234 | No difference |
| 60 | complete\_cases | continuous | unweighted | physical | unadjusted | -0.037 | .076 | No difference |
| 17 | imputed | binomial | weighted | total | adjusted | -0.035 | .014\* | Support associated with less IPV |
| 56 | complete\_cases | continuous | weighted | controlling | unadjusted | -0.034 | .360 | No difference |
| 31 | imputed | binomial | unweighted | controlling | adjusted | -0.034 | < .001\*\*\* | Support associated with less IPV |
| 91 | complete\_cases | binary | unweighted | physical | adjusted | -0.034 | .098 | No difference |
| 11 | imputed | continuous | unweighted | physical | adjusted | -0.033 | .052 | No difference |
| 24 | imputed | binomial | weighted | controlling | unadjusted | -0.032 | < .001\*\*\* | Support associated with less IPV |
| 59 | complete\_cases | continuous | unweighted | physical | adjusted | -0.031 | .158 | No difference |
| 79 | complete\_cases | binomial | unweighted | controlling | adjusted | -0.031 | < .001\*\*\* | Support associated with less IPV |
| 3 | imputed | continuous | weighted | physical | adjusted | -0.028 | .203 | No difference |
| 83 | complete\_cases | binary | weighted | physical | adjusted | -0.028 | .466 | No difference |
| 49 | complete\_cases | continuous | weighted | total | adjusted | -0.028 | .374 | No difference |
| 72 | complete\_cases | binomial | weighted | controlling | unadjusted | -0.023 | .211 | No difference |
| 65 | complete\_cases | binomial | weighted | total | adjusted | -0.022 | .286 | No difference |
| 81 | complete\_cases | binary | weighted | total | adjusted | -0.020 | .818 | No difference |
| 7 | imputed | continuous | weighted | controlling | adjusted | -0.020 | .509 | No difference |
| 85 | complete\_cases | binary | weighted | emotional | adjusted | -0.013 | .881 | No difference |
| 28 | imputed | binomial | unweighted | physical | unadjusted | -0.013 | < .001\*\*\* | Support associated with less IPV |
| 23 | imputed | binomial | weighted | controlling | adjusted | -0.012 | .510 | No difference |
| 76 | complete\_cases | binomial | unweighted | physical | unadjusted | -0.012 | < .001\*\*\* | Support associated with less IPV |
| 27 | imputed | binomial | unweighted | physical | adjusted | -0.011 | < .001\*\*\* | Support associated with less IPV |
| 75 | complete\_cases | binomial | unweighted | physical | adjusted | -0.010 | < .001\*\*\* | Support associated with less IPV |
| 20 | imputed | binomial | weighted | physical | unadjusted | -0.009 | .003\*\* | Support associated with less IPV |
| 52 | complete\_cases | continuous | weighted | physical | unadjusted | -0.009 | .294 | No difference |
| 19 | imputed | binomial | weighted | physical | adjusted | -0.007 | .137 | No difference |
| 51 | complete\_cases | continuous | weighted | physical | adjusted | -0.006 | .615 | No difference |
| 68 | complete\_cases | binomial | weighted | physical | unadjusted | -0.004 | .141 | No difference |
| 67 | complete\_cases | binomial | weighted | physical | adjusted | -0.004 | .643 | No difference |
| 71 | complete\_cases | binomial | weighted | controlling | adjusted | 0.006 | .833 | No difference |
| 55 | complete\_cases | continuous | weighted | controlling | adjusted | 0.007 | .809 | No difference |
| *Note.* \* p < .05, \*\* p < .01, \*\*\* p < .001 | | | | | | | | |

## Controlled effect of race on IPV

All specifications, focusing on the inference about the direction of the effect:

| universe | Specification option | | | | | estimate | *p* | inference |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *missing* | *proportion* | *weights* | *outcome* | *covariates* |
| 47 | imputed | binary | unweighted | controlling | adjusted | -0.044 | .023\* | White more IPV |
| 95 | complete\_cases | binary | unweighted | controlling | adjusted | -0.043 | .056 | No difference |
| 69 | complete\_cases | binomial | weighted | emotional | adjusted | -0.039 | .153 | No difference |
| 53 | complete\_cases | continuous | weighted | emotional | adjusted | -0.038 | .169 | No difference |
| 83 | complete\_cases | binary | weighted | physical | adjusted | -0.031 | .135 | No difference |
| 35 | imputed | binary | weighted | physical | adjusted | -0.029 | .175 | No difference |
| 21 | imputed | binomial | weighted | emotional | adjusted | -0.027 | .255 | No difference |
| 5 | imputed | continuous | weighted | emotional | adjusted | -0.027 | .259 | No difference |
| 65 | complete\_cases | binomial | weighted | total | adjusted | -0.024 | .258 | No difference |
| 49 | complete\_cases | continuous | weighted | total | adjusted | -0.023 | .286 | No difference |
| 33 | imputed | binary | weighted | total | adjusted | -0.023 | .664 | No difference |
| 37 | imputed | binary | weighted | emotional | adjusted | -0.021 | .706 | No difference |
| 31 | imputed | binomial | unweighted | controlling | adjusted | -0.019 | < .001\*\*\* | White more IPV |
| 15 | imputed | continuous | unweighted | controlling | adjusted | -0.018 | .030\* | White more IPV |
| 17 | imputed | binomial | weighted | total | adjusted | -0.018 | .308 | No difference |
| 1 | imputed | continuous | weighted | total | adjusted | -0.018 | .310 | No difference |
| 63 | complete\_cases | continuous | unweighted | controlling | adjusted | -0.015 | .120 | No difference |
| 79 | complete\_cases | binomial | unweighted | controlling | adjusted | -0.015 | .014\* | White more IPV |
| 23 | imputed | binomial | weighted | controlling | adjusted | -0.012 | .652 | No difference |
| 7 | imputed | continuous | weighted | controlling | adjusted | -0.012 | .652 | No difference |
| 48 | imputed | binary | unweighted | controlling | unadjusted | -0.012 | .510 | No difference |
| 71 | complete\_cases | binomial | weighted | controlling | adjusted | -0.011 | .730 | No difference |
| 55 | complete\_cases | continuous | weighted | controlling | adjusted | -0.011 | .754 | No difference |
| 19 | imputed | binomial | weighted | physical | adjusted | -0.008 | .327 | No difference |
| 67 | complete\_cases | binomial | weighted | physical | adjusted | -0.007 | .291 | No difference |
| 3 | imputed | continuous | weighted | physical | adjusted | -0.007 | .219 | No difference |
| 81 | complete\_cases | binary | weighted | total | adjusted | -0.007 | .909 | No difference |
| 43 | imputed | binary | unweighted | physical | adjusted | -0.006 | .560 | No difference |
| 51 | complete\_cases | continuous | weighted | physical | adjusted | -0.006 | .199 | No difference |
| 96 | complete\_cases | binary | unweighted | controlling | unadjusted | -0.005 | .797 | No difference |
| 6 | imputed | continuous | weighted | emotional | unadjusted | -0.004 | .825 | No difference |
| 87 | complete\_cases | binary | weighted | controlling | adjusted | -0.004 | .943 | No difference |
| 22 | imputed | binomial | weighted | emotional | unadjusted | -0.004 | .836 | No difference |
| 36 | imputed | binary | weighted | physical | unadjusted | -0.004 | .782 | No difference |
| 84 | complete\_cases | binary | weighted | physical | unadjusted | -0.004 | .776 | No difference |
| 16 | imputed | continuous | unweighted | controlling | unadjusted | -0.003 | .647 | No difference |
| 32 | imputed | binomial | unweighted | controlling | unadjusted | -0.003 | .474 | No difference |
| 39 | imputed | binary | weighted | controlling | adjusted | -0.002 | .973 | No difference |
| 11 | imputed | continuous | unweighted | physical | adjusted | -0.000 | .926 | No difference |
| 54 | complete\_cases | continuous | weighted | emotional | unadjusted | -0.000 | .985 | No difference |
| 70 | complete\_cases | binomial | weighted | emotional | unadjusted | -0.000 | .990 | No difference |
| 25 | imputed | binomial | unweighted | total | adjusted | -0.000 | .940 | No difference |
| 27 | imputed | binomial | unweighted | physical | adjusted | -0.000 | .946 | No difference |
| 9 | imputed | continuous | unweighted | total | adjusted | -0.000 | .985 | No difference |
| 91 | complete\_cases | binary | unweighted | physical | adjusted | 0.000 | .970 | No difference |
| 64 | complete\_cases | continuous | unweighted | controlling | unadjusted | 0.001 | .886 | No difference |
| 80 | complete\_cases | binomial | unweighted | controlling | unadjusted | 0.001 | .792 | No difference |
| 2 | imputed | continuous | weighted | total | unadjusted | 0.002 | .899 | No difference |
| 52 | complete\_cases | continuous | weighted | physical | unadjusted | 0.002 | .665 | No difference |
| 68 | complete\_cases | binomial | weighted | physical | unadjusted | 0.002 | .697 | No difference |
| 18 | imputed | binomial | weighted | total | unadjusted | 0.002 | .886 | No difference |
| 4 | imputed | continuous | weighted | physical | unadjusted | 0.002 | .643 | No difference |
| 85 | complete\_cases | binary | weighted | emotional | adjusted | 0.002 | .966 | No difference |
| 20 | imputed | binomial | weighted | physical | unadjusted | 0.003 | .627 | No difference |
| 59 | complete\_cases | continuous | unweighted | physical | adjusted | 0.004 | .382 | No difference |
| 75 | complete\_cases | binomial | unweighted | physical | adjusted | 0.005 | .095 | No difference |
| 12 | imputed | continuous | unweighted | physical | unadjusted | 0.005 | .192 | No difference |
| 28 | imputed | binomial | unweighted | physical | unadjusted | 0.005 | .030\* | Black more IPV |
| 44 | imputed | binary | unweighted | physical | unadjusted | 0.005 | .589 | No difference |
| 50 | complete\_cases | continuous | weighted | total | unadjusted | 0.005 | .753 | No difference |
| 66 | complete\_cases | binomial | weighted | total | unadjusted | 0.006 | .750 | No difference |
| 38 | imputed | binary | weighted | emotional | unadjusted | 0.006 | .903 | No difference |
| 57 | complete\_cases | continuous | unweighted | total | adjusted | 0.006 | .452 | No difference |
| 73 | complete\_cases | binomial | unweighted | total | adjusted | 0.007 | .081 | No difference |
| 10 | imputed | continuous | unweighted | total | unadjusted | 0.007 | .255 | No difference |
| 26 | imputed | binomial | unweighted | total | unadjusted | 0.008 | .011\* | Black more IPV |
| 60 | complete\_cases | continuous | unweighted | physical | unadjusted | 0.008 | .066 | No difference |
| 76 | complete\_cases | binomial | unweighted | physical | unadjusted | 0.009 | .002\*\* | Black more IPV |
| 92 | complete\_cases | binary | unweighted | physical | unadjusted | 0.009 | .467 | No difference |
| 29 | imputed | binomial | unweighted | emotional | adjusted | 0.009 | .106 | No difference |
| 13 | imputed | continuous | unweighted | emotional | adjusted | 0.009 | .405 | No difference |
| 34 | imputed | binary | weighted | total | unadjusted | 0.011 | .816 | No difference |
| 8 | imputed | continuous | weighted | controlling | unadjusted | 0.014 | .526 | No difference |
| 24 | imputed | binomial | weighted | controlling | unadjusted | 0.014 | .530 | No difference |
| 14 | imputed | continuous | unweighted | emotional | unadjusted | 0.014 | .144 | No difference |
| 30 | imputed | binomial | unweighted | emotional | unadjusted | 0.014 | .005\*\* | Black more IPV |
| 58 | complete\_cases | continuous | unweighted | total | unadjusted | 0.016 | .035\* | Black more IPV |
| 74 | complete\_cases | binomial | unweighted | total | unadjusted | 0.016 | < .001\*\*\* | Black more IPV |
| 61 | complete\_cases | continuous | unweighted | emotional | adjusted | 0.018 | .144 | No difference |
| 77 | complete\_cases | binomial | unweighted | emotional | adjusted | 0.019 | .006\*\* | Black more IPV |
| 56 | complete\_cases | continuous | weighted | controlling | unadjusted | 0.021 | .452 | No difference |
| 72 | complete\_cases | binomial | weighted | controlling | unadjusted | 0.021 | .471 | No difference |
| 42 | imputed | binary | unweighted | total | unadjusted | 0.023 | .271 | No difference |
| 46 | imputed | binary | unweighted | emotional | unadjusted | 0.025 | .244 | No difference |
| 41 | imputed | binary | unweighted | total | adjusted | 0.025 | .273 | No difference |
| 62 | complete\_cases | continuous | unweighted | emotional | unadjusted | 0.027 | .015\* | Black more IPV |
| 78 | complete\_cases | binomial | unweighted | emotional | unadjusted | 0.028 | < .001\*\*\* | Black more IPV |
| 45 | imputed | binary | unweighted | emotional | adjusted | 0.031 | .175 | No difference |
| 89 | complete\_cases | binary | unweighted | total | adjusted | 0.048 | .062 | No difference |
| 93 | complete\_cases | binary | unweighted | emotional | adjusted | 0.056 | .033\* | Black more IPV |
| 40 | imputed | binary | weighted | controlling | unadjusted | 0.059 | .178 | No difference |
| 82 | complete\_cases | binary | weighted | total | unadjusted | 0.064 | .201 | No difference |
| 90 | complete\_cases | binary | unweighted | total | unadjusted | 0.067 | .005\*\* | Black more IPV |
| 86 | complete\_cases | binary | weighted | emotional | unadjusted | 0.069 | .160 | No difference |
| 94 | complete\_cases | binary | unweighted | emotional | unadjusted | 0.071 | .003\*\* | Black more IPV |
| 88 | complete\_cases | binary | weighted | controlling | unadjusted | 0.078 | .163 | No difference |
| *Note.* \* p < .05, \*\* p < .01, \*\*\* p < .001 | | | | | | | | |

## Indirect effect of race on IPV

| universe | Specification option | | | | | estimate | *p* | inference |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *missing* | *proportion* | *weights* | *outcome* | *covariates* |
| 36 | complete\_cases | continuous | weighted | controlling | adjusted | -0.000 | .836 | No difference |
| 34 | complete\_cases | continuous | weighted | physical | adjusted | 0.000 | .695 | No difference |
| 38 | complete\_cases | continuous | weighted | physical | unadjusted | 0.001 | .290 | No difference |
| 51 | complete\_cases | binary | weighted | emotional | adjusted | 0.001 | .885 | No difference |
| 4 | imputed | continuous | weighted | controlling | adjusted | 0.001 | .545 | No difference |
| 10 | imputed | continuous | unweighted | physical | adjusted | 0.001 | .065 | No difference |
| 33 | complete\_cases | continuous | weighted | total | adjusted | 0.001 | .483 | No difference |
| 42 | complete\_cases | continuous | unweighted | physical | adjusted | 0.001 | .153 | No difference |
| 2 | imputed | continuous | weighted | physical | adjusted | 0.001 | .272 | No difference |
| 49 | complete\_cases | binary | weighted | total | adjusted | 0.001 | .830 | No difference |
| 12 | imputed | continuous | unweighted | controlling | adjusted | 0.001 | .041\* | Black more IPV through informal support |
| 9 | imputed | continuous | unweighted | total | adjusted | 0.002 | .030\* | Black more IPV through informal support |
| 35 | complete\_cases | continuous | weighted | emotional | adjusted | 0.002 | .423 | No difference |
| 1 | imputed | continuous | weighted | total | adjusted | 0.002 | .169 | No difference |
| 26 | imputed | binary | unweighted | physical | adjusted | 0.002 | .082 | No difference |
| 14 | imputed | continuous | unweighted | physical | unadjusted | 0.002 | .006\*\* | Black more IPV through informal support |
| 25 | imputed | binary | unweighted | total | adjusted | 0.002 | .162 | No difference |
| 44 | complete\_cases | continuous | unweighted | controlling | adjusted | 0.002 | .053 | No difference |
| 46 | complete\_cases | continuous | unweighted | physical | unadjusted | 0.002 | .078 | No difference |
| 50 | complete\_cases | binary | weighted | physical | adjusted | 0.002 | .579 | No difference |
| 27 | imputed | binary | unweighted | emotional | adjusted | 0.002 | .140 | No difference |
| 58 | complete\_cases | binary | unweighted | physical | adjusted | 0.002 | .071 | No difference |
| 11 | imputed | continuous | unweighted | emotional | adjusted | 0.002 | .037\* | Black more IPV through informal support |
| 40 | complete\_cases | continuous | weighted | controlling | unadjusted | 0.002 | .379 | No difference |
| 41 | complete\_cases | continuous | unweighted | total | adjusted | 0.002 | .022\* | Black more IPV through informal support |
| 17 | imputed | binary | weighted | total | adjusted | 0.002 | .549 | No difference |
| 59 | complete\_cases | binary | unweighted | emotional | adjusted | 0.002 | .217 | No difference |
| 57 | complete\_cases | binary | unweighted | total | adjusted | 0.002 | .172 | No difference |
| 19 | imputed | binary | weighted | emotional | adjusted | 0.003 | .491 | No difference |
| 20 | imputed | binary | weighted | controlling | adjusted | 0.003 | .434 | No difference |
| 3 | imputed | continuous | weighted | emotional | adjusted | 0.003 | .179 | No difference |
| 43 | complete\_cases | continuous | unweighted | emotional | adjusted | 0.003 | .026\* | Black more IPV through informal support |
| 6 | imputed | continuous | weighted | physical | unadjusted | 0.003 | .085 | No difference |
| 52 | complete\_cases | binary | weighted | controlling | adjusted | 0.003 | .452 | No difference |
| 18 | imputed | binary | weighted | physical | adjusted | 0.004 | .189 | No difference |
| 28 | imputed | binary | unweighted | controlling | adjusted | 0.004 | .076 | No difference |
| 8 | imputed | continuous | weighted | controlling | unadjusted | 0.004 | .061 | No difference |
| 13 | imputed | continuous | unweighted | total | unadjusted | 0.004 | < .001\*\*\* | Black more IPV through informal support |
| 37 | complete\_cases | continuous | weighted | total | unadjusted | 0.004 | .137 | No difference |
| 16 | imputed | continuous | unweighted | controlling | unadjusted | 0.004 | < .001\*\*\* | Black more IPV through informal support |
| 62 | complete\_cases | binary | unweighted | physical | unadjusted | 0.004 | .006\*\* | Black more IPV through informal support |
| 30 | imputed | binary | unweighted | physical | unadjusted | 0.004 | < .001\*\*\* | Black more IPV through informal support |
| 45 | complete\_cases | continuous | unweighted | total | unadjusted | 0.005 | .001\*\* | Black more IPV through informal support |
| 48 | complete\_cases | continuous | unweighted | controlling | unadjusted | 0.005 | < .001\*\*\* | Black more IPV through informal support |
| 54 | complete\_cases | binary | weighted | physical | unadjusted | 0.005 | .129 | No difference |
| 55 | complete\_cases | binary | weighted | emotional | unadjusted | 0.005 | .533 | No difference |
| 15 | imputed | continuous | unweighted | emotional | unadjusted | 0.005 | < .001\*\*\* | Black more IPV through informal support |
| 29 | imputed | binary | unweighted | total | unadjusted | 0.005 | .023\* | Black more IPV through informal support |
| 60 | complete\_cases | binary | unweighted | controlling | adjusted | 0.005 | .039\* | Black more IPV through informal support |
| 31 | imputed | binary | unweighted | emotional | unadjusted | 0.005 | .014\* | Black more IPV through informal support |
| 53 | complete\_cases | binary | weighted | total | unadjusted | 0.006 | .421 | No difference |
| 63 | complete\_cases | binary | unweighted | emotional | unadjusted | 0.006 | .068 | No difference |
| 47 | complete\_cases | continuous | unweighted | emotional | unadjusted | 0.006 | < .001\*\*\* | Black more IPV through informal support |
| 61 | complete\_cases | binary | unweighted | total | unadjusted | 0.006 | .057 | No difference |
| 5 | imputed | continuous | weighted | total | unadjusted | 0.006 | .001\*\* | Black more IPV through informal support |
| 39 | complete\_cases | continuous | weighted | emotional | unadjusted | 0.007 | .105 | No difference |
| 7 | imputed | continuous | weighted | emotional | unadjusted | 0.009 | .009\*\* | Black more IPV through informal support |
| 21 | imputed | binary | weighted | total | unadjusted | 0.009 | .179 | No difference |
| 23 | imputed | binary | weighted | emotional | unadjusted | 0.010 | .149 | No difference |
| 32 | imputed | binary | unweighted | controlling | unadjusted | 0.011 | < .001\*\*\* | Black more IPV through informal support |
| 56 | complete\_cases | binary | weighted | controlling | unadjusted | 0.012 | .087 | No difference |
| 22 | imputed | binary | weighted | physical | unadjusted | 0.012 | .003\*\* | Black more IPV through informal support |
| 64 | complete\_cases | binary | unweighted | controlling | unadjusted | 0.012 | < .001\*\*\* | Black more IPV through informal support |
| 24 | imputed | binary | weighted | controlling | unadjusted | 0.013 | .044\* | Black more IPV through informal support |
| *Note.* \* p < .05, \*\* p < .01, \*\*\* p < .001 | | | | | | | | |

## Total effect of race on IPV

From the mediation model.

| universe | Specification option | | | | | estimate | *p* | inference |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *missing* | *proportion* | *weights* | *outcome* | *covariates* |
| 28 | imputed | binary | unweighted | controlling | adjusted | -0.040 | .048\* | White more IPV |
| 60 | complete\_cases | binary | unweighted | controlling | adjusted | -0.038 | .080 | No difference |
| 35 | complete\_cases | continuous | weighted | emotional | adjusted | -0.036 | .188 | No difference |
| 50 | complete\_cases | binary | weighted | physical | adjusted | -0.029 | .099 | No difference |
| 33 | complete\_cases | continuous | weighted | total | adjusted | -0.023 | .306 | No difference |
| 3 | imputed | continuous | weighted | emotional | adjusted | -0.022 | .346 | No difference |
| 18 | imputed | binary | weighted | physical | adjusted | -0.022 | .222 | No difference |
| 17 | imputed | binary | weighted | total | adjusted | -0.022 | .705 | No difference |
| 19 | imputed | binary | weighted | emotional | adjusted | -0.019 | .718 | No difference |
| 12 | imputed | continuous | unweighted | controlling | adjusted | -0.017 | .041\* | White more IPV |
| 1 | imputed | continuous | weighted | total | adjusted | -0.016 | .362 | No difference |
| 44 | complete\_cases | continuous | unweighted | controlling | adjusted | -0.013 | .173 | No difference |
| 4 | imputed | continuous | weighted | controlling | adjusted | -0.011 | .684 | No difference |
| 36 | complete\_cases | continuous | weighted | controlling | adjusted | -0.010 | .755 | No difference |
| 34 | complete\_cases | continuous | weighted | physical | adjusted | -0.006 | .237 | No difference |
| 2 | imputed | continuous | weighted | physical | adjusted | -0.006 | .301 | No difference |
| 49 | complete\_cases | binary | weighted | total | adjusted | -0.006 | .950 | No difference |
| 26 | imputed | binary | unweighted | physical | adjusted | -0.005 | .663 | No difference |
| 32 | imputed | binary | unweighted | controlling | unadjusted | -0.001 | .957 | No difference |
| 10 | imputed | continuous | unweighted | physical | adjusted | 0.000 | .962 | No difference |
| 52 | complete\_cases | binary | weighted | controlling | adjusted | 0.000 | .984 | No difference |
| 16 | imputed | continuous | unweighted | controlling | unadjusted | 0.001 | .904 | No difference |
| 54 | complete\_cases | binary | weighted | physical | unadjusted | 0.001 | .959 | No difference |
| 9 | imputed | continuous | unweighted | total | adjusted | 0.002 | .834 | No difference |
| 20 | imputed | binary | weighted | controlling | adjusted | 0.002 | .982 | No difference |
| 58 | complete\_cases | binary | unweighted | physical | adjusted | 0.002 | .884 | No difference |
| 38 | complete\_cases | continuous | weighted | physical | unadjusted | 0.002 | .617 | No difference |
| 51 | complete\_cases | binary | weighted | emotional | adjusted | 0.003 | .925 | No difference |
| 7 | imputed | continuous | weighted | emotional | unadjusted | 0.005 | .833 | No difference |
| 6 | imputed | continuous | weighted | physical | unadjusted | 0.005 | .386 | No difference |
| 42 | complete\_cases | continuous | unweighted | physical | adjusted | 0.005 | .310 | No difference |
| 48 | complete\_cases | continuous | unweighted | controlling | unadjusted | 0.006 | .495 | No difference |
| 39 | complete\_cases | continuous | weighted | emotional | unadjusted | 0.006 | .782 | No difference |
| 14 | imputed | continuous | unweighted | physical | unadjusted | 0.007 | .096 | No difference |
| 64 | complete\_cases | binary | unweighted | controlling | unadjusted | 0.007 | .741 | No difference |
| 5 | imputed | continuous | weighted | total | unadjusted | 0.008 | .590 | No difference |
| 22 | imputed | binary | weighted | physical | unadjusted | 0.008 | .632 | No difference |
| 41 | complete\_cases | continuous | unweighted | total | adjusted | 0.009 | .317 | No difference |
| 37 | complete\_cases | continuous | weighted | total | unadjusted | 0.009 | .575 | No difference |
| 30 | imputed | binary | unweighted | physical | unadjusted | 0.010 | .329 | No difference |
| 46 | complete\_cases | continuous | unweighted | physical | unadjusted | 0.010 | .039\* | Black more IPV |
| 11 | imputed | continuous | unweighted | emotional | adjusted | 0.011 | .330 | No difference |
| 13 | imputed | continuous | unweighted | total | unadjusted | 0.012 | .070 | No difference |
| 62 | complete\_cases | binary | unweighted | physical | unadjusted | 0.013 | .285 | No difference |
| 23 | imputed | binary | weighted | emotional | unadjusted | 0.018 | .718 | No difference |
| 8 | imputed | continuous | weighted | controlling | unadjusted | 0.019 | .382 | No difference |
| 15 | imputed | continuous | unweighted | emotional | unadjusted | 0.019 | .054 | No difference |
| 45 | complete\_cases | continuous | unweighted | total | unadjusted | 0.021 | .006\*\* | Black more IPV |
| 43 | complete\_cases | continuous | unweighted | emotional | adjusted | 0.021 | .079 | No difference |
| 21 | imputed | binary | weighted | total | unadjusted | 0.022 | .639 | No difference |
| 40 | complete\_cases | continuous | weighted | controlling | unadjusted | 0.023 | .403 | No difference |
| 25 | imputed | binary | unweighted | total | adjusted | 0.028 | .221 | No difference |
| 29 | imputed | binary | unweighted | total | unadjusted | 0.028 | .178 | No difference |
| 31 | imputed | binary | unweighted | emotional | unadjusted | 0.030 | .167 | No difference |
| 27 | imputed | binary | unweighted | emotional | adjusted | 0.033 | .130 | No difference |
| 47 | complete\_cases | continuous | unweighted | emotional | unadjusted | 0.033 | .002\*\* | Black more IPV |
| 57 | complete\_cases | binary | unweighted | total | adjusted | 0.051 | .052 | No difference |
| 59 | complete\_cases | binary | unweighted | emotional | adjusted | 0.057 | .019\* | Black more IPV |
| 53 | complete\_cases | binary | weighted | total | unadjusted | 0.070 | .168 | No difference |
| 55 | complete\_cases | binary | weighted | emotional | unadjusted | 0.072 | .164 | No difference |
| 61 | complete\_cases | binary | unweighted | total | unadjusted | 0.073 | .001\*\* | Black more IPV |
| 24 | imputed | binary | weighted | controlling | unadjusted | 0.074 | .065 | No difference |
| 63 | complete\_cases | binary | unweighted | emotional | unadjusted | 0.076 | .002\*\* | Black more IPV |
| 56 | complete\_cases | binary | weighted | controlling | unadjusted | 0.090 | .088 | No difference |
| *Note.* \* p < .05, \*\* p < .01, \*\*\* p < .001 | | | | | | | | |

## Direct effect of race on IPV

From the mediation model.

| universe | Specification option | | | | | estimate | *p* | inference |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *missing* | *proportion* | *weights* | *outcome* | *covariates* |
| 28 | imputed | binary | unweighted | controlling | adjusted | -0.044 | .025\* | White more IPV |
| 60 | complete\_cases | binary | unweighted | controlling | adjusted | -0.043 | .059 | No difference |
| 35 | complete\_cases | continuous | weighted | emotional | adjusted | -0.038 | .172 | No difference |
| 50 | complete\_cases | binary | weighted | physical | adjusted | -0.031 | .072 | No difference |
| 18 | imputed | binary | weighted | physical | adjusted | -0.026 | .146 | No difference |
| 3 | imputed | continuous | weighted | emotional | adjusted | -0.025 | .288 | No difference |
| 17 | imputed | binary | weighted | total | adjusted | -0.024 | .668 | No difference |
| 33 | complete\_cases | continuous | weighted | total | adjusted | -0.023 | .285 | No difference |
| 19 | imputed | binary | weighted | emotional | adjusted | -0.021 | .698 | No difference |
| 12 | imputed | continuous | unweighted | controlling | adjusted | -0.018 | .030\* | White more IPV |
| 1 | imputed | continuous | weighted | total | adjusted | -0.018 | .314 | No difference |
| 44 | complete\_cases | continuous | unweighted | controlling | adjusted | -0.015 | .115 | No difference |
| 32 | imputed | binary | unweighted | controlling | unadjusted | -0.012 | .501 | No difference |
| 4 | imputed | continuous | weighted | controlling | adjusted | -0.011 | .672 | No difference |
| 36 | complete\_cases | continuous | weighted | controlling | adjusted | -0.010 | .756 | No difference |
| 2 | imputed | continuous | weighted | physical | adjusted | -0.007 | .201 | No difference |
| 26 | imputed | binary | unweighted | physical | adjusted | -0.007 | .559 | No difference |
| 49 | complete\_cases | binary | weighted | total | adjusted | -0.006 | .945 | No difference |
| 34 | complete\_cases | continuous | weighted | physical | adjusted | -0.006 | .217 | No difference |
| 64 | complete\_cases | binary | unweighted | controlling | unadjusted | -0.006 | .758 | No difference |
| 7 | imputed | continuous | weighted | emotional | unadjusted | -0.005 | .808 | No difference |
| 22 | imputed | binary | weighted | physical | unadjusted | -0.004 | .780 | No difference |
| 54 | complete\_cases | binary | weighted | physical | unadjusted | -0.004 | .773 | No difference |
| 16 | imputed | continuous | unweighted | controlling | unadjusted | -0.003 | .678 | No difference |
| 52 | complete\_cases | binary | weighted | controlling | adjusted | -0.003 | .939 | No difference |
| 20 | imputed | binary | weighted | controlling | adjusted | -0.001 | .952 | No difference |
| 39 | complete\_cases | continuous | weighted | emotional | unadjusted | -0.001 | .988 | No difference |
| 10 | imputed | continuous | unweighted | physical | adjusted | -0.000 | .910 | No difference |
| 9 | imputed | continuous | unweighted | total | adjusted | 0.000 | .988 | No difference |
| 58 | complete\_cases | binary | unweighted | physical | adjusted | 0.000 | .985 | No difference |
| 48 | complete\_cases | continuous | unweighted | controlling | unadjusted | 0.001 | .889 | No difference |
| 5 | imputed | continuous | weighted | total | unadjusted | 0.002 | .920 | No difference |
| 38 | complete\_cases | continuous | weighted | physical | unadjusted | 0.002 | .694 | No difference |
| 6 | imputed | continuous | weighted | physical | unadjusted | 0.002 | .651 | No difference |
| 51 | complete\_cases | binary | weighted | emotional | adjusted | 0.002 | .942 | No difference |
| 42 | complete\_cases | continuous | unweighted | physical | adjusted | 0.004 | .381 | No difference |
| 14 | imputed | continuous | unweighted | physical | unadjusted | 0.005 | .204 | No difference |
| 37 | complete\_cases | continuous | weighted | total | unadjusted | 0.005 | .760 | No difference |
| 30 | imputed | binary | unweighted | physical | unadjusted | 0.005 | .578 | No difference |
| 41 | complete\_cases | continuous | unweighted | total | adjusted | 0.006 | .452 | No difference |
| 13 | imputed | continuous | unweighted | total | unadjusted | 0.007 | .225 | No difference |
| 23 | imputed | binary | weighted | emotional | unadjusted | 0.008 | .868 | No difference |
| 46 | complete\_cases | continuous | unweighted | physical | unadjusted | 0.008 | .071 | No difference |
| 62 | complete\_cases | binary | unweighted | physical | unadjusted | 0.009 | .492 | No difference |
| 11 | imputed | continuous | unweighted | emotional | adjusted | 0.009 | .419 | No difference |
| 21 | imputed | binary | weighted | total | unadjusted | 0.013 | .774 | No difference |
| 15 | imputed | continuous | unweighted | emotional | unadjusted | 0.014 | .166 | No difference |
| 8 | imputed | continuous | weighted | controlling | unadjusted | 0.014 | .510 | No difference |
| 45 | complete\_cases | continuous | unweighted | total | unadjusted | 0.016 | .032\* | Black more IPV |
| 43 | complete\_cases | continuous | unweighted | emotional | adjusted | 0.019 | .125 | No difference |
| 40 | complete\_cases | continuous | weighted | controlling | unadjusted | 0.021 | .460 | No difference |
| 29 | imputed | binary | unweighted | total | unadjusted | 0.023 | .280 | No difference |
| 31 | imputed | binary | unweighted | emotional | unadjusted | 0.025 | .255 | No difference |
| 25 | imputed | binary | unweighted | total | adjusted | 0.026 | .245 | No difference |
| 47 | complete\_cases | continuous | unweighted | emotional | unadjusted | 0.028 | .013\* | Black more IPV |
| 27 | imputed | binary | unweighted | emotional | adjusted | 0.031 | .159 | No difference |
| 57 | complete\_cases | binary | unweighted | total | adjusted | 0.048 | .056 | No difference |
| 59 | complete\_cases | binary | unweighted | emotional | adjusted | 0.055 | .026\* | Black more IPV |
| 24 | imputed | binary | weighted | controlling | unadjusted | 0.061 | .138 | No difference |
| 53 | complete\_cases | binary | weighted | total | unadjusted | 0.064 | .207 | No difference |
| 55 | complete\_cases | binary | weighted | emotional | unadjusted | 0.067 | .188 | No difference |
| 61 | complete\_cases | binary | unweighted | total | unadjusted | 0.067 | .003\*\* | Black more IPV |
| 63 | complete\_cases | binary | unweighted | emotional | unadjusted | 0.070 | .004\*\* | Black more IPV |
| 56 | complete\_cases | binary | weighted | controlling | unadjusted | 0.078 | .144 | No difference |
| *Note.* \* p < .05, \*\* p < .01, \*\*\* p < .001 | | | | | | | | |

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