**Supplementary material**

**Random vs. fixed effects meta-analysis results**

Article title:
Past year intimate partner violence perpetration among people with depression: an individual participant data (IPD) meta-mediation analysis.

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**Alcohol: men**

Total effect: In fixed effects meta-analysis, the proportion of difference in physical IPV perpetration between men with and without depression was 4.8% (95% CI 2.6-6.9). In random effects meta-analysis, the proportion of difference was 5.1% (95% CI 1.3-8.9).
Figure 1 Results of fixed effects meta-analysis of the percentage differences between those with and without depression in past year physical IPV perpetration.

| Study       | ES (95% CI)     | Weight |
|-------------|-----------------|--------|
| CHDS        | 4.64 (-3.52, 16.38) | 12.01  |
| NSFH        | 2.83 (0.45, 6.11)  | 46.83  |
| Add Health  | 7.79 (4.58, 11.60) | 41.16  |
| Overall     | 5.00 (1.25, 8.92)  | 100.00 |

NOTE: Weights are from random effects analysis

Figure 2 Results of random effects meta-analysis of the percentage differences between those with and without depression in past year physical IPV perpetration.
Indirect effect: In fixed effects meta-analyses, no part of the total effect was mediated by alcohol (0.02%, 95% CI -0.1-0.2). In random effects meta-analyses, no part of the total effect was mediated by alcohol (0.1%, 95% CI -0.2%-0.4%).

Figure 3 Results of fixed effects meta-analysis of the mediated percentage differences between men with and without depression in past year physical IPV perpetration.
Figure 4 Results of random effects meta-analysis of the mediated percentage differences between men with and without depression in past year physical IPV perpetration.
Direct effect: In fixed effects meta-analysis, 4.6% (95% CI 2.4-6.7) of the total effect of depression on past year physical IPV perpetration among men was unmediated by alcohol. In random effects meta-analysis, 4.9% (95% CI 0.7%-9.0%) of the total effect of depression on past year physical IPV perpetration among men was unmediated by alcohol.

Figure 5 Results of fixed effects meta-analysis of the unmediated percentage differences between men with and without depression in past year physical IPV perpetration.
### Figure 6 Results of random effects meta-analysis of the unmediated percentage differences between men with and without depression in past year physical IPV perpetration.

| Study         | ES (95% CI)     | Weight |
|---------------|-----------------|--------|
| CHDS          | 3.72 (-3.96, 15.34) | 13.87  |
| NSFH          | 2.52 (0.17, 5.80)  | 45.41  |
| Add Health    | 7.82 (4.63, 11.62) | 40.72  |
| Overall (I-squared = 62.9%, p = 0.067) | 4.65 (0.72, 8.57) | 100.00 |

NOTE: Weights are from random effects analysis
**Alcohol: Women**

Total effect: In fixed effects meta-analyses, the proportion of difference in physical IPV perpetration between women with and without depression was 7.2% (95% CI 4.1-10.2). In random effects meta-analyses, the proportion of difference in physical IPV perpetration between women with and without depression was 7.7% (95% CI 3.7%-11.7%).

| Study       | Effect (95% CI) | Weight |
|-------------|-----------------|--------|
| CHDS        | 7.43 (-0.84, 18.22) | 10.12  |
| E-risk      | 14.21 (5.46, 24.28) | 10.37  |
| Add Health  | 6.21 (2.95, 9.75)  | 79.51  |
| Overall (I-squared = 18.8%, p = 0.292) | 7.16 (4.13, 10.19) | 100.00 |

*Figure 7 Results of fixed effects meta-analysis of the percentage differences between women with and without depression in past year physical IPV perpetration.*
### Study

| ID | ES (95% CI) | Weight |
|----|-------------|--------|
| ChIDS | 7.43 (-0.84, 18.22) | 15.75 |
| E-risk | 14.21 (5.46, 24.28) | 16.10 |
| Add Health | 6.21 (2.95, 9.75) | 68.15 |
| Overall (I-squared = 19.8%, p = 0.292) | 7.69 (3.66, 11.72) | 100.00 |

**Note:** Weights are from random effects analysis.

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**Figure 8** Results of random effects meta-analysis of the percentage differences between women with and without depression in past year physical IPV perpetration.
Indirect effect: In fixed effects meta-analysis, no part of the total effect was mediated by alcohol (0.04%, 95% CI -0.1-0.2). In random effects meta-analysis, no part of the total effect was mediated by alcohol (0.8%, 95% CI -0.5-2.1).

Figure 9 Results of fixed effects meta-analysis of the mediated percentage differences between women with and without depression in past year physical IPV perpetration.
Figure 10 Results of random effects meta-analysis of the mediated percentage differences between women with and without depression in past year physical IPV perpetration.
Direct effect: In fixed effects meta-analysis, 6.6% (95% CI 3.5-9.7) of the total effect of depression on past year physical IPV perpetration among women was unmediated by alcohol. In random effects meta-analysis, results were identical.

![Figure 11 Results of fixed effects meta-analysis of the unmediated percentage differences between women with and without depression in past year physical IPV perpetration.](image)

| Study       | ES (95% CI)       | Weight |
|-------------|-------------------|--------|
| CHDS        | 6.57 (-1.41, 17.22) | 10.40  |
| E-risk      | 11.81 (2.70, 21.81) | 9.69   |
| Add Health  | 6.18 (2.95, 9.66)  | 79.71  |
| Overall (I-squared = 0.0%, p = 0.552) | 6.78 (3.77, 9.78) | 100.00 |
Figure 12 Results of random effects meta-analysis of the unmediated percentage differences between women with and without depression in past year physical IPV perpetration.
IPV victimisation: women

Total effect: In fixed effects meta-analysis, the proportion of difference in physical IPV perpetration between women with and without depression was 7.4% (95% CI 4.3-10.6). In random effects meta-analysis, the proportion of difference in physical IPV perpetration between women with and without depression was 8.4% (95% CI 3.6-13.1).

Figure 13 Results of fixed effects meta-analysis of the percentage differences between women with and without depression in past year physical IPV perpetration.
Figure 14 Results of random effects meta-analysis of the percentage differences between women with and without depression in past year physical IPV perpetration.

| Study          | ES (95% CI)       | Weight |
|----------------|-------------------|--------|
| CHDS           | 8.10 (-0.21, 19.46) | 18.84  |
| E-risk         | 15.35 (6.85, 25.69) | 18.57  |
| Add Health     | 6.35 (2.97, 10.04)  | 62.58  |
| Overall (I-squared = 29.2%, p = 0.343) | 8.35 (3.59, 13.11) | 100.00 |

NOTE: Weights are from random effects analysis.
Indirect effect: In fixed effects meta-analysis, 3.3% (95% CI 2.0-4.5%) of the total effect of depression on past year physical IPV perpetration among women was mediated by IPV victimisation. In random effects meta-analysis, 4.7% (95% CI 0.9-8.5) of the total effect of depression on past year physical IPV perpetration among women was mediated by IPV victimisation.

Figure 15 Results of fixed effects meta-analysis of the mediated percentage differences between women with and without depression in past year physical IPV perpetration.
Figure 16 Results of random effects meta-analysis of the mediated percentage differences between women with and without depression in past year physical IPV perpetration.
Direct effect: In fixed effects meta-analysis, 3.1% (95% CI 0.3-6.0) of the total effect of depression on past year physical IPV perpetration among women was unmediated by IPV victimisation. In random effects meta-analysis, results were identical.
Figure 18 Results of random effects meta-analysis of the unmediated percentage differences between women with and without depression in past year physical IPV perpetration.
Severe IPV victimisation: women

Total effect: In fixed effects meta-analysis, the proportion of difference in physical IPV perpetration between women with and without depression was 7.4% (95% CI 4.3% - 10.4%). In random effects meta-analysis, the proportion of difference in physical IPV perpetration between women with and without depression was 7.8% (95% CI 3.8% - 11.8%).

Figure 19 Results of fixed effects meta-analysis of the percentage differences between women with and without depression in past year physical IPV perpetration.
Figure 20 Results of random effects meta-analysis of the percentage differences between women with and without depression in past year physical IPV perpetration
Indirect effect: In fixed effects meta-analysis, 1.9% (95% CI 0.7-3.2) of the total effect was mediated by severe IPV victimisation. In random effects meta-analysis, the results were identical.

![Figure 21 Results of fixed effects meta-analysis of the mediated percentage differences between women with and without depression in past year physical IPV perpetration.](image)

![Figure 22 Results of random effects meta-analysis of the mediated percentage differences between women with and without depression in past year physical IPV perpetration.](image)
Direct effect: In fixed effects meta-analysis, 5.4% (95% CI 2.5-8.2) of the total effect of depression on past year physical IPV perpetration among women was unmediated by severe IPV victimisation. In random effects meta-analysis, the results were identical.

Figure 23 Results of fixed effects meta-analysis of the unmediated percentage differences between women with and without depression in past year physical IPV perpetration.
Figure 24 Results of random effects meta-analysis of the unmediated percentage differences between women with and without depression in past year physical IPV perpetration.
Mediation meta-analysis results for past year severe physical IPV perpetration:

**IPV victimisation: Women**

Total effect: In fixed effects meta-analysis, the proportion of difference in severe physical IPV perpetration between women with and without depression was 4.0% (95% CI 1.5-6.6). In random effects meta-analysis, the proportion of difference in severe physical IPV perpetration between women with and without depression was 5.4% (95% CI 0.1%-10.6%).

![Results of fixed effects meta-analysis of the percentage differences between women with and without depression in past year severe physical IPV perpetration.](image)

Figure 25 Results of fixed effects meta-analysis of the percentage differences between women with and without depression in past year severe physical IPV perpetration.
Figure 26 Results of random effects meta-analysis of the percentage differences between women with and without depression in past year severe physical IPV perpetration.
Indirect effect: In fixed effects meta-analysis, 2.1% (95% CI 1.1-3.1) of the total effect of depression on past year severe physical IPV perpetration among women was mediated by IPV victimisation. In random effects meta-analysis, the total effect of depression on past year severe physical IPV perpetration among women was not mediated by IPV victimisation (2.9%, 95% CI -0.3%-6.1%).

Figure 27 Results of fixed effects meta-analysis of the mediated percentage differences between women with and without depression in past year physical IPV perpetration.
Figure 28 Results of random effects meta-analysis of the mediated percentage differences between women with and without depression in past year physical IPV perpetration.
Direct effect: In fixed effects meta-analysis, there was no direct effect of depression on severe IPV perpetration (1.3%, 95% CI -1.03-3.5). In random effects meta-analysis, the results were identical.

Figure 29 Results of fixed effects meta-analysis of the non-mediated percentage differences between women with and without depression in past year severe physical IPV perpetration.

Figure 30 Results of random effects meta-analysis of the non-mediated percentage differences between women with and without depression in past year severe physical IPV perpetration.
Severe IPV victimisation: women

Total effect: In fixed-effects meta-analysis, the proportion of difference in severe physical IPV perpetration between women with and without depression was 2.0% (95% CI 0.6%-3.3%). In random-effects meta-analysis, the proportion of difference in severe physical IPV perpetration between women with and without depression was 3.3% (95% CI 0.2%-6.3%).

Figure 31 Results of fixed effects meta-analysis of the percentage differences between women with and without depression in past year severe physical IPV perpetration.
Figure 32 Results of random effects meta-analysis of the percentage differences between women with and without depression in past year severe physical IPV perpetration.
Indirect effect: In fixed effects meta-analysis, 1.2% (95% CI 0.6-1.8) of the total effect of depression on past year severe physical IPV perpetration among women was mediated by severe IPV victimisation. In random effects meta-analysis, the results were identical.

Figure 33 Results of fixed effects meta-analysis of the mediated percentage differences between women with and without depression in past year severe physical IPV perpetration.
Figure 34 Results of random effects meta-analysis of the mediated percentage differences between women with and without depression in past year severe physical IPV perpetration.
Direct effect: In fixed effects meta-analysis, there was part of the total effect which was unmediated (0.9%, 95% CI -0.4-2.1). In random effects meta-analysis, there was no part of the total effect which was unmediated (1.6%, 95% CI -0.7-3.8).

Figure 35 Results of fixed effects meta-analysis of the unmediated percentage differences between women with and without depression in past year severe physical IPV perpetration.
Figure 36 Results of random effects meta-analysis of the unmediated percentage differences between women with and without depression in past year severe physical IPV perpetration.