

Methods in a Minute: Meta-Analysis

Visual Flow

Slide	Text
1	Research can—and should—help practitioners and policymakers choose which treatments and programs to recommend.
2	But what happens when studies of the same treatment reach different conclusions?
3	To understand whether a treatment is effective across circumstances, researchers can use a statistical technique called meta-analysis.
4	Meta-analysis can be applied across many fields.
5	AIR researchers that use meta-analysis have found that: Students who receive financial aid for college are more likely to graduate from college.
6	AIR researchers that use meta-analysis have found that: In low- and middle-income countries, women with business training are more likely to be self-employed and earn higher profits than those without training.
7	Let's walk through a simplified example.
8	A doctor looks for relevant research when considering a medication to prevent heart disease in their patient and finds...
9	...three studies of the medication. Two of them show little effect, and one shows a positive effect.
10	A meta-analysis can help the doctor make sense of these results.
11	For each study included in a meta-analysis, researchers calculate an effect size.
12	Effect size is a standardized statistic describing how effective the treatment is.
13	This allows them to compare and combine results from multiple studies.
14	Researchers weight studies based on factors such as the number of participants, and then calculate an average effect.
15	By doing this, they can generate more accurate estimates to understand the average effect across <i>all</i> studies.
16	In the earlier example, an average significant positive effect, calculated from the 3 studies, suggests that the medication prevents heart attacks.
17	Rather than reading three studies, the doctor reads just one meta-analysis.
18	With this information, the doctor can more confidently prescribe the medication.
19	Learn more about evidence synthesis methods and AIR's synthesis projects at mosaic.air.org .