

Enabling Meta-analysis with a Research Data Repository
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Meta-analysis is a well-established method to systematically assess previous research and to derive conclusions about a body of scientific inquiry. Inferences based on multiple studies are more credible and are an important aspect of evidence-based research. While meta-analysis is typically conducted by comparing published articles, the availability of research data from different studies in the same repository accords the opportunity to examine results simultaneously. Data in the same repository facilitates discovery and access. Specifically, similar data in the same repository enables researchers to estimate analogous regressions. As evidence-based research becomes more widespread, facilitating meta-analytic research should be a key aim of repositories.

A repository that adheres to the F.A.I.R. (Findable, Accessible, Interoperable, Reusable) principles offers researchers the opportunity to compare results from different studies. Repositories that focus on a theme, such as the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development-funded Data Sharing for Demographic Research (DSDR), enable researchers to find studies with comparable variables and analogous samples. DSDR archives data on mother and child health, health disparities, and the human lifecycle for secondary analysis. Through DSDR, researchers can search and contrast variables among many studies.

An example of analogous studies in DSDR are studies that have collected data on food insecurity. DSDR hosts data with variables about food insecurity including "Welfare, Children, and Families: A Three-City Study," "Relationship Dynamics and Social Life (RDSL) Study," and "Baby's First Years (BFY)".

While meta-analysis is common in the health sciences including public health, epidemiology and evidence-based medicine, quantitative researchers in other disciplines including the social sciences have not employed the technique as frequently. Meta-analysis can add to the validity of trends and other findings by demonstrating that results are not limited to a single study. Repositories that host data related to a common theme enable researchers to check if findings are consistent across multiple studies. Through repositories, researchers can also replicate published studies.