

Using mixed methods

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Mixed methods research, or research that involves collecting both quantitative and qualitative data, can help Healthy Marriage and Relationship Education (HMRE) programs and evaluators answer a wide array of research questions and deepen their insights into the questions they are investigating (Box 5.1; Creswell and Creswell 2018; Johnson and Onwuegbuzie 2004). For example, quantitative data could help HMRE programs and evaluators determine if their program achieved its intended goals, and qualitative data could help answer how and why it did or did not.

This brief explains why and when programs and evaluators might use mixed methods research in an HMRE evaluation, followed by a description of three commonly implemented designs. The brief closes with questions HMRE programs and evaluators can consider when choosing an approach.

Box 5.1. Key terms

Quantitative research. A research method for testing objective theories by examining the relationship among variables. Quantitative data are often close-ended, numerical data (such as numerical responses on a survey measure).

Qualitative research. A research method for exploring and understanding the meaning individuals or groups associate with a social or human problem. Qualitative data are often open-ended, non-numerical, or descriptive data (for example, responses to an in-depth interview or focus group).

Source: Creswell and Creswell 2018.

? Why use mixed methods research?

There are many advantages to using a mixed methods design. A mixed methods research design is particularly useful when attempting to answer research questions that neither quantitative nor qualitative methods can answer alone. Mixed methods research can allow evaluators to make more substantive conclusions because the strengths of the qualitative methods can offset the weaknesses of the quantitative methods, and vice versa (Creswell and Creswell 2018; Johnson and Onwuegbuzie 2004). For instance, quantitative data can provide numerical information—such as percentages, rates, or trends—while qualitative data can provide detailed insights into participants’ perspectives and experiences. In HMRE contexts, quantitative research can help demonstrate that an HMRE program improves participants’ relationship skills, but evaluators might need qualitative data to understand *how and why* relationship skills improved. Similarly, if an HMRE grant recipient is interested in testing the impact of the program or generalizing findings to broader populations or settings, they will need to collect quantitative data. Conducting mixed methods research can help HMRE grant recipients answer complex research questions that are generalizable while simultaneously providing a deeper understanding of the issue being investigated (Dawadi 2021).

The Administration for Children and Families (ACF) provides grants to fund healthy marriage and relationship education (HMRE) programs to strengthen and improve the quality of relationships. The programs offer a range of services from relationship education for high school students to marriage and relationship skills building for adult couples. Grant recipients may be funded to also conduct descriptive or impact evaluations of their funded programs. Independent local evaluators support grant recipients in conducting their local evaluations. This brief is part of a larger evaluation technical assistance (TA) toolkit developed by Mathematica to help HMRE local evaluators understand key program evaluation concepts, common evaluation challenges, and strategies to prevent or overcome challenges. The briefs are standalone documents that can be read in any order. The TA toolkit was developed with HMRE program staff, their local evaluators, and other partners in mind, but it is also relevant to other program areas and organizations.

Types of mixed methods research

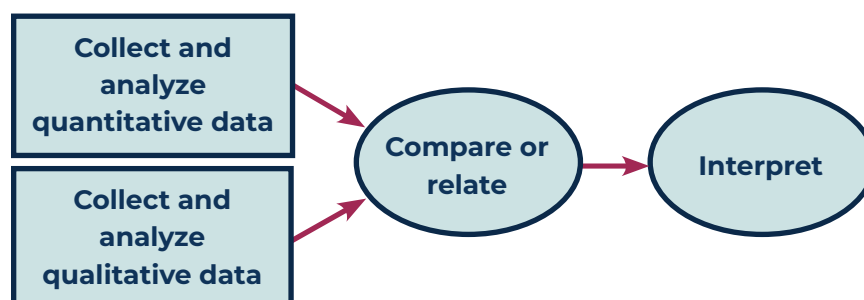
There are several types of mixed method research designs. This section focuses on three common designs—*convergent parallel* or *triangulation*, *explanatory sequential*, and *exploratory sequential*. This section explains each type of design, discusses when to consider using it, and gives an example scenario of how to use it.



Convergent parallel or triangulation design

In a convergent parallel design (Figure 5.1), researchers simultaneously (but separately) collect quantitative and qualitative data, analyze them separately, and triangulate the results (Creswell and Creswell 2018). Evaluators can use a triangulation design to collect different but complementary data about an outcome of interest.

Figure 5.1. Convergent parallel design



Source: Creswell and Creswell 2018.

A central purpose of this design is to give researchers the ability to directly compare and contrast quantitative or statistical results with qualitative data to reveal similarities and discrepancies. Accordingly, it is important to measure the same or similar variables, constructs, or concepts for each data collection method (Creswell and Creswell 2018). For example, a survey can have a question about how satisfied participants were with the HMRE program, and a focus group can explore the reasons why they were or weren't satisfied with the program. Box 5.2 is a scenario of how an HMRE program can use a triangulation design to evaluate their program.

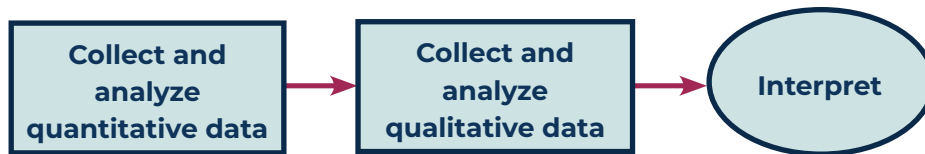
Box 5.2. A triangulation design for evaluating an HMRE program

An HMRE program that serves couples is interested in learning more about how their program influences couples' level of satisfaction with their relationships. The evaluation seeks to answer two research questions: (1) Did participants' satisfaction with their relationship increase in the period from enrollment to six months after program services ended? and (2) What aspects of the program contributed to changes in participants' relationship satisfaction? To answer these research questions, the evaluator decides to triangulate quantitative and qualitative data and compare the results. Specifically, they administer a series of quantitative survey measures in which participants rate their communication skills and feelings of closeness and affection toward their partner. They also conduct a series of focus groups with couples at the six-month follow-up to collect qualitative data on their program experiences and how their relationship with their partner changed since participating in the program.

Explanatory sequential design

The intent of an explanatory sequential design is to have qualitative data explain quantitative findings in detail. It involves two phases of data collection: (1) collecting and analyzing quantitative data, followed by (2) designing a qualitative data collection approach based on the quantitative findings (Figure 5.2).

Figure 5.2. Explanatory sequential design



Source: Creswell and Creswell 2018.

Evaluators should use this design when they want a better explanation of the results of their quantitative analysis—particularly when the results might be innovative or different from what the literature suggests (for example, when demonstrating the efficacy of a novel approach). Evaluators might also use this design when they wish to create meaningful subgroups based on their quantitative findings. For example, an evaluator may choose to purposively sample focus group participants that reported high and low scores on a survey measure on cooperative co-parenting. This type of mixed method design can also be useful in program improvement (Box 5.3).

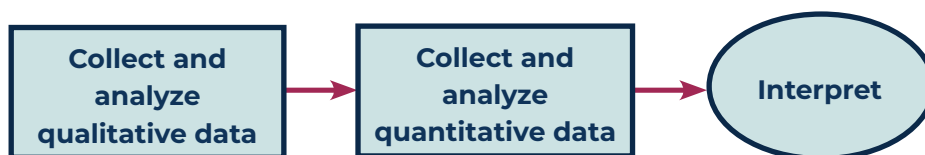
Box 5.3. Explanatory sequential design for program improvement

An HMRE program for parents learns from a quantitative exit survey that 60 percent of participants were satisfied with the program. The program and evaluator decide to purposefully select a group of participants who reported being satisfied with the program and a group of participants who reported being dissatisfied with the program and conduct qualitative, one-on-one interviews to understand what contributed to their experiences. After analyzing the data, the evaluator finds common themes among the dissatisfied group—namely, that they think the program is too long, and that it should provide meals before workshops. Meanwhile, themes from the satisfied group include appreciation for on-site child care, engaging material, and the transportation assistance. The program uses these results to continue to support aspects of the program that participants appreciated, and tweak aspects of the program that could be improved (for example, keep offering child care, and start offering meals before workshops).

Exploratory sequential design

In an exploratory sequential design, evaluators use qualitative data to develop a survey or other quantitative measure (Creswell and Creswell 2018). This design involves two phases of data collection: (1) collecting and analyzing qualitative data, followed by (2) designing and administering a survey based on the qualitative data (Figure 5.3).

Figure 5.3. Exploratory sequential design



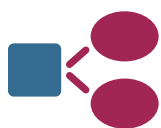
Source: Creswell and Creswell 2018.

Evaluators should choose this design when they need to explore a topic in more depth before collecting more data. Exploratory sequential designs can be useful when appropriate measures or instruments are not available; there is no guiding framework or theory; or the evaluator wants to generalize established findings to new groups. For example, an exploratory sequential design can help programs and evaluators tailor program content or measures used in evaluations to make them more culturally appropriate for specific populations. Box 5.4 gives a scenario of when an HMRE program might use an exploratory sequential design.

Evaluators may also use this design when conducting an implementation study or when undertaking a program improvement effort. For example, if an HMRE program decides to implement a new content delivery approach (such as offering pre-recorded, asynchronous workshop sessions), their evaluator may choose to collect qualitative feedback from staff and participants on the new mode, then design a survey to collect more information on how to enhance delivery of the asynchronous content.

Box 5.4. An exploratory sequential design to inform program delivery

An HMRE program is interested in developing a program to improve the co-parenting relationships of recently divorced parents. To understand the needs and experiences of divorced parents, the evaluator starts by holding a focus group with providers serving divorced families. After collecting, coding, and analyzing these data, the evaluator finds common challenges among this group in forming new romantic relationships, poor communication about parenting roles and expectations, and difficulty accessing co-parenting services in the neighborhood. Based on these findings, the evaluator designs a community survey to understand if these themes are common to a larger group of people and to assess community interest in co-parenting services. The evaluator also designs a survey for legal professionals working with divorced families to assess their interest in and ability to refer participants to the HMRE program.



Choosing a mixed methods design

Although this brief explores three common mixed methods designs, they are not the only designs to choose from. There are many others—for example, embedded, transformative, and multiphase designs (Creswell 2008; Creswell and Creswell 2018). Incorporating these types of designs into HMRE evaluations is beyond the scope of this brief, but evaluators can use the reference section to find more resources on these types of designs.

Given the many options evaluators have for mixed methods approaches, they might wonder how to go about selecting a specific design type. Selecting a suitable design is based on many factors, including the evaluation's research questions, resources, timing, and capabilities (Creswell and Creswell 2018; Creswell et al. 2011). For example, if the evaluation budget is limited, and an evaluator's research questions can be answered primarily with quantitative data, they might consider the explanatory sequential design. Table 5.1 provides guidance evaluators can use to help determine their approach based on suggestions from prominent experts on mixed methods.

Table 5.1. Considerations when choosing a mixed method design approach

Areas to consider	Questions	Guidance
<i>Research questions</i>	<ul style="list-style-type: none"> What type of data are required to answer the question? Will both types of data be given equal weight in terms of answering the research questions? 	<ul style="list-style-type: none"> Evaluators might first consider the theoretical framework guiding the HMRE program and the evaluation. Some theories may lend themselves to collecting certain types of data. Evaluators should be able to explain the rationale behind their decisions about the data types they need to answer the questions, and their prioritization of the data types. This rationale should align with the analytic approach (for example, how the evaluators are merging data).
<i>Resources</i>	<ul style="list-style-type: none"> Does the evaluation have enough resources to support a mixed methods design? 	<ul style="list-style-type: none"> Evaluators should assess all the resources available to them—that is, funding, staff, and time. For example, the evaluator should have funds available to collect both types of data, ample staff to implement the approach, and enough time to analyze and interpret the data.
<i>Timing</i>	<ul style="list-style-type: none"> Should the data be collected concurrently or sequentially? At what stage of the evaluation will the data be integrated? 	<ul style="list-style-type: none"> Evaluators should consider the sequence of the data collection. For example, if the evaluator wants to select focus groups based on survey responses, a sequential approach is warranted. Evaluators should also consider when the data will be merged. Each of the design types discussed in this brief merge different data types at different stages. For example, a triangulation design merges data at the interpretation stage.
<i>Capabilities</i>	<ul style="list-style-type: none"> Do evaluator staff have the required skills to collect and analyze the data? 	<ul style="list-style-type: none"> Lead evaluators should consider their own abilities and those of their staff. They will need the right skill sets to collect, analyze, merge, and interpret each data type.

Source: Based on Creswell and Creswell 2018; Creswell et al. 2011.

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Suggested citation: Friend, Daniel, Rebecca Piatt, and Brandon Hollie (2024). "Using Mixed Methods." OPRE Report #2024-143. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Acknowledgements: Many people contributed to this toolkit. First, we acknowledge staff at the OPRE in the Administration for Children and Families at the U.S. Department of Health and Human Services. We are particularly grateful for the direction and feedback from Samantha Illangasekare, Rebecca Hjelm, and Kathleen McCoy. We want to extend our gratitude to Sarah Avellar and Angela D'Angelo for reviewing drafts of the briefs. We also extend our appreciation to Effie Metropoulos and Bridget Gutierrez for editing and Yvonne Marki-Korosec and Gwyneth Olson for designing the graphics in this toolkit.