



University of California
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Mixed Methods Research

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“Mixed method approaches allow researchers to use a **diversity of methods...offsetting limitations of exclusively quantitative and qualitative research** ... Mixed methods may be employed to produce a **robust description and interpretation of the data, make quantitative results more understandable, or understand broader applicability of small-sample qualitative findings.**”

<https://catalyst.harvard.edu/community-engagement/mmr/>



Learning Objectives



Understand what mixed methods research is and why you would use it



Understand the types of mixed methods study designs



Understand the principles of integrated quantitative and qualitative research

Mixed methods research

- A way to get "a more complete understanding of issues and hear the voices of participants." (Guetterman et al)
- Merges quantitative and qualitative data to see how one informs the other
 - Mixed vs. multimethod research
- Design selection based on your study goals and resources

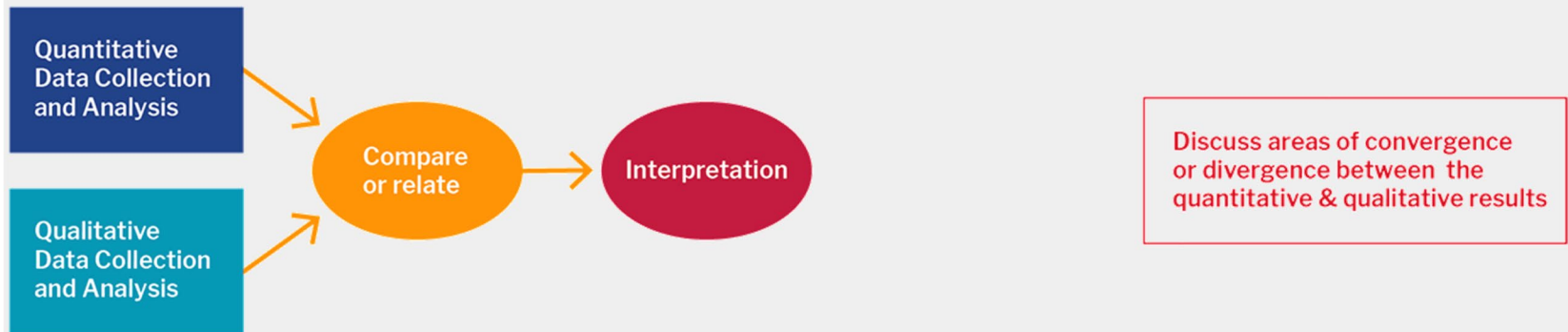
Mixed methods research



Mixed methods study designs

BASIC MIXED METHODS RESEARCH DESIGNS

Convergent Parallel Design



Explanatory Sequential Design



Exploratory Sequential Design



Example of a Convergent Parallel Design

Surveys: What are provider/staff practices around social risk screening at a convenience sample of 4 CHCs in Texas?

EHR data: How many patients have social risk screening data in their charts?

Interviews: What are provider/staff perspectives on social risk screening within CHCs

Theme 1: Broad support for social risk screening/care integration

	Provider/staff illustrative interview quotes	Provider survey data	EHR data
Sub-theme: Increase in screening efforts	<i>The reason why we passed the torch to the back [as opposed to front office] is because once the patient gets to the back of the clinic, that's when they open more [...] trying to figure out where should we be screening for SDoH, 'Should it be in the front? Should it be in the back? Should it be the doctor? Should it be the MA? Should it be once we connect them to the care coordinator?' to see when the patient would actually give us the right answers or not the right answers, but the honest answers. – Staff</i> <i>[T]he constraints that we have on all that just make it hard when time is such a factor for our visits. But I still find it important, so I still incorporate [social risk screening] into my visit somehow. – Provider</i>	Social needs screening activities at my clinic have (1=Decreased; 10=Increased) (N=87): Mean 6.8, 0.23 SE, 95% CI 6.4-7.3	Combined social risk screening rate at Site 1 & 2: August 2019: 4% February 2021: 46% Peak: January 2021: 56%



Data integration in mixed methods studies

- **Narrative:** describe integration of quantitative and qualitative findings
- **Data transformation:** transform either quantitative data into qualitative or qualitative into quantitative and then integrate the transformed data with the data that was not transformed (compare quant with quant or qual with qual data)
- **Joint displays:** visually integrate the data to show how the data augment each other

Fetters, M. D., et al. (2013). "Achieving integration in mixed methods designs-principles and practices." *Health Serv Res* **48**(6 Pt 2): 2134-2156.

Guetterman, T. C., et al. (2015). "Integrating Quantitative and Qualitative Results in Health Science Mixed Methods Research Through Joint Displays." *Ann Fam Med* **13**(6): 554-561.



Data integration: joint displays

Figure 2. A joint display from an explanatory sequential design that is organized by a theoretical framework and relates categorical scores to quotes.

Table 4. Quotes Related to Lanham et al's Relationship Characteristics in Clinics with High and Low WRS Scores

Rich communication

Communication through face-to-face conversation; most effective when messages are unclear or ambiguous

Low WRS score clinics	"I think that some days we should just sit down and say, 'Okay, this is what's going on. What do you know—how do you perceive this is supposed to be done?' ...[S]ometimes the hurdles that we run into are just, they could have been easily avoided if there had been a little bit better communication."
High WRS score clinics	"Well, you know we have what's called huddle every morning and any problems from the day before are discussed in huddle with all the team members and the clerical staff, social workers, the pharmacist. So we all get to know anything that's going on at that time."

Heedful interrelating

Individuals are attentive to their work tasks and sensitive to how their roles and actions affect and intersect with those around them

Low WRS score clinics	"...[T]here's a whole lot of tension and a lot of it has to do with, 'That ain't my job and you're messing in my area and you don't belong in my area and you need to back out and just stay in your own business.'"
High WRS score clinics	"I think the teamwork here is just excellent. You know we really pitch in and try and help. Everyone's attitude basically is that if one person's working hard, we're all working hard."

Trust

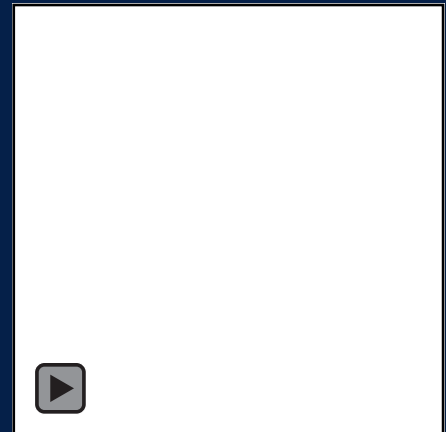
Individuals feel safe in making themselves vulnerable to others

Low WRS score clinics	"Some people are probably not going to verbalize a lot, because they're afraid it might get back to their boss or... because they don't want to rock the boat."
High WRS score clinics	"So, I have learned so much about medicine itself from these people; they're not afraid to answer them for whatever

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Summary

- Mixed methods allow for a merging/integration of quantitative and qualitative data to show how one informs the other
- Can provide a more complete picture of research question
- Can be resource intensive
- Requires meaningful integration of the data sources





References

- Required:
- Fetters, M. D., et al. (2013). "Achieving integration in mixed methods designs-principles and practices." Health Serv Res **48**(6 Pt 2): 2134-2156.
 - Overview of integrating quantitative and qualitative research
- Guetterman, T. C., et al. (2015). "Integrating Quantitative and Qualitative Results in Health Science Mixed Methods Research Through Joint Displays." Ann Fam Med **13**(6): 554-561.
 - Overview of integrating quantitative and qualitative research
- Suggested:
- UCSF Library Mixed Methods: <https://guides.ucsf.edu/QualitativeResearch/MixedMethods>
 - Overview of mixed methods from UCSF Library, including additional references/resources
- Harvard Catalyst **Community Engagement Program: Mixed Methods Research**: <https://catalyst.harvard.edu/community-engagement/mmr/>
- Lee, S. D., et al. (2022). "Application of Mixed Methods in Health Services Management Research: A Systematic Review." Med Care Res Rev **79**(3): 331-344.
 - Best practice recommendations for mixed methods research in health services research