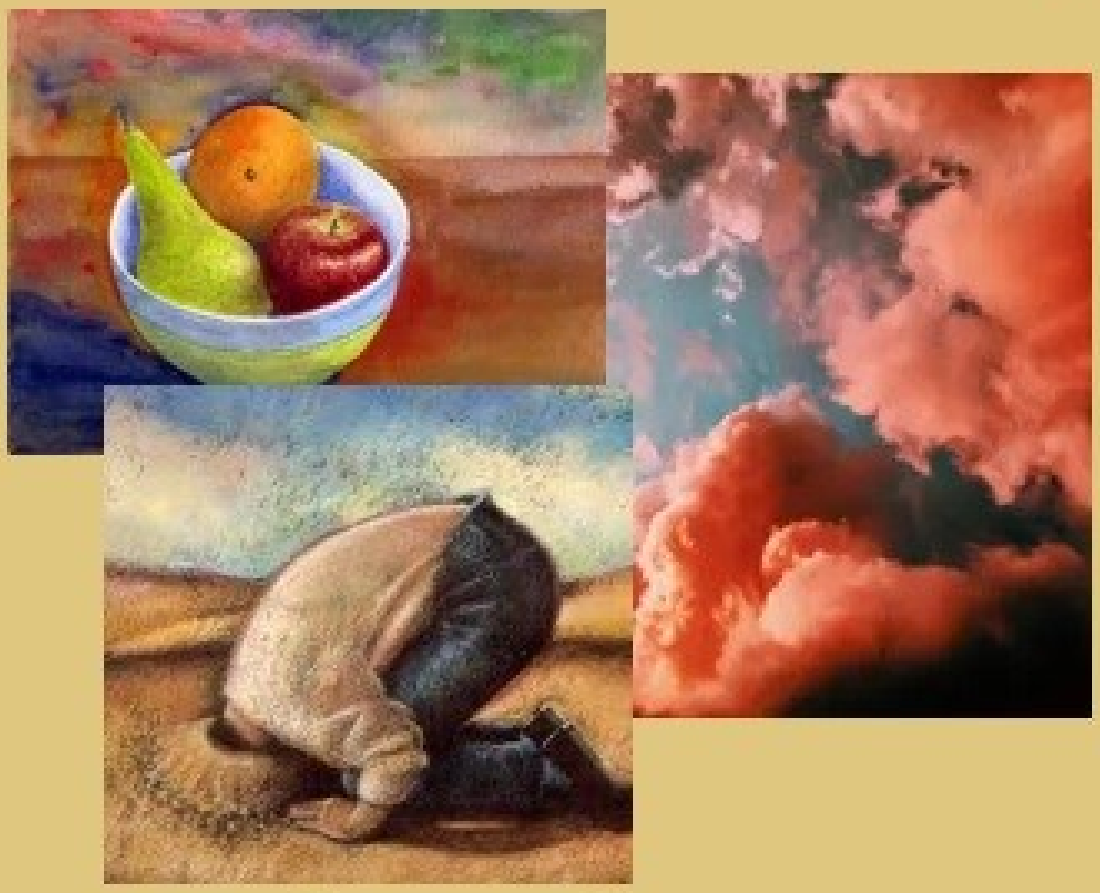
Shared Constructs in Research Design



Sampling
Bias
Validity

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This document includes a three-part series that appeared in *Research Design Review* in 2021 concerning three shared constructs in quantitative & qualitative research design.
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Shared Constructs in Research Design: Part 1 — Sampling

Quantitative and qualitative research, and the respective research designs, are distinct from each other in many ways; and, indeed, much has been written in *Research Design Review* on the **unique attributes of qualitative research**. There are, however, commonalities across research methodologies that cannot be ignored in quality research design. These commonalities include fundamental constructs that further a principled approach to research design, such as the notion of sampling, bias, and validity.

The idea of linking, what many may consider, quantitative concepts with qualitative research may be disconcerting to some who approach qualitative research from a particular stance or paradigm orientation, or believe that quantitative jargon and ideas have no place in qualitative methods. And yet, as stated in **"The Transcendence of Quality Over Paradigms in Qualitative Research,"**

> *As important as a theoretical or philosophical orientation may be to serving as the foundation to a qualitative research effort, it need not be tied to the quality measures the researcher utilizes in the actual doing of the research.*

Meaning that a quality approach to design is critical regardless of paradigm orientation, as reinforced in **"Distinguishing Qualitative Research Methods from Paradigm Orientation,"**

> *If, philosophically, the goodness of qualitative research is of ultimate concern, and if it is agreed that qualitative research can, in fact, serve worthwhile (i.e., "good") purposes, then logically it would serve those purposes only to the degree that it is done well, regardless of the specific objectives [or paradigm orientation] that qualitative researchers are striving to address.* (Roller & Lavrakas, p. 20)

A specific example is given in **"Social Contructionism & Quality in Qualitative Research Design"** which states in part,

> *Quality considerations walk hand-in-hand with social constructionism (and many theoretical and philosophical orientations), you might even say that they need each other. A quality approach is driven by the researcher's understanding and utilization of the socially-constructed world (e.g., use of language, the imbalance of power) while the social constructionist ultimately requires research outcomes that are useful.*

In the spirit of embracing varying degrees of worldviews associated with qualitative research along with a quality approach to qualitative research design, researchers can turn their attention to fundamental constructs such as sampling. In the field of psychology, researchers such as

Robinson (2014) have proposed a four-point "pan-paradigmatic" sampling framework, and Morrow (2005) emphasizes the idea that "purposeful sampling is used to produce information-rich cases, and a combination of sampling strategies may be used to achieve this purpose." Braun and Clarke (2019) have their "own rules of thumb and make pragmatic decisions around sampling" with attention to sample size, "recognising that sample size alone is not the only factor at play. Getting different stories can require sampling more widely" (p. 11). And O'Reilly and Parker (2013) link quality to sampling, stating that the "defensibility of the quality of qualitative research, to a considerable extent, relates to sampling adequacy" (p.2).

Sampling is central to qualitative design among other social scientists — such as Adler & Adler (2012) who discuss "theoretical sampling, where researchers purposely seek to interview participants who occupy particular niches in their analysis" (p. 9), and Roller & Lavrakas (2015) who have made sampling a main feature of the **Total Quality Framework Credibility component** — and researchers in the health sciences. Morse (1991, 2000, 2015, 2020) is widely considered the champion of qualitative health research. Back in 1991, Morse argued for greater attention to sampling in qualitative research, emphasizing the need for closer examination of "the principles of sampling in qualitative research and to consider threats to validity and special problems that occur when making sampling decisions" (p. 129). Fast forward nearly 30 years and Morse continues her discussion of sampling strategies, stating "Sampling is…a strategy that must be approached carefully in light of many factors unique to your [qualitative] project, along with anticipating the ramifications of your sampling decision for the entire project" (2020, p. 5).

Another shared construct — bias — is the focus of Part 2 in this discussion.

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Shared Constructs in Research Design: Part 2 — Bias

Part 1 of the discussion of shared constructs — **"Shared Constructs in Research Design: Part 1 – Sampling"** — acknowledges the distinctiveness between quantitative and qualitative research while highlighting the notion that there are fundamental constructs common to a quality approach to research design regardless of method or, in the case of qualitative research, paradigm orientation. Three such constructs are sampling, bias, and validity. Part 1 of this discussion focused on sampling (prefaced by a consideration of paradigms in qualitative research and the importance of quality research design regardless of orientation). This article (Part 2) discusses bias.

Bias in qualitative research design has been the topic of a number of articles in *Research Design Review* over the years. One of these articles is a broad discussion on **paying attention to bias in qualitative research** and another explores **social desirability bias in online research.** An article written in 2014 examines **the role of empathy in qualitative research** and its potential for enhancing clarity while reducing the bias in qualitative data, and another article in *RDR* talks about visual cues and the **importance of visual cues in mitigating sources of bias** in qualitative research. Other articles concerning bias in *RDR* are specific to methods. For example, a couple of articles discuss mitigating interviewer bias in the in-depth interview method — **"In-depth Interviewer Effects: Mitigating Interviewer Bias"** and **"Interviewer Bias & Reflexivity in Qualitative Research"** — while another article focuses on ethnography and **mitigating observer bias**, and a fourth article considers the **potential bias in mobile (smartphone) qualitative research**.

Others in the field of psychology have discussed various aspects of bias in qualitative research. For example, Linda Finlay (2002) discusses the value of reflexivity as a tool to, among other things, "open up unconscious motivations and implicit biases in the researcher's approach" (p. 225). Ponterotto (2005) looks at the varying role and understanding of bias across paradigm orientations in qualitative research among the postpositivists, constructivist–interpretivist researchers, and critical–ideological researchers. In psychiatry, Whitley & Crawford (2005) suggest ways to mitigate investigator bias and thereby increase the rigor in qualitative studies. Morrow (2005) asserts that "all research is subject to researcher bias" and highlights the subjectivity inherent in qualitative research and explores bracketing and reflexivity as a means of "making one's implicit assumptions and biases overt to self and others" (p. 254). And researcher bias is central to the **Credibility component of the Total Quality Framework** (Roller & Lavrakas, 2015).

Social scientists such as Williams & Heikes (1993) examine the impact of interviewer gender on social desirability bias in qualitative research; while Armour, Rivaux, and Bell (2009) discuss researcher bias within the context of analysis and interpretation of two phenomenological studies. In a recent paper, Howlett (2021) reflects on the transition to online technical research

solutions and the associated methodological considerations, such as the negative impact of selection bias due to weak recruitment and engagement strategies.

Among healthcare researchers, Arcury & Quandt (1999) discuss recruitment with a focus on sampling and the use of gatekeepers, with an emphasis on the potential for selection bias which they monitored by way of reviewing "the type of clients being referred to us, relative to the composition of the site clientele" (p. 131). Whittemore, Chase, & Mandle (2001) define quality in qualitative research by way of validity standards, including investigator bias — "…a phenomenological investigation will need to address investigator bias (explicitness) and an emic perspective (vividness) as well as explicate a very specific phenomenon in depth (thoroughness)" (p. 529). And Morse (2015), who is a pioneer in qualitative health research and has written extensively on issues of quality in qualitative research design, highlights the mitigation of researcher bias as central to the validity of qualitative design, offering "the correction of researcher bias" as one recommended strategy for "establishing rigor in qualitative inquiry" (p. 33).

Another shared and much discussed construct among qualitative researchers — validity — is the focus of Part 3 in this discussion.

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Shared Constructs in Research Design: Part 3 — Validity

Not unlike Part 1 (concerning sampling) and Part 2 (concerning bias) of the discussion that began earlier, the shared construct of validity in research design has also been an area of focus in several articles posted in *Research Design Review*. Most notable is "Quality Frameworks in Qualitative Research" posted in February 2021 in which validity is discussed within the context of the parameters or strategies various researchers use to define and think about the dimensions of rigor in qualitative research design. This article uses the Total Quality Framework (Roller & Lavrakas, 2015) and criteria of Lincoln and Guba (1985) to underscore the idea that quality approaches to design cuts across paradigm orientation, leading to robust and valid interpretations of the data.

Many other qualitative researchers, across disciplines, believe in the critical role that the shared construct of validity plays in research design. Joseph Maxwell, for example, discusses validity in association with his realism approach to casual explanation in qualitative research (Maxwell, 2004); and discusses in detail five unique dimensions of validity, including descriptive validity, interpretative validity, theoretical validity, evaluative validity, and generalizability (Maxwell, 1992). And of course, Miles & Huberman were promoting greater rigor by way of validity more than three decades ago (Miles & Huberman, 1984).

More recently, Koro-Ljungberg (2010) takes an in-depth look at validity in qualitative research and, with extensive literature as the backdrop, makes the case that "validity is in doing, as well as its (un)making, and it exhibits itself in the present paradox of knowing and unknowing, indecision, and border crossing" (p. 609). Matteson & Lincoln (2008) remind educational researchers that validity does not solely concern the analysis phase of research design but "the data collection method must also address validity" (p. 672). Creswell & Miller (2000) discuss different approaches to determine validity across three paradigm orientations — postpositivist, constructivist, and critical — and "lens" of the researcher, participants, and researchers external to the study.

Among qualitative health researchers, Morse (2020) emphasizes the potential weakness in validity when confusing the analysis of interpretative inquiry with that associated with "hard, *descriptive* data" (p. 4), and Morse et al. (2002) present five verification strategies and argue that validity (as well as reliability) is an "overarching" construct that "can be appropriately used in all scientific paradigms" (p. 19).

These researchers, and those discussed in Part 1 – Sampling and Part 2 – Bias, are admittedly a small share of those who have devoted a great deal of thought and writing concerning these shared constructs. The reader is encouraged to utilize these references to build on their understanding of these constructs in qualitative research and to grow their own library of knowledge.

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