The Use of Triangulation in Qualitative Research

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Triangulation refers to the use of multiple methods or data sources in qualitative research to develop a comprehensive understanding of phenomena (Patton, 1999). Triangulation also has been viewed as a qualitative research strategy to test validity through the convergence of information from different sources. Denzin (1978) and Patton (1999) identified four types of triangulation: (a) method triangulation, (b) investigator triangulation, (c) theory triangulation, and (d) data source triangulation. The current article will present the four types of triangulation followed by a discussion of the use of focus groups (FGs) and in-depth individual (IDI) interviews as an example of data source triangulation in qualitative inquiry.

Types of Triangulation

The first type of triangulation is method triangulation. Method triangulation involves the use of multiple methods of data collection about the same phenomenon (Polit & Beck, 2012). This type of triangulation, frequently used in qualitative studies, may include interviews, observation, and field notes.

Investigator triangulation involves the participation of two or more researchers in the same study to provide multiple observations and conclusions. This type of triangulation can bring both confirmation of findings and different perspectives, adding breadth to the phenomenon of interest (Denzin, 1978).

Theory triangulation uses different theories to analyze and interpret data. With this type of triangulation, different theories or hypotheses can assist the researcher in supporting or refuting findings.

Data source triangulation involves the collection of data from different types of people, including individuals, groups, families, and communities, to gain multiple perspectives and validation of data.

Data Source Triangulation

Most qualitative researchers studying human phenomena collect data through interviews with individuals or groups; their selection of the type of interview depends on the purpose of the study and the resources available. Fontana and Frey (2000) described the IDI interview as one of the most powerful tools for gaining an understanding of human beings and exploring topics in depth. IDI interviews, ranging from the structured and controlled to the unstructured and fluid, can elicit rich information about personal experiences and perspectives (Russell, Gregory, Ploeg, DiCenso, & Guyatt, 2005). IDI interviews allow for spontaneity, flexibility, and responsiveness to individuals; however, conducting the interviews, transcribing the discourse, and analyzing the text often require considerable time and effort.

In contrast, FGs elicit data from a group of participants who can hear each other's responses and provide additional comments that they might not have made individually. Researchers who conduct FGs recognize that the participant interaction, which stimulates the identification and sharing of various perspectives on the same topic, is central to their success (Morgan, 1996). Several authors have pointed out that researchers rarely evaluate or discuss this approach (Clayton, Butow, Arnold, & Tattersall, 2005; Duggleby, 2005; Kitzinger, 1994; Lehoux, Poland, & Daudelin, 2006; Sandelowski, 2000; Sandelowski & Bar-roso, 2003; Webb & Kevern, 2001; Zorn, Roper, Broadfoot, & Weaver, 2006). In terms of time, compared to IDI interviews, FGs may initially be less demanding to researchers; however, the time and effort required to analyze the complex data elicited from FGs might ultimately negate any time savings (Mansell, Bennett, Northway, Mead, & Moseley, 2004).

The nature of data yielded by these two methods of collection differs. Brown (1999) explained that FGs differ from IDI interviews in that the "dynamic and interactive exchange among participants" in FGs lead them to produce "multiple stories and diverse experiences" (p. 115). Fern (1982) found that those who participated in IDI interviews generated more ideas than did those participating in either moderated or unmoderated FGs. In a communications study, DeJong and Schellens (1998) compared the use of IDIs and FGs to evaluate the text in a brochure about alcohol consumption and found that IDI participants focused on the finer details of the text, whereas the interaction among FG participants identified potential problems with the brochure. Kaplowitz (2000, 2001) found that IDI interview participants were more likely to discuss sensitive topics and stimulate discussion about different topics when compared to FG participants. Kaplowitz and Hoehn (2001) found that using FGs and IDI interviews provided different perspectives on resources, values, and issues and concluded that one method was not better than the other, but rather that the two approaches were complementary. In