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Clarifying Mixed Methodology in Occupational Therapy Research

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Clarifying Mixed Methodology in Occupational Therapy Research

Keywords

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Credentials Display

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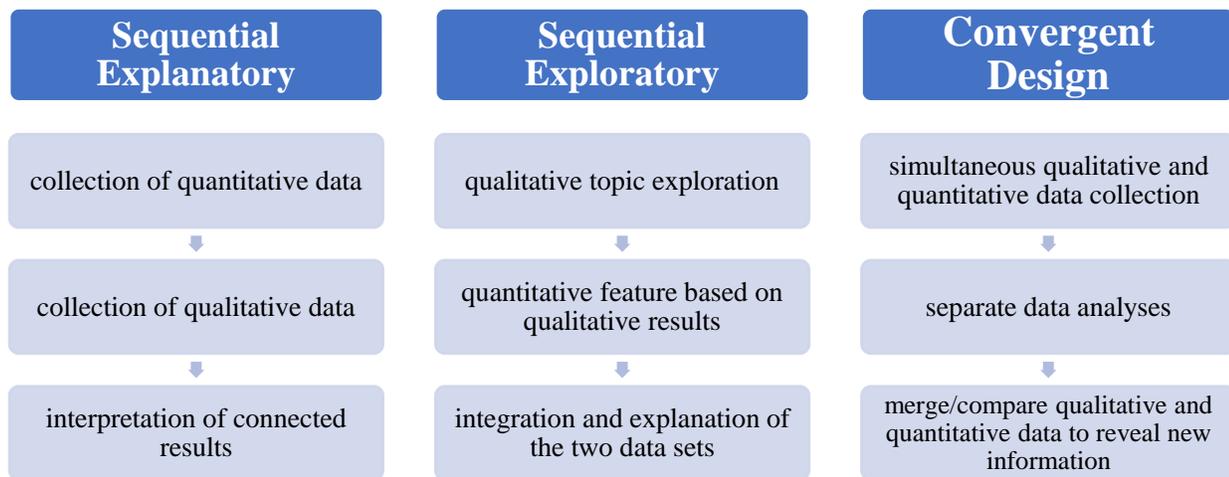
As a member of the *Open Journal of Occupational Therapy* (OJOT) editorial review board, I recently expressed concerns to Dr. Dirette regarding the rigor of mixed methodology in occupational therapy research, which led to this collaboration. As a new researcher working on my dissertation in 2008, I sought to study mothering occupations when parenting children with feeding concerns, and I felt that a mixed methods design would work best to answer the research questions (Winston et al., 2010). At that time, I relied on the work of Creswell and Plano Clark (2007) and Tashakkori and Teddlie (2010). My study design would consist of gathering a quantitative data set and a qualitative data set using a triangulation design, convergence model where qualitative and quantitative data were collected simultaneously and each analyzed separately. In this design there would be a third level of data analysis where the quantitative and qualitative data were mixed by comparing and/or contrasting the data, ultimately integrating the data. In the last 10 plus years, the literature has continued to expand on the methodological issues for conducting mixed methods designs thereby strengthening the potential for increased rigor and trustworthiness in this methodology.

Definitions

Many definitions of mixed methods research exist, but most include the fact that mixed methods research typically collects both qualitative and quantitative data to answer a research question or to explore a topic in more depth (Creswell & Plano Clark, 2018; Greene, 2007; Johnson et al., 2007; Tashakkori & Creswell, 2007; Tashakkori & Teddlie, 2010). Mixed methodology includes the collection, analysis, and integration of the two forms of data and results, framed by theory and philosophy (Creswell & Plano-Clark, 2018). Tashakkori and Creswell (2007) refer to the need for researchers to distinguish between “mixed methods as a collection and analysis of two types of data (qualitative and quantitative) and mixed methods as the integration of two approaches to research (quantitative and qualitative)” (p. 3). The authors state that those studies that do not seek to integrate data sets are focused more on the methods of data collection whereas those that do integrate the data sets are focused on the methodology.

As researchers we should be clear in our description of the research methodology and design used in a study such that readers have a clear understanding of the philosophical stance of the researchers, the questions being studied, the data analysis, and the results and discussion. Fetters (2021) suggests the integration challenge, $1 + 1 = 3$, to create a mixed methods study that includes the integration of data sets. Current literature suggests the following primary mixed methods research designs (see Figure 1) (Creswell & Plano Clark, 2018; Fetters, 2021):

- **Sequential explanatory:** This design occurs in two phases beginning with the collection of the quantitative data, followed in a second phase with the collection of the qualitative data seeking to explain or expand on the quantitative result. The qualitative data follows from the quantitative data. The final step is to interpret the connected results from the two data sets.
- **Sequential exploratory:** This design prioritizes the qualitative phase first to explore a topic. In the second phase, the researcher designs “a quantitative feature based on the qualitative results” (Creswell & Plano Clark, 2018, p. 67). The final step is the integration and explanation of the two data sets.
- **Convergent Design:** This design brings the two data sets together so they can be compared or combined. The researcher collects qualitative and quantitative data simultaneously and analyzes each data set separately. The final step is to consider how to merge or compare the qualitative and quantitative data to reveal new information.

Figure 1*Illustration of Mixed Methods Research Designs*

Application to Occupational Therapy

Mixed methods studies are becoming more prevalent in the occupational therapy literature. However, the quantitative and qualitative methods are presented but not always “mixed or integrated” in a study. The strengths of true mixed methodology include that it may be more acceptable to quantitative-based audiences, provide a strong approach for team-based researchers, and provide an opportunity to develop greater understanding and exploration of complex issues (Creswell & Plano Clark, 2018). Fetters (2021) has called for occupational therapists to understand the essential characteristics of methodology and, in particular, the characteristics that make up a mixed methods study. Mixed methods research has the potential to bring rich data to light as researchers can report both participants’ perspectives with qualitative data and the researchers’ perspectives through chosen quantitative measures, and then able to “give voice to participants as well as report statistical trends” (Creswell & Plano Clark, 2018, p. 72). The exploration of the complexity of occupational engagement and participation is a strong fit for the use of mixed methodological research.

Mixed Methods Studies in OJOT

In this issue, we are publishing two mixed methods studies, bringing the total we have published to 50 articles that use a mixed methods design. Beginning about 6 years ago, there was an increase in the number of submissions that used mixed methods, indicating a growing interest in this research design. Most of the studies we have published use convergent mixed methods designs, but there are also good examples of sequential explanatory designs.

The first mixed methods design study ever published in OJOT was a sequential explanatory mixed methods design written by Merryman et al. (2012). In this study, the researchers explore the effectiveness of an occupation-based summer camp for socioeconomically disadvantaged at-risk middle school youth. The researchers first used a quasi-experimental quantitative design to gather data 1 month before camp, 1 month after camp, and 6 months post-camp using the Camper Growth Index, a self-report survey to assess factors of resilience. The researchers collected data for both the treatment and control groups. They then used the quantitative data to inform the in-depth qualitative interviews that were done 6 months post-camp. The qualitative interview questions explored the effects of the summer camp across the four domains of positive identity, social skills, physical and thinking skills, and positive values. The data were

integrated to provide an in-depth, well-informed view of the effectiveness of the program and the impact it had on the lives of these youth.

We also are publishing in this issue two mixed methods studies that use a convergent design. Tsai et al. (2022) use a convergent design to explore the spirituality of elders as they transition to long-term care. They use quantitative measures that include the Religious and Existential Well Being sections of the Spiritual Well Being Scale along with qualitative interviews that are framed by the Life Narrative Interview Guide and the Cultural Heritage Interview. The data are integrated to present an in-depth view of the perspectives of the elders. Salazar (2022) also uses a mixed methods design to explore the perspectives of fathers whose children are in the neonatal intensive care unit (NICU) and transitioning to home. This convergent mixed methods design uses a survey that gathers quantitative and qualitative responses with semi-structured follow-up interviews that are informed by the surveys.

Conclusion

We encourage researchers to explore the nuances of designing and conducting mixed methods studies both in terms of mixing methods and using mixed methodology. We urge occupational therapy researchers to continue to pursue answers to research questions that are both quantitative and qualitative and to consider using mixed methods designs to integrate answers that are gleaned from both designs to develop the depth of knowledge in each area of interest to the profession of occupational therapy. It is hoped that this letter from the editor will encourage occupational therapy researchers to continue to develop their knowledge and skills in the area of mixed methods research.

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