

Qualitative Data Analysis Framework for Early Career Researchers: ARISE

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ABSTRACT

The process of data analysis in qualitative research can be a daunting process for early-career researchers. The ARISE Framework offers an operational guide with a set of questions reflecting the research question. The purpose of this paper is to implement a creative and systematic way of doing the research endeavour. As such, the ARISE Framework is an action-oriented approach that involves knowledge development, synthesis, and conceptualization within an interpretive-constructivist paradigm. The proposed framework consists of theoretical and practical procedures to conduct a methodologically sound analysis. Each stage of the framework opens a reflection on the art of qualitative data analysis through a five-stage approach. Optimization of this process includes revising the themes as they can evolve over time. Each prescriptive piece on carrying out the analysis will provide qualitative researchers with an in-depth understanding of data-generated insights.

KEYWORDS: Qualitative data analysis, ARISE Framework

The philosophical assumptions about the study of knowledge (epistemology) and the nature of reality and being (ontology) are within different knowledge paradigms. Based on epistemology and ontology, the paradigm-specific criteria attempt to understand the social world (Guba & Lincoln, 1994). The positivist paradigm refers to objective and neutral knowledge in which researchers are impartial in the research process (Finlay & Ballinger, 2006). Advocates of positivistic inquiry point out that “the primary goal is an explanation that (ultimately) leads to prediction and control of phenomena” (Ponterotto, 2005, p. 3). The interpretivist-constructivist paradigm supports the idea that lived experiences and researchers’ values cannot be separated from the research process. Proponents of interpretivist-constructivist highlight that “the goal of understanding ‘lived experiences’ is from the point of view of those who live it day to day” (Ponterotto, 2005, p. 4).

Objectivist epistemology within the positivism paradigm is understood that knowledge exists outside the beliefs and values of the researcher (Ravenek & Laliberte Rudman, 2013). Positivists support that there is no room for values in the scientific endeavour: The researcher and the research participant are assumed to be independent of one another (dualism). By following rigorous, standard procedures, the participant and topic can be studied by the researcher without bias (objectivism) (Ponterotto, 2005). As such, the influence of the researcher within positivism is removed in the scientific process.

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In marked contrast, subjectivist epistemology within the interpretivist-constructivist paradigm refers to the existence of knowledge through interactions between participants and researchers in context-specific settings (Ravenek & Laliberte Rudman, 2013). This is linked to the perspective on how people understand their world according to their subjective knowledge. The constructivist position adopts “a hermeneutical approach, which maintains that meaning is hidden and must be brought to the surface through deep reflection” (Ponterotto, 2005, p. 4).

Qualitative research is theory-hypothesis generation, discovery, exploration, instrument data collection, and thematic analysis (Johnson & Onwuegbuzie, 2004). Qualitative data analysis is one of the most challenging aspects of the research process. Codes and themes require intellectual work to develop meaning and understanding of phenomena. “Research questions can be examined from different perspectives, and it is often useful to combine different methods” (Johnson et al., 2007, p. 5).

This paper introduces and details the ARISE Framework for qualitative data analysis. This framework can be applied to a specific qualitative design: the interpretive-constructivist, which accounts for the researcher as a co-participant alongside the participants in meaning-making (Pino-Gavidia & Adu, 2022). Deeper meanings are uncovered through reflexivity on participants’ subjective meanings about lived experiences, and how participants make sense of the world (Carpenter & Suto, 2008). In this view, the ARISE Framework was developed with the goal of guiding the reading of the data and reflecting the research questions. This framework is different from other frameworks as it was created in my doctoral work as an early career researcher with the need of a conceptual design for thematic analysis.

Although there is a diverse range of approaches in the qualitative literature, I sought to create an innovative visual approach that offers an analytic procedure in meaningful knowledge production. A good example to model this work is Braun and Clarke (2022), which highlights that most researchers offer a method instead of a methodology. Indeed, my proposed framework fits as a methodology with a unique design that allows the researchers to engage in a step-by-step approach and revision of the themes as they can evolve over time. Braun and Clarke (2022) support researchers to design a reflexive approach that is a *theoretically informed framework for research*.

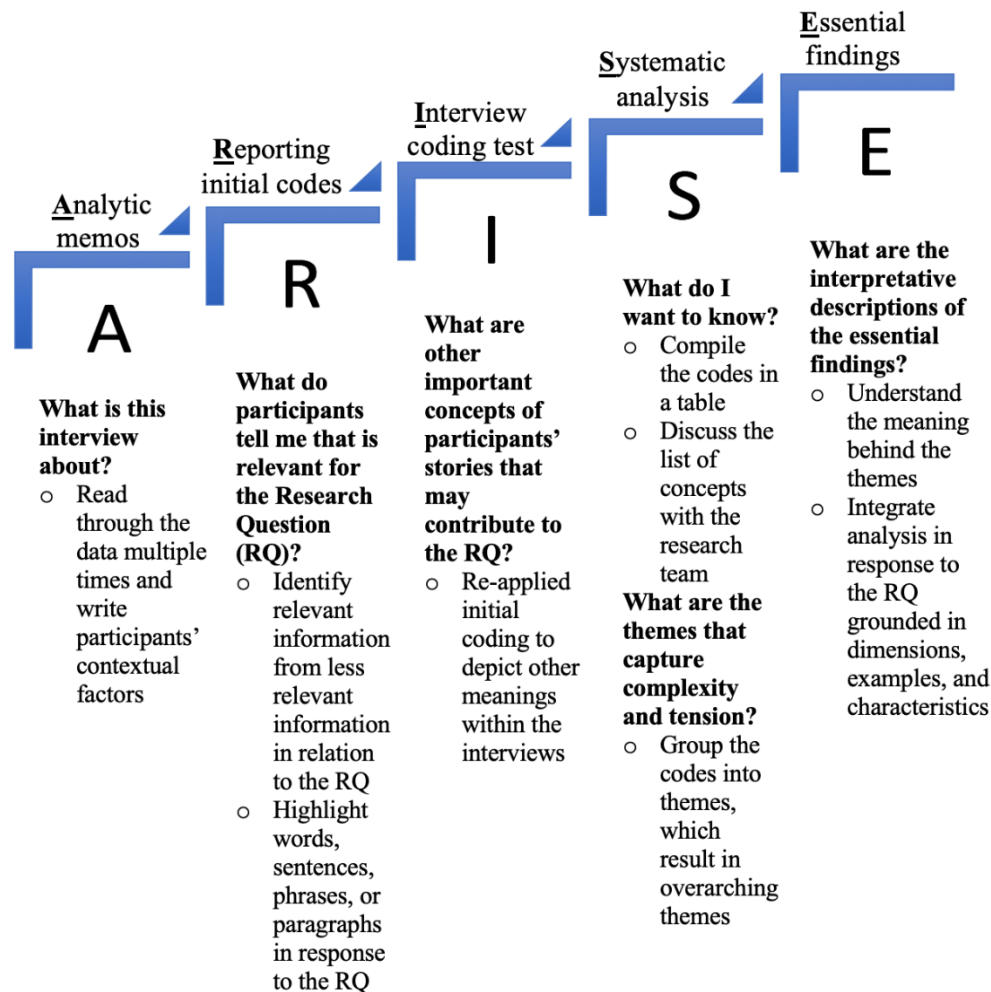
ARISE Framework

The ARISE Framework presents a set of questions that guide the analysis of the data on how to interpret and summarize qualitative data within the interpretive-constructivist design. The implications of this framework capture theoretical and practical procedures to conduct a methodologically sound analysis in a five-stage process. The ARISE Framework provides a form of integration and a richer understanding of qualitative data analysis for better dissemination.

The ARISE Framework is an iterative process that involves knowledge development, synthesis, and conceptualization with the purpose of applying an analytic guide within an interpretive-constructivist paradigm. Optimization of this process requires engagement from the downstream to the upstream. The proposed framework consists of an action approach through five stages: **A**: Analytic memos; **R**: Reporting initial codes; **I**: Interview coding testing; **S**: Systematic analysis; and **E**: Essential findings. Each sequential piece contributes to an in-depth understanding of data-generated insights and assists qualitative researchers in discovering the study's uniqueness (Figure 1).

Figure 1

ARISE FRAMEWORK for Qualitative Data Analysis



Note. This is a five-stage approach called 'ARISE Framework.'

How to Use the ARISE Framework

Qualitative researchers often struggle with word overload and over-coding during data analysis. There is a need to better understand qualitative data analysis grounded in a knowledge paradigm that underlies principles of research design. The ARISE Framework is an action approach for knowledge quest. Regarding such positionality, the quest for knowledge within this framework is situated in the interpretive-constructivist paradigm (Bourke, 2014). In fact, the implementation of a framework facilitates a methodologically sound analysis (Hesse-Biber & Johnson, 2013). Barriers and Facilitators of COVID-19 practices among Canadian Single Mothers was published, and the ARISE Framework was applied (Pino-Gavidia et al., 2024). In that study, thematic analysis was applied through the ARISE framework. The authors' initial analysis carried out twelve interviews following each letter of the framework which involved inductive theory-driven data. Throughout the five-stage approach of the framework, the evolution of theme labels arose, and the concepts of transferability, credibility, confirmability, and dependability were incorporated throughout the framework (Lincoln & Guba, 1985). Another example of this framework can be

applied as a codebook where qualitative researchers have the evolution of theme levels involved from each letter. There is more sorting to do, indeed. Then, it would help to write down more details under each letter, as this framework is a working record of the researcher's discernment. For instance, as you are coding, you are making notes on what goes into the general categories (Table 1).

Table 1
Codebook Example

Code	Sub-code	Inclusion criteria	Exclusion criteria	Theme
		Description of the code – what, when	why not	

Note. This is a table referring to information about the ARISE Framework. Notes should be recorded in this codebook table.

The following questions can be considered to help gain a better sense of applying the steps: What are the elements within this letter? The elements can be placed under codes and subcodes. How are you discriminating between one letter of the framework and the other? What is the variability, and what is the boundary between letters? You will need to apply inclusion and exclusion criteria while you follow the framework. This encompasses a theoretically informed methodology of a five-stage approach called 'ARISE Framework.'

1. **The 'A' action-approach— 'Analytic memos'** on what is this interview about? This question prompts researchers to write an interview summary by reading the data multiple times and writing participants' contextual factors. The importance of memo-writing is linked with a good understanding of the interview as a whole: "We advise writing a short memo immediately after conducting an interview to briefly outline the most striking characteristics or messages that relate to the research question" (Dierckx de Casterlé et al., 2021, p. 8). Memos are snapshots that will allow researchers to exercise creativity and imagination in a way that describes the uniqueness of participants while considering the contextual richness of the story.
2. **The 'R' action-approach— 'Reporting initial codes'** on what do participants tell me that is relevant for the research question? This encourages researchers to examine the most relevant information from the least relevant in response to the inquiry. During this stage, the researcher should highlight words, sentences, phrases, or paragraphs in relation to the research question. Coding schemes refers "to the process of identifying and assigning labels to words, phrases, sentences, or paragraphs that convey important meanings in response to the research question" (Dierckx de Casterlé et al., 2021, p. 5). Deductive content analysis is performed systematically from the transcript by using the research questions as the primary categories (McKenzie et al., 2017). Within each category, data is further analyzed inductively.
3. **The 'I' action-approach— 'Interview coding testing'** on what are other concepts of the participant's story that may contribute to the research question? Throughout this stage, the researcher is called to exercise reflexivity, which is "to be attentive to the context of knowledge development and, more specifically, to their own impacts on the collection, analysis, and interpretation of data" (Dierckx de Casterlé et al., 2021, p. 4).

Re-applied initial coding intends to depict other meanings within the interview. Reflexivity through coding testing is the self-awareness towards the discovery of theories, concepts, and hypothesis from deductive to inductive coding approach – moving outward and inward to study the phenomenon with awareness of the social context (Pino-Gavidia & Adu, 2022).

4. **The ‘S’ action-approach— ‘*Systematic analysis*’** on what do I want to know? and what are the themes that capture complexity and tension? The former question accounts for compiling the codes in a table to discuss the list of concepts with the research team. The latter question refers to grouping the codes into themes that will result in overarching themes. To write-up themes with specific codes is to revise them, as they can evolve over time. This is the analytical work of ‘people ware’ rather than ‘software’. Within the interpretative paradigm, themes and codes refer to a researcher’s posture of openness and receptivity toward potential meanings embedded in text (Given 2008).
5. **The ‘E’ action-approach— ‘*Essential findings*’** on what are the interpretative descriptions of essential findings? This final stage is to reach understanding on the meaning behind the themes by integrating analysis in response to the research question. The meaning behind the themes is embedded in the complexity of participants’ experiences. For doing so, the analysis is integrated in grounded in meaning, dimensions, examples, and characteristics. Transferability comes within this stage in which the study’s applicability makes the readers feel like the research overlaps with their own experience, or they have experienced a similar situation, but in a different way (Tracy 2010).

Implications

In using the ARISE Framework, researchers are encouraged to use the five-stage approach that can differ considerably between qualitative studies in response to different research questions. However, the analytic procedure is a strong foundation of this framework that underlies conceptualizations and constructs towards meaningful knowledge production. The diversity of each letter is typically rarely acknowledged in a big picture approach, and data analysis can result in overwhelming, resulting in research that lacks design coherence. Moreover, the ARISE Framework not only offers researchers a theoretically informed framework but also a tool that can be applied as a codebook. This is a considerable design flexibility for researchers to engage in design thinking, as this framework can evolve according to their needs. In this paper, I support early career researchers in the quest for qualitative analysis, guiding them through the conceptual underpinnings of a five-stage approach.

Conclusion

There is no strict procedure for following the analysis process in qualitative research. The ARISE Framework has the potential to offer qualitative researchers an operational guide in the iterative process of data analysis within the interpretative-constructivist design. This framework consists of an action-approach: (A) Alytic memos; (R) Reporting initial codes; (I) Interview coding testing; (S) Systematic analysis; and (E) Essential findings. Each stage leads the researcher to obtain codes, themes, and interpretative descriptions with the goal of understanding the meanings behind the themes. Further research requires implementation of the ARISE Framework in research studies to assess its effectiveness.

Funding Details:

No funding was received to assist with the preparation of this manuscript

Disclosure Statement

The author has no financial or proprietary interests in any material discussed in this article

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Notes on Contributor

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