

## Qualitative research methodology: approaches for nutrition research

Qualitative research methodology, nested in a post-positivistic paradigm, assumes that scientific research methods are not the only way of knowing the truth in a real-world setting.<sup>1</sup> The truth, held and constructed by people, represents their subjective perceptual understanding of phenomena by exploring the meanings individuals or groups assign to it. This understanding remains interpretive, with the intent to understand and not quantify reality but seek clarification about the “what”, “why” and “how” of a specific phenomenon rather than “how many”;<sup>2</sup> the latter resonates with quantitative research mindsets in the nutrition field. Rich individual experiences, obtained from verbal accounts people share, remain untapped, leaving the reason *why* an individual reacted in a certain way unaccounted for.

Five qualitative approaches, also called strategies, traditions or designs, are specific to qualitative methodology:

1. **Narrative research** is characterised by the collection of chronological or unstructured narratives, stories or descriptions of events shared by individuals or groups that tell the story of their lived and untold experiences of a phenomenon.<sup>3</sup> A paucity of narrative research exists in the field of nutrition. By exploring the storied environments of people’s everyday nutrition experiences, new insights can be obtained into *how* knowledge is constructed.<sup>4</sup> Interviews, observations, documents, illustrations and other qualitative data instruments assist in gathering the stories.<sup>5</sup> Yarning, a narrative story recognised as an Indigenous methodology, facilitates an exploration of Indigenous ways of knowing, being and doing in reality.<sup>6</sup> These stories include contextual, historical, political, and cultural identity as an expression of Indigenous worldviews of nutrition, health and wellbeing.<sup>7</sup> Indigenous views of nutrition are embedded in a rich South African cultural history that still needs to be explored.

Narrative data analysis deals with *what* is said (thematic analysis), the *way* the story is told (structural analysis) or *who* the story is directed toward (dialogic/interactional/performance analysis)<sup>8</sup> and should not be confused with narrative reviews commonly found in the nutrition field. Researchers should have extensive information about the participant and a thorough understanding of the context in which the life story was told<sup>5</sup> to avoid any misinterpretation of findings in narrative analyses. The field of nutrition can benefit from narrative research as people’s stories may provide insight into *how* and *why* people behave in a certain way.

2. **Phenomenology** focuses on individuals’ lived experiences as they perceive a phenomenon (single concept, idea or situation) within the real world.<sup>9</sup> It establishes *how* individuals experienced the phenomenon and *what* was experienced to understand the common meaning among all participants and then develops a description of essential parts that represent the experience of all individuals.<sup>5</sup> Participants must have relevant experience of the phenomenon to assist the researcher in achieving a common understanding.

The use of phenomenology in the nutrition field is extensive, but the approach requires research questions and objectives that explore lived experiences of a specific phenomenon. True to phenomenology, interpreted descriptions of the findings should contain phenomenologically illuminating, meaningful and thoughtful insights and understandings of this phenomenon.<sup>10</sup> Phenomenology is not recommended when researchers want to generalise their findings; phenomenology assists in accurately unpacking experiences, ignoring how the findings apply to other situations or people.<sup>11</sup> Researchers are required to suspend their attitudes, beliefs and suppositions to enable them to focus on participants’ experiences and guard against influencing the shared experience<sup>9</sup> that speaks to the embeddedness of the researcher.

Interviews are commonly used in phenomenological studies,<sup>11</sup> although poems, diaries, written accounts, observations and documents are also used.<sup>6</sup> Data analysis from these methods identifies significant sentences or statements as “meaning units” tied together into general descriptions of the experience.<sup>12</sup> Transitioning from this approach is interpretive phenomenology, where emphasis is placed on the interpretation of the experience and not its description.<sup>13</sup> Understanding people’s common nutrition-related experiences may illuminate *why* some phenomena are less successful in changing behaviour than others.

3. **Grounded theory**, though not a theory by itself,<sup>14</sup> is used to develop a conceptual theory from the analysis of systematically gathered views from several participants, grounded in the data,<sup>15</sup> going beyond the description of the experience. It considers patterns of behaviour, allowing a theory to emerge to explain a practice, a process, an action, an interaction, or provide a framework for research.<sup>5,16</sup> The approach is useful when little is known about a phenomenon,<sup>16</sup> allowing researchers to identify steps or phases of the process or action over time<sup>5</sup> that can contribute to new concepts in the field of nutrition.

Grounded theory research commences with purposive sampling. Data collection, usually facilitated through in-depth interviews, concurrently occurs with data analysis and coding,<sup>15,16</sup> and is often ignored by researchers when applying the approach and writing up the methodology. This process allows researchers to compare originally generated codes and themes to new data analysis findings, assisting with the refinement of the phenomena they are interested in understanding. It is recommended that constant comparative analysis is used together with theoretical sampling, an integral part of grounded theory,<sup>14</sup> to ensure that theoretical saturation is reached.<sup>16</sup> Memoing, where ideas are written down during data collection and analysis to assist in theory development, is also critical.<sup>5</sup> Researchers must set aside any theoretical ideas or notions to allow the theory to emerge, and will know if the theory is sufficiently detailed and categories are saturated by further applying discriminant sampling so differences between categories or groups can surface.<sup>5</sup> Grounded theory’s application remains somewhat curbed in the South African nutrition

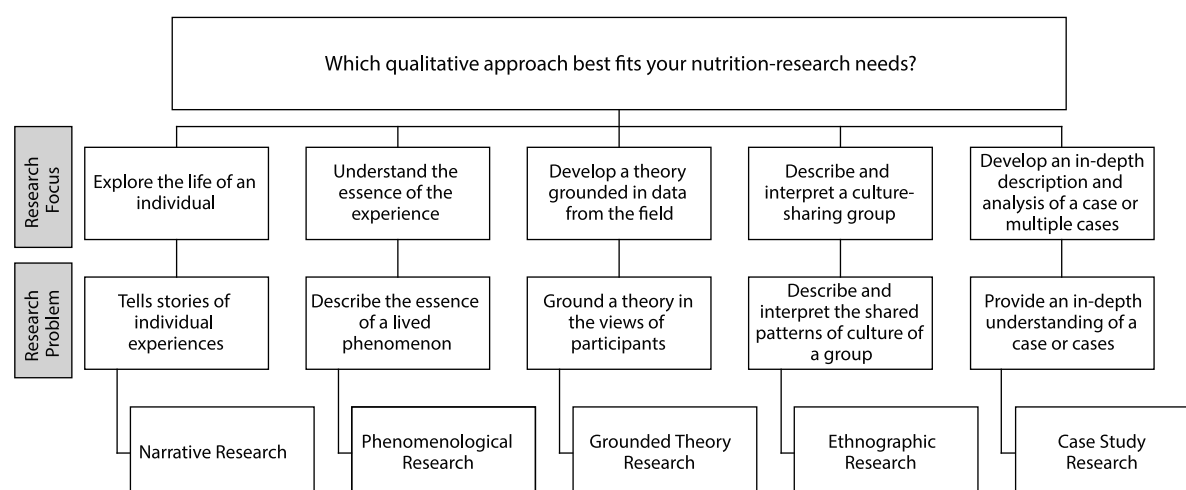


Figure 1. Amended flowchart for assessing the fit of five qualitative approaches.<sup>5</sup>

field and could be applied to identify elements that will improve nutrition intervention and education in South Africa.

4. The **ethnographic approach** focuses on an entire group sharing a common culture (a culture-sharing group) that evolved through their interactions, behaviours and perceptions over time,<sup>17</sup> resulting in shared patterns of values, behaviours, beliefs and language.<sup>5</sup> It is concerned with “learning about people”<sup>17</sup> and describing and discovering the cultural complexities of the group.<sup>18</sup> Researchers must immerse themselves in the real-world context through intensive observational and informal or conversational fieldwork<sup>5</sup> to gather insights into social practices normally hidden from the public.<sup>17</sup> Subsequently, the approach relies on the inductive data analysis of participants’ *emic* perspectives, interpreted from the researcher’s *etic* perspective, presenting an overall cultural interpretation.<sup>5</sup> The final understanding is about how the group functions and the culture-sharing group works,<sup>5</sup> enabling researchers to link phenomena that have little connection with each other.<sup>17</sup> However, the prolonged engagement<sup>5</sup> required to fully understand the intricacies of the context in which the group functions is challenging. Focused ethnography, one of many forms of ethnography, can be used in applied nutrition research to explore the nature of the practice and generate evidence to solve a specific problem.<sup>19</sup> An ethnographic research approach may benefit researchers’ understanding of how shared beliefs and practices influence a nutrition-related problem in a specific group.
5. The **case study** approach is an in-depth, multi-faceted understanding of a real-life problem or issue in its natural setting<sup>20</sup> within one or more bounded systems (a case or cases), where the case or cases are used to illustrate, describe, explain or explore a problem.<sup>5,20</sup> A pre-defined boundary demarcates the case, specifying the nature and timeframe of the study and the characteristics of the group, individual, organisation or geographical area.<sup>20</sup> A single or instrumental case study is applied to one single aspect, such as a single individual or a single group.<sup>20,21</sup> Multiple or collective case studies are often used when the phenomenon is rare or little understood.<sup>21</sup> It entails multiple cases (similar or diverse) being used to compare patterns, relationships or similarities.<sup>20</sup> In an intrinsic case study, the focus is on the case itself and gaining a better understanding of the case.<sup>21</sup>

The challenge is to find a case and establish a rationale for selecting and gathering information about the case.<sup>5</sup> A case is not only a group of people who are naturally grouped but have specific characteristics that would answer the research question. It is important to know what should be studied within the selected case or cases and how to study them,<sup>22</sup> resulting in the rigour of case studies being questioned.<sup>5</sup> Researchers should take cognisance of this and apply well-established rigour strategies associated with qualitative research. Prolonged engagement, persistent observation, triangulation, peer debriefing, member checking, audit trails, reflexivity and thick descriptions have been found to ensure case study rigour.<sup>23</sup> A well-planned case study approach involves multiple data-capturing sources that include observations, interviews, videos, documents, and many others, with the outcome describing the case<sup>5</sup> through the identification of themes.<sup>21</sup> A case study approach can be very useful to nutrition researchers as it can facilitate a deep exploration of dietary habits, unique nutritional situations, the health status of specific communities or nutrition education, among other researchable fields.

In successfully using any of the approaches in qualitative nutrition-related research, the fit of these approaches should be determined by considering the research focus and research problem (see Figure 1).<sup>5</sup> Merely using the definition of an approach is not a true reflection of the principles of the approach. The study’s design should fit the assumptions, methods and philosophical underpinnings of the approach. Further, researchers should fully understand the assumptions of a qualitative methodology to successfully apply the approach in delivering on the research question and purpose of the study.

Nutrition research in South Africa may benefit from any of these five approaches as questions of *what*, *why* and *how* remain unanswered in many nutrition research fields. Potterie et al.<sup>24</sup> also very eloquently justify the value of a qualitative methodology through the use of qualitative descriptive research in the field of nutrition. The authors explain the usefulness of qualitative research to explore, explain and outline the procedural simplicity of a phenomenon not always clearly extracted from a quantitative methodology. They remind researchers of the importance of understanding the context in which qualitative research is conducted and attending to the methodological fit

between the purpose of the study and the qualitative descriptive research method. The importance of methodological fit is argued in the editorial, with further consideration given to the fit of the qualitative research approach. Intended qualitative research can benefit greatly from the recommendations provided by Potterie et al.<sup>24</sup> and the correct use of the five qualitative research approaches discussed in this editorial.


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