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# Approaches to qualitative research: A narrative literature review

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## Abstract

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**Introduction:** Qualitative research, distinct from its quantitative counterpart, delves into the complexities of human behavior, lifestyles, and social interactions through the interpretation and contextualization of participants' spoken words and experiences.

**Methods:** This comprehensive review study aims to elucidate the key qualitative research methods, including grounded theory, case studies, conversation analysis, ethnography, and phenomenology, each with unique origins, philosophical foundations, and practical applications.

**Results:** By systematically reviewing the literature, this article evaluated the strengths and limitations of these methods, highlighting their pivotal role in addressing intricate real-world problems across various disciplines such as social sciences, healthcare, education, and cultural studies. Through detailed analysis, our study underscored the significance of qualitative research in providing profound insights into human experiences, enhancing our understanding of complex social phenomena, and informing more empathetic and effective interventions.

**Discussion:** Our findings advocate for integrating qualitative approaches to enrich the depth and breadth of research, ultimately contributing to more comprehensive and impactful solutions in diverse fields.

**Take-home message:** This article highlights how qualitative research methods such as grounded theory, case studies, and ethnography offer essential insights into human behavior and social phenomena. These methods enable deep exploration of complex issues, enhancing research validity and impact across disciplines.

**Keywords:** Case studies; conversation analysis; ethnography; grounded theory; phenomenology.

## INTRODUCTION

Unlike quantitative research, qualitative research is a broad approach that explores lifestyle, groups, and behavioral patterns by interpreting and contextualizing people's spoken utterances. The approach in qualitative research is primarily to get to the core of what steered people's decisions and how decisions led to critical structures in people's lives. That being the case, qualitative approaches attempt to incorporate and analyze spoken words by relying on participants' utterances or the researcher's statements that characterize the participants' actions, behaviors, and expressions. Denzin & Lincoln [1] state that "qualitative" refers to attributes, procedures, and connotations. This means these attributes, methods, processes, and connotations are neither tested nor measured based on quantities. In line with that, qualitative research is seen as a style of inquiry that explores and provides a deeper, insightful understanding of real-world problems [2]. The researcher's role in such research is to access participants' thoughts and feelings. This makes the process a difficult task as the researcher needs to ask people to talk about topics and give details on their personal experiences that might be very personal to them.

In this regard, the researcher must safeguard the participants' responses with absolute confidentiality. Sutton & Austin [3] believe that the researcher can do this by clearly stating to participants the essence of the research and the ethical responsibility he or she has in protecting participants' data, as well as making sure the research has been ethically considered and approved by the relevant research ethical review board or committee.

No matter the philosophical standpoint of the researcher, qualitative research involves generating large amounts of data [3]. This is because qualitative research is viewed as a method that focuses on obtaining data via open-ended and chatty communication. Methods and approaches in qualitative research are concerned not only with "what" people think but also with "why" and "how." One of the main strengths of qualitative research is its ability to explain patterns or processes in human behaviors or ways of life that are difficult to quantify with numerical values [4]. This, therefore, makes knowing the "what", "why" and "how" of what participants are thinking paramount in explaining human experiences, attitudes, and behaviors at certain points in time more useful and accurate than assigning quantitative values. Knowing that quantifying qualitative data is possible is also of great interest. However, researchers in qualitative research are interested in themes and patterns that are difficult to quantify [5].

Various methods and approaches are used to conduct qualitative research to reveal the perceptions and behaviors of a target population. However, every qualitative approach has steps and inquiry strategies for analyzing study results. These methods and approaches include the grounded theory approach, case study approaches, conversation analysis, ethnography, and phenomenology inquiry.

This study aims to present a well-summarized understanding of qualitative research approaches by addressing concerns about grounded theory approaches, case study approaches, conversation analysis, ethnography, and phenomenology inquiry. Specifically, the study seeks to:

1. Explore and delineate the key qualitative research methods, their origins, and philosophical foundations.
2. Evaluate each method's practical applications, strengths, and limitations.
3. Highlight the importance of qualitative research in addressing complex real-world problems across various disciplines.

## METHODS

### *Research design*

In this literature review of qualitative research methods, we conducted a narrative analysis and covered a broad range of topics by using studies of various complexity and design [6]. This involved several steps: defining research questions,

identifying relevant literature, selecting studies, and synthesizing findings. We aimed to explore and summarize various qualitative research methods and provide a detailed analysis of their origins, applications, strengths, and limitations.

### ***Literature search***

A comprehensive literature search was conducted using several electronic databases, including PubMed, PsycINFO, Scopus, Web of Science, and Google Scholar. The search was performed between January 1, 2024, and February 28, 2024. The search was guided by the following keywords: "qualitative research methods," "grounded theory," "case study," "conversation analysis," "ethnography," "phenomenology," "narrative inquiry," "action research," "discourse analysis," "autoethnography," and "participatory action research." The search was not limited by publication date, but we focused on peer-reviewed articles, books, and book chapters to ensure the credibility and academic rigor of the sources.

### ***Inclusion criteria***

Studies were selected based on the following criteria:

1. They discussed specific qualitative research methods in detail.
2. They comprehensively understood the methods and their practical applications.
3. They were published in peer-reviewed journals or as chapters in academic books.
4. They offered insights into the strengths and limitations of each method.

### ***Screening and selection process***

The initial search yielded a large number of studies. Two reviewers screened titles and abstracts independently to assess their relevance to the research questions. Studies that appeared relevant were then reviewed in full text. Any discrepancies between the reviewers regarding the inclusion of specific studies were resolved through discussion and consensus.

### ***Data extraction and synthesis***

From the selected studies, data were extracted on the following aspects:

- The origins and philosophical foundations of each qualitative research method.
- The procedures and main stages involved in each method.
- Typical applications and examples of studies using each method.
- The strengths and limitations associated with each method.

Data extraction was performed systematically using a standardized form to ensure consistency. The extracted data were then synthesized to provide a detailed overview and comparative analysis of the methods.

### ***Ensuring validity and reliability***

To enhance the validity and reliability of our review, we employed several strategies:

1. Triangulation: We used multiple sources of data (peer-reviewed articles, books, and book chapters) to corroborate findings.
2. Peer Review: The data extraction and synthesis process involved multiple researchers to minimize bias and ensure the accuracy of the findings.
3. Detailed Documentation: All research process steps were meticulously documented to ensure transparency and reproducibility.

## **RESULTS AND DISCUSSION**

### ***What is qualitative research? Definitions***

Unlike its quantitative counterpart, qualitative research delves into lifestyles, groups, and behavioral patterns by interpreting and contextualizing participants' spoken words. This approach aims to understand the core of individuals' decisions and the structures of their lives. As per Denzin & Lincoln [1], "qualitative" encompasses attributes, procedures, and connotations that are not measured quantitatively. Qualitative research provides deeper insights into real-world

problems [7], capturing participants' thoughts and feelings, often on personal topics, while ensuring confidentiality and ethical considerations [8]. This approach generates large data sets [9], focusing on the "what," "why," and "how" of participants' thoughts, providing explanations for human behaviors and experiences [10].

Qualitative research is broadly defined as a method of inquiry employed in various academic disciplines, traditionally in the social sciences, market research, and further contexts [11]. It is mainly focused on understanding human experiences and social phenomena from the perspectives of those involved [12]. According to Strauss & Corbin [13], qualitative research emphasizes processes and meanings that are not rigorously examined or measured in terms of quantity, amount, intensity, or frequency. Instead, it seeks to understand the quality and essence of phenomena, making it highly adaptable to studies that require in-depth exploration of complex, context-bound issues [14].

### ***Types of qualitative research***

#### *Grounded theory approach*

Grounded theory is a structured approach for conducting qualitative research to develop theories. This method originates in sociology, specifically from the works of Glaser and Strauss [15]. According to Moriarty [16], grounded theory represents "interactionism," which focuses on understanding structural patterns and social dimensions of human interactions and how a group describes reality using gestures, clothing, and words. Therefore, the approach is viewed more as an inductive study than a deductive one. In support of that, Gray [17] viewed inductive studies as an attempt to explore binding concepts and construct relationships and theories from a data set. Even though he emphasized that inductive studies could be connected to pre-existing notions and theories, it does not seek to accept or reject them but rather to generate in-depth descriptions from the data at hand [17].

Regarding how grounded theory has become famous and important in qualitative research, findings indicate that two of every three qualitative research studies are based on grounded theory [18]. Hence, there is no shortage of studies with grounded theory. Studies such as Lu [19] with Chinese Americans, Sbaraini et al. [20] on social processes in private dental practices, de Oliveira Cavalcante et al. [21] on people affected by Tuberculosis, and Jakobsson et al. [22] on a visit to a cancer clinic are all examples of grounded theory research that are worth mentioning. On its merits as an essential method in qualitative studies, it can be viewed as a method that provides new insight into under-studied research areas [15].

This is because grounded theory praises the power of inductive rather than deductive [14], as the researcher does not begin the study with hypotheses and does not aim to test to accept or reject hypotheses. Thus, the researcher begins the research by collecting data from the participants' native environment, analyzing it concurrently, and developing hypotheses [23]. This means the researcher can generate meaningful information and think deeply about the data to understand matters related to their subject of interest.

Moreover, grounded theory provides a flexible approach regarding resources needed for data collection. This makes it an ideal method for exploratory research [24], as rich data can be obtained, providing the researcher with a composite structure to analyze the data and reflect deeply beneath them [25]. As a result, grounded theory is regarded as an ideal qualitative research method for investigating social processes that have been overlooked in mainstream research or topics with relatively limited findings.

#### *Core features of grounded theory research*

##### *Sampling*

In most grounded theory research, various kinds of nonprobability sampling are deployed. This is because grounded theory researchers purposively select participants' criteria before conducting the research based on the characteristics they offer to the research topic. However, theoretical sampling is the hallmark of grounded theory research. This entails starting a research process by interviewing a handful of participants relevant to the research study, then analyzing these data and

selecting more participants based on the questions arising and the gaps within the data collected. The process of repeatedly interviewing or collecting data to analyze is continuous until the researcher reaches a point where no new information can be gathered. This sampling can help the researcher address gaps within the subject of interest and expand upon previous findings and concepts [14]. Deploying theoretical sampling means being responsive to the data initially collected and, more importantly, being open to exploring ideas that emanate from the data.

According to Strauss & Corbin [13], this gives a pathway to decide what concepts and questions to explore next. Theoretical sampling, therefore, guides the researcher on who to ask, what to ask, and where to go to address the gaps in the data collected. That being the case, at the onset of ground theory research, it is typically impossible to decide upon the number of participants to be sampled, as sampling is driven by various variables emerging from the various stages of data analysis.

#### *Data analysis*

The data analysis method used in grounded theory research is similar to the procedures used in the data collection stage. Data collection and coding take place simultaneously. After extensively reviewing all the data, the researcher analyzes it by looking for repeatable patterns and themes. The themes are then merged with key phrases (codes) and organized into concepts and categories based on their identifiable relationship to the subject. Maxwell & Miller suggested that coding and categorization imply scheme cluster analysis and classification. This implies that in grounded theory research, coding and categorization connect schemes to concepts and the formation of theories. The following constitutes considerations that should be noted in the data analysis process:

- Initial codes are short phrases that denote important characteristics.
- If there are too many initial codes, they should be collapsed and renamed. This is done to eliminate redundant codes.
- After renaming codes, they should be structured into categories and sub-categories and matched to major topics related to the subject of study.
- In the event of redundancy, code categories and subcategories should be reviewed to identify key findings.
- Finally, codes and categories should be merged with subject-related concepts [27].

#### *Case study approach*

Case study research is widely used in many fields of study, particularly in the social sciences. It is regarded as a method for developing a comprehensive, multifaceted understanding of issues in their real-world context [28]. For this reason, it is sometimes considered as a naturalistic approach. For experienced researchers in qualitative research, this approach is a stand-alone method [1], with certain degrees of flexibility concerning methods of inquiry that are not present in grounded theory and phenomenology research [29]. The researcher, therefore, designs methods to suit the case and the research hypotheses as the interest is on the individual case rather than the methods of inquiry. Similarly, Creswell & Poth [8] argued that case studies view real-life events as cases over time, describing each case as a theme.

In social science and health-related research, integrating a wide range of philosophical ideas is seen as an obvious benefit in case studies as the researcher can tailor the methods to the underlying research problem [30]. Stewart [31] also suggested that case studies are not limited to health-related research. The method can be used across all research domains depending on the topic and the purpose, especially if the researcher is motivated to understand complex phenomena [30]. All these benefits reflect that case study research is exploratory and explanatory, making it an ideal method for answering questions about the how and why of a given subject of interest without ignoring the participants' real-life context. This advantage stems from the fact that case study research also allows for rigorous methods in data collection and analysis [30], with the methods used being most determined by the research purpose and design. In most case study research, data collection methods include interviews, focus group discussions, observations, and the exploration of artifacts.

### *Conversation analysis (CA)*

CA is an inductive, micro-analytic, and predominantly qualitative method for studying language as it is used in social interaction. It differs most distinctly from other methods in this handbook in its use of field recordings of naturally occurring conversation, its focus on language as a resource for social action, and its procedure of basing analyses on the details of participants' behavior. As we will see, the method consists of collecting and curating instances of an interactional phenomenon, the case-by-case analysis of that phenomenon, and producing a formal account of its operation. The CA approach typically resonates with those interested in human social conduct and committed to naturalistic observation. It offers researchers a well-developed descriptive apparatus for investigating conversational interaction and a rigorously empirical procedure for supporting analysis.

Conversation analysis is an inductive and micro-analytic qualitative method, mostly used in studies that relate to everyday social interaction. It is particularly suitable for studies considering language or talk as a vehicle for social action. This approach was developed and used in sociological studies in the early 1970s by sociologists such as Harvey Sacks, Emanuel Schegloff, and Gail Jefferson [32]. A typical conversation analysis begins with the researcher establishing a problem associated with a hypothesis, followed by a detailed data collection method in the form of video or audio in the space where the conversation occurred. The researcher then transcribes every verbal and nonverbal element from the recording as much as possible to inductively analyze the recurring patterns of interaction [33]. From that, the researcher eventually identifies occurrences, rules, or concepts to define these patterns, which will either lead to strengthening, altering, or replacing the initial hypotheses with new ones.

Compared to other qualitative methods, conversational analysis is more comprehensive. With it, the researcher does not use code to represent key elements in the data but instead examines recorded interactions and transcripts. In this case, the themes in conversation analysis are often viewed as close [34]. Another advantage of conversational analysis is that it makes it possible to predict what other interviewees are likely to say based on each speaker's feelings, attitudes, and feedback, which is almost impossible in different methods of inquiry. In every setting where recording is permitted, conversational analysis provides the researcher with a rigorous explanatory tool to examine behaviors, attitudes, and values [35].

### *Ethnography*

The root of ethnography can be traced back to the 1900s when anthropologists such as Bronislaw Malinowski and Alfred Radcliffe-Brown studied rural and remote societies over a long period [36]. In its broadest definition, ethnography is described as the systematic study of people and their related cultures. For ethnographers, the aim is to closely study and actively participate in the lives of the individuals under study to identify specific patterns in their human experiences [37]. Ethnography is distinguished from other inquiry forms because it is undertaken in a realistic setting, with the researcher observing and actively participating in people's lives [37]. This makes it an excellent tool for studies geared toward searching for the meaningfulness of cultural norms and perspectives and the causes of specific actions, practices, and social trends.

An ethnographic study has several advantages. First, ethnographers can immerse themselves in people's natural environments through observation and engagement, resulting in a broader understanding of the social phenomena of their interest in various contexts [36]. This eventually allows them to gather empirical insights into hidden social practices that might not be observed from afar. Furthermore, it is longitudinal, allowing the researcher to track and document cultural changes over some time. Therefore, it is considered a research method emphasizing working with people rather than considering them as objects.

### *Phenomenological methods*

Phenomenology is a research method that focuses on understanding the nature of a phenomenon through those who have lived it. The goal is to articulate the central phenomenon in terms of what happened and how it happened [38]. There

are several types of phenomenology approaches, each from a different philosophical perspective. For example, existential phenomenology, realistic phenomenology, constitutive phenomenology, and hermeneutical phenomenology. Therefore, to use a phenomenological method, the researcher must first consider the philosophy that they believe in and how relevant it is to their subject of interest.

Regardless of the type of phenomenology and the philosophical perspective underpinning it, a phenomenological method has various strengths. According to Denscombe [39], it provides the opportunity to obtain an authentic and in-depth profile of the topic of interest; it is humanistic because the researcher emphasizes lived experiences; it is appropriate for research with a small number of participants; and most importantly, its findings pique the reader's interest.

### ***Additional qualitative research methods***

In expanding the scope of this review, additional qualitative research methods have been identified that contribute significantly to the field. These methods include narrative inquiry, action research, discourse analysis, autoethnography, and participatory action research (PAR). Each method provides unique perspectives and techniques for exploring qualitative data, and their rigorous application can deepen understanding in various research contexts.

#### *Narrative inquiry*

Narrative inquiry is a method that uses personal stories to explore how individuals make sense of their experiences. It involves collecting and analyzing narratives, which can be oral or written, to uncover the meanings and interpretations that individuals assign to their life events. This method is particularly effective in understanding personal and social identities and cultural contexts [40]. Narrative Inquiry allows researchers to examine the temporal, social, and contextual dimensions of experience, providing a rich, holistic view of human life. By analyzing stories, researchers can identify patterns, themes, and insights that might not be accessible through other methods.

#### *Action research*

Action research is a participatory and cyclical approach that involves researchers and participants working collaboratively to address practical problems and bring about change [41]. It emphasizes reflective practice and iterative planning, acting, observing, and reflecting cycles. This method benefits educational and organizational settings aiming to improve practices, processes, or policies. Action research fosters a collaborative environment where participants are co-researchers, contributing their expertise and perspectives to the research process. This method generates practical solutions and empowers participants by involving them directly in the research.

#### *Discourse analysis*

Discourse analysis focuses on the study of language and communication in social contexts. It examines how language constructs meaning, identity, and power relations [42]. This method involves analyzing texts, conversations, and other forms of communication to understand how discourse shapes social practices and interactions. Discourse analysis is particularly valuable in fields such as sociology, linguistics, and media studies, where understanding the role of language in society is crucial. Researchers can uncover underlying ideologies, assumptions, and power dynamics that influence communication by exploring how discourse functions in different contexts.

#### *Autoethnography*

Autoethnography combines ethnographic research with autobiographical reflection, allowing researchers to use their own experiences as a lens to study cultural phenomena [43]. This method involves a deep, reflective engagement with personal experiences, contextualizing them within broader cultural, social, and political frameworks. Autoethnography provides a unique perspective that bridges the gap between the personal and the cultural, offering reflective and analytical insights. It is particularly useful in cultural studies, anthropology, and sociology, where understanding the intersection of individual and collective experiences is key.



*Participatory action research (PAR)*

Participatory Action Research (PAR) is an approach that emphasizes collaboration between researchers and participants to address issues of social justice and bring about meaningful change [41,44]. PAR involves participants as co-researchers, actively engaging them in the research process from the initial design to the dissemination of findings. This method is particularly effective in marginalized communities, where traditional research methods may not adequately capture participants' lived experiences and challenges. PAR aims to democratize the research process, ensuring that the voices of those most affected by the research are heard and valued.

**Synthesis of results**

Table 1 summarizes the characteristics of key qualitative research methodologies, highlighting their origins, main applications, strengths, and limitations. This summary provides an overview of the different methodologies and their unique features, facilitating the selection of the most appropriate method based on research objectives.

**Table 1.** Summary of key qualitative research methodologies.

<b>Methodology</b>	<b>Origins</b>	<b>Main Applications</b>	<b>Strengths</b>	<b>Limitations</b>
Grounded Theory	Sociology (Glaser and Strauss)	Social studies, social processes	Theory development from data	Time-consuming, complex management
Case Study	Social sciences, education, health	Understanding complex issues	Detailed and holistic insights	Limited generalizability, potential researcher bias
Conversation Analysis	Sociology (Sacks, Schegloff, Jefferson)	Social interactions, linguistics	Micro-analytic, natural data	Labor-intensive, limited cultural context
Ethnography	Anthropology (Malinowski, Radcliffe-Brown)	Cultural phenomena, social practices	Contextualized and deep understanding	Time-consuming, observer effect
Phenomenological Inquiry	Philosophy, Psychology	Lived experiences, phenomena	Detailed descriptions, human perspective	Challenging to generalize, complex interpretation

Table 2 extends the analysis by including additional qualitative research methods, offering further perspectives and techniques for exploring qualitative data. These methods include narrative inquiry, action research, discourse analysis, autoethnography, and participatory action research, each with specific applications and unique advantages.

**Table 2.** Summary of additional qualitative research methods.

<b>Methodology</b>	<b>Description</b>	<b>Main Applications</b>	<b>Strengths</b>	<b>Limitations</b>
Narrative Inquiry	Uses personal stories to explore experiences	Personal and social identities	Holistic view, deep understanding	Time and resource-intensive
Action Research	Cyclical and participatory approach to address practical problems	Education, organizations	Practical solutions, direct involvement	Complex coordination, participant bias

Methodology	Description	Main Applications	Strengths	Limitations
Discourse Analysis	Study of language in social contexts	Sociology, linguistics	Understanding meanings and power relations	Labor-intensive, subjective interpretation
Autoethnography	Ethnographic research with autobiographical reflection	Cultural studies, sociology	Links personal experience with cultural context	Researcher bias, limited generalizability
Participatory Action Research (PAR)	Collaboration between researchers and participants for social change	Marginalized communities	Social justice, participatory engagement	Complex coordination, potential conflicts of interest

### ***Qualitative vs. quantitative research: The differences***

While both qualitative and quantitative research methods aim to contribute to knowledge, their approaches, objectives, and data collection methods are fundamentally different. Quantitative research quantifies variables and tests hypotheses through statistical methods [45]. It is characterized by structured tools such as surveys, experiments, and questionnaires to collect numerical data, which can then be analyzed to identify patterns, relationships, and causality [46]. This method is advantageous for studies requiring the measurement of large samples and generalizing results to broader populations.

In contrast, qualitative research explores phenomena in-depth and understands the meanings and interpretations individuals assign to their experiences [1]. It relies on unstructured or semi-structured techniques such as interviews, focus groups, and observations to gather rich, detailed data [7]. The goal is to comprehensively understand the context and complexity of the phenomena studied rather than focusing on generalizability [10]. As a result, qualitative research often involves smaller, more focused sample sizes chosen for their relevance to the research question rather than for representativeness [9].

Moreover, qualitative research is inherently flexible and iterative, allowing researchers to adapt their methods as new insights emerge during the study [8]. This contrasts with the fixed, predetermined procedures typically employed in quantitative research [46]. While quantitative methods provide breadth, qualitative methods offer depth, making them complementary approaches that can be used together to enrich the understanding of complex research questions [7]. For instance, quantitative research might identify the prevalence of a phenomenon, whereas qualitative research can explain why it occurs and how individuals experience it.

### ***Mixed-methods research***

Mixed methods research integrates qualitative and quantitative approaches within a single study to capitalize on the strengths of each method and provide a more comprehensive understanding of research problems [47]. This approach involves collecting, analyzing, and integrating both data types, often through sequential, concurrent, or transformative strategies. Mixed methods research is precious in addressing complex research questions requiring numerical measurement and in-depth exploration [48].

One of the main advantages of mixed methods research is its ability to corroborate and cross-validate findings, enhancing the credibility and validity of the results [49]. For instance, quantitative data might reveal a significant trend, while qualitative data provides contextual understanding and insights into the underlying reasons for this trend. This methodological pluralism allows for a richer, more nuanced understanding of the research problem [50].

Furthermore, mixed methods research facilitates triangulation, where integrating different data sources can lead to more robust and comprehensive findings [45]. By leveraging the strengths of both qualitative and quantitative data, researchers can mitigate the limitations inherent in each method when used independently. For example, quantitative methods excel in generalizability and statistical rigor, while qualitative methods offer depth and contextual richness.

Mixed methods research also allows for exploring complex phenomena from multiple perspectives, accommodating real-world issues' diverse and multifaceted nature [51]. This holistic approach not only enhances the scope and depth of the research but also fosters a more dynamic interaction between data collection and analysis phases, often leading to more innovative and impactful insights.

Moreover, integrating qualitative and quantitative approaches can enhance the applicability of research findings in practical settings. For example, in healthcare research, quantitative data might identify the prevalence of a health issue. In contrast, qualitative data provides insights into patient experiences and perceptions, informing more effective and empathetic healthcare interventions [47].

### ***Evaluation of practical applications, strengths, and limitations of each method***

Each qualitative research method has unique practical applications, strengths, and limitations that suit different studies and contexts.

#### *Grounded theory approach*

##### *Practical applications*

Widely used in social sciences, especially sociology, to develop theories grounded in real-world observations. It is commonly applied in studies exploring social processes and interactions.

##### *Strengths*

Provides a systematic method for generating theories directly from data. Its inductive nature allows for discovering new insights without being constrained by existing theories.

##### *Limitations*

Data collection and analysis can be time-consuming and require significant data. The iterative process can also be challenging and require substantial researcher expertise.

#### *Case study approach*

##### *Practical applications*

Used extensively in social sciences, education, and healthcare to gain an in-depth understanding of complex issues within their real-life context. Suitable for exploratory, explanatory, and descriptive research.

##### *Strengths*

Offers rich, detailed, and holistic insights into a single case or a small number of cases. Flexible in terms of data collection methods and adaptable to various research questions.

##### *Limitations*

The findings may not be generalizable due to the focus on specific cases. Due to the close involvement with the case, there is also potential for researcher bias.

#### *Conversation analysis*

##### *Practical applications*

It is ideal for studying everyday social interactions and language use in social contexts. Frequently applied in sociolinguistics, communication studies, and psychology.

##### *Strengths*

It provides detailed, micro-analytic insights into conversational structures and social interactions. It uses naturally occurring data, enhancing ecological validity.

#### *Limitations*

It is highly labor-intensive due to the detailed transcription and analysis of interactions. It may not capture broader social or cultural contexts influencing the interactions.

#### *Ethnography*

##### *Practical applications*

It is commonly used in anthropology, sociology, and cultural studies to explore cultural phenomena and social practices through immersive fieldwork.

##### *Strengths*

Offers a deep, contextualized understanding of social practices and cultural norms. The longitudinal nature allows for observing changes over time.

##### *Limitations*

It is time-consuming and may require extended periods of fieldwork. The researcher's presence can influence participants' behavior (observer effect), and findings are often specific to the studied culture or group.

#### *Phenomenological inquiry*

##### *Practical applications*

Used in psychology, education, and health sciences to explore and describe lived experiences and the essence of phenomena.

##### *Strengths*

It provides rich, detailed descriptions of personal experiences and insights into how individuals make sense of their world. It emphasizes participants' perspectives and meanings.

##### *Limitations*

Due to the focus on subjective experiences, generalizing findings may be challenging. Careful interpretation is required to avoid researcher bias, and the bracketing process can be difficult to maintain consistently.

By evaluating these methods in terms of their practical applications, strengths, and limitations, researchers can make informed decisions about the most appropriate qualitative approach for their specific research questions and contexts. Each method offers unique advantages that can be leveraged to gain deeper insights into complex social phenomena while posing particular challenges that must be managed effectively.

### ***The importance of qualitative research in addressing complex real-world problems across various disciplines***

Qualitative research addresses complex real-world problems across multiple disciplines by providing a deep, nuanced understanding of human experiences, behaviors, and social processes. Unlike quantitative research, which often focuses on measuring and quantifying phenomena, qualitative research delves into the underlying reasons, motivations, and contexts that shape human actions and interactions [12]. This makes qualitative research particularly valuable in social sciences, healthcare, education, and cultural studies. In social sciences, qualitative research helps uncover the intricacies of social interactions, power dynamics, and cultural norms, allowing researchers to develop theories and frameworks that reflect the lived experiences of individuals and communities [1]. This is essential for creating social policies and interventions sensitive to diverse populations' needs and contexts [7].

Qualitative research provides insights into patient experiences, healthcare practices, and the psychosocial aspects of illness and treatment. It enables healthcare professionals to understand patient perspectives, improve patient-provider communication, and design interventions that are more patient-centered and effective [8]. For example, qualitative studies

on chronic pain [52], mental health [53], and patient satisfaction [54] can lead to more empathetic and responsive healthcare services. In education, qualitative research explores the processes of teaching and learning, classroom dynamics, and educational inequalities [9]. It helps educators understand how students from different backgrounds experience and engage with education. It is critical to develop inclusive teaching strategies and policies that promote equity and access to quality education [12].

In cultural studies, qualitative research examines the meanings and interpretations individuals and groups assign to their cultural practices, identities, and artifacts [11]. This approach is vital for preserving cultural heritage, understanding cultural changes, and fostering cross-cultural understanding and dialogue [43]. Overall, qualitative research provides the depth and context necessary to understand complex phenomena holistically. It enables researchers to capture the richness of human experiences and address the subtleties and complexities that quantitative methods might overlook [10]. Qualitative research contributes to more comprehensive and practical solutions to real-world problems, making it an indispensable tool for researchers across various disciplines [7].

## CONCLUSION

### *What qualitative researchers do*

The duties of qualitative researchers are to examine how and why people learn, interpret, and make sense of themselves and others the way they do. Thus, the data collection techniques used in such studies are adaptable and sensitive to sociocultural settings. Instead of using tightly standardized tools for data collection, interviews, focus groups, and observation have proven to be effective tools in acquiring the type of data needed for qualitative research.

In psychological studies, qualitative researchers can find answers to how patients experience their struggles, which are difficult to measure with a quantitative approach. For example, understanding the mechanism behind the delay in help-seeking among trauma survivors [53], and how to adequately understand the emotional struggles that come with chronic pain [52]. However, qualitative research allows the researcher to appreciate these challenges and evaluate patients' satisfaction with a specific treatment or medicine [54]. It also helps facilitate more quantitative investigations [53]. For example, qualitative research that addresses what helps and inhibits mental illness can improve quantitative inquiries.

Unlike other forms of research, qualitative researchers are seen as social interactors capable of facilitating good relationships with their subjects of interest. Qualitative research requires excellent interpersonal skills and community networks [55]. Therefore, being a qualitative researcher is defined as walking onto a bridge with various individuals and groups, trying to understand them holistically, empathizing, and linking their views so that others can understand. In this sense, Roger et al. [55] define qualitative research as cultural learning and understanding through investigation and awareness.

Furthermore, because qualitative research is based on recursivity, qualitative researchers have a nonstatic approach to research planning and design. In other words, in qualitative studies, data collection is viewed as a continuous process until one or more predefined stopping criteria are reached. The argument here is that recursivity occurs when relevant evidence allows the researcher to be more open to new emerging concepts [56]. For example, after interim data analysis, a qualitative researcher is open to making unplanned adjustments to the research focus or design or may be open to further data collection.

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