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A brief guide to qualitative research in veterinary science: interviews, focus groups, surveys and reflexive thematic analysis for practitioners and researchers

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ABSTRACT

Qualitative research is increasingly recognised as an essential component of veterinary inquiry, especially when exploring the complex human, ethical, and contextual factors that influence animal health and welfare. This primer offers a practical and straightforward guide to the most commonly used qualitative methods in veterinary settings, including interviews, focus groups, and open-ended surveys as methods of data collection, and reflexive thematic analysis as one approach to data analysis. Aimed at veterinary practitioners and researchers with limited prior experience in qualitative approaches, it explains the reasons for using these methods and how to conduct them rigorously, and highlights common pitfalls to avoid. Drawing on published examples from veterinary science, the article clarifies the process of qualitative data collection and analysis, emphasising reflexivity and ethical responsibility. Although qualitative research does not produce statistically generalisable results, it offers valuable insights into how veterinary professionals and clients experience and understand their world. By providing readers with the foundational tools to design, evaluate, and conduct high-quality qualitative research, this guide helps build a more comprehensive evidence base for informed veterinary decision-making.

Abbreviations: COREQ: Consolidated Criteria for Reporting Qualitative Research; SRQR: Standards for Reporting Qualitative Research; RTA: Reflexive thematic analysis

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Introduction


Quantitative research has long dominated veterinary science, shaping the evidence base and professional training. However, many of the profession's most pressing and complex questions – those related to client communication, ethical decision-making, animal welfare, workplace culture, or mental health – cannot be answered solely through numbers. These human, social, and contextual issues require an understanding of how and why things happen in real-world veterinary settings (e.g. Armitage-Chan *et al.* 2016; Quain *et al.* 2022). Qualitative methods are particularly well-suited to exploring these questions, offering insights that are inaccessible through quantitative surveys or experimental designs.

In the veterinary field, qualitative research has been instrumental in deepening our understanding of moral stress, professional identity, interprofessional collaboration, and responses to welfare standards. For example, focus groups and interviews have shed light on the everyday moral pressures facing veterinary

teams and explored how facilitated ethical discussions may help reduce stress (Quain *et al.* 2022; Ashall 2023), and in-depth semi-structured interviews have highlighted veterinarians' intricate ethical and situational reasoning when making challenging decisions (Deelen *et al.* 2023).

Most veterinarians who engage with qualitative research, whether in practice, education, or policy, employ a few core methods: individual interviews, focus groups, and surveys as methods for collecting data, and reflexive thematic analysis as a widely-used approach to data analysis. This guide introduces these methods in plain language, using practical veterinary examples to illustrate key concepts. For readers who wish to go further, we signpost to established, comprehensive guides that summarise how to do qualitative research in depth, such as Braun and Clarke on reflexive thematic analysis (Braun *et al.* 2015; Braun and Clarke 2022), Saldaña on coding (Saldaña 2016), Green on qualitative methods in health (Green *et al.* 2025), and reporting standards

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including Consolidated Criteria for Reporting Qualitative Research (COREQ; Tong *et al.* 2007) and Standards for Reporting Qualitative Research (SRQR; O'Brien *et al.* 2014). Veterinary teams can also draw on a dedicated series published in the *Journal of Veterinary Medical Education* (King *et al.* 2021a, 2021b), which provides tailored guidance specifically for veterinary educators. While these works are excellent, they can feel overwhelming to those new to the field. Our aim is to bridge that gap by offering an accessible starting point, clear steps, and simple checklists, while pointing to those resources for deeper study.

Qualitative research encompasses methods that enable the understanding of how people interpret, experience, and navigate their social and professional environments. It is particularly valuable in veterinary science for examining issues shaped by interpersonal relationships, values, and organisational context. This includes decision-making processes, client–veterinarian communication, team and leadership dynamics, workplace wellbeing, and broader ethical challenges (e.g. Littlewood *et al.* 2021).

Unlike quantitative research, which produces numerical data, qualitative methods generate rich, descriptive data drawn from interviews, open-ended survey responses, focus groups, observations, or document analysis. These data are then systematically analysed for patterns, themes, and meanings. For instance, to explore issues related to burnout, a qualitative study might explore how veterinarians experience it, what contributes to their emotional strain, and their perspectives on possible solutions (Ashton-James and McNeilage 2022).

Qualitative research is beneficial for exploring complex issues, uncovering hidden perspectives, and examining meaningful aspects of practice. For example, a survey of German farm veterinarians investigated morally challenging situations that arise from conflicting responsibilities among animals, farmers, society, and veterinarians themselves (Dürnberger 2020). When conducted rigorously, with attention to credibility, reflexivity, and transparency, qualitative research provides valuable insights that can inform practice in ways that numbers alone cannot.

What qualitative research can do

Qualitative research is particularly valuable for examining how meaning, relationships, and context influence veterinary practice. It allows participants to express their experiences, beliefs, and attitudes in their own words, uncovering insights that are often overlooked by structured surveys or experimental designs, particularly when values, ethics, or emotions are involved. For instance, a qualitative study involving Dutch farm-animal veterinarians demonstrated how clinical

decision-making is influenced by a complex interplay of animal welfare concerns, client expectations, sector norms, and economics, rather than strict protocols (Deelen *et al.* 2023). Likewise, Canadian veterinarians noted that mental health challenges such as fatigue and stress impaired their ability to communicate clearly, concentrate, and provide high-quality care (Campbell *et al.* 2023).

Qualitative methods also help to uncover systemic issues. Discussion groups on ethical issues within a UK animal charity revealed hidden sources of team stress, including time pressure, unclear roles, and emotional isolation (Ashall 2023). These findings resulted in practical changes at the team level and fostered greater openness.

Because qualitative research focuses on lived experiences of those within the study population and enables participants to discuss attitudes, values and beliefs, it gives a voice to clients, students, nurses, and others whose perspectives may otherwise be overlooked. This research can inform the design of more supportive communication, education, and workplace systems. It is also well-suited to exploring new or poorly understood issues. For example, qualitative studies have examined the challenges involved in developing students' emotional and ethical competence during tertiary education, as well as how workplace culture shapes team dynamics and professional wellbeing. The goal is not measurement, but insight that can enhance veterinary practice, education, and policy.

What qualitative research cannot do

Qualitative research is not designed to measure frequency, test hypotheses, or determine cause-and-effect relationships. It typically uses small, purposive samples to explore depth rather than ensure statistical generalisability. A qualitative study can explain how veterinarians experience moral stress, for example, but it cannot measure how common it is or determine whether one factor causes another. Instead, qualitative research provides detailed, context-rich findings that others can relate to or apply in similar settings. This makes it particularly useful for understanding complex or sensitive topics where numbers alone are insufficient to convey meaning.

Themes in qualitative research do not emerge automatically; the researcher actively develops them through interpretation. This indicates that the researcher's position and perspective shape the findings. Far from being a flaw, this is a recognised feature of qualitative inquiry, which values reflexivity. This means that researchers need to reflect upon, report and be transparent about how their background influences the study (Braun and Clarke 2021a,

2021b, 2022). Qualitative research cannot claim objectivity or neutrality in the same way that some quantitative designs do. The researcher is part of the process, shaping what is asked, how participants respond, and how meaning is constructed. By making that process visible, qualitative studies enhance rather than diminish their credibility. The trustworthiness, validity and credibility of research are also enhanced by triangulation through the use of multiple data sources, methods or perspectives. Cross-verification of data and analyses can help to minimise bias, confirm patterns and provide a deeper, more holistic understanding of the phenomenon under study. In short, qualitative research does not provide predictive models or universal claims. Still, it offers powerful insights into how people experience the world, why they act, and how we might improve veterinary systems to support them better.

Qualitative research: the language

Reading qualitative studies, textbooks, and advice will quickly highlight a large number of unfamiliar terms. This is not an exhaustive list, but the following provides an overview of some key considerations. Two terms that frequently appear are ontology and epistemology. Simply put, these are perspectives on the nature of reality, knowledge, and what matters in the world. These perspectives affect the research that we do.

Ontology: what is real?

Ontology is something we may not explicitly think about – our assumptions about the nature of reality. Simply put, does reality exist independently of human knowledge of it (realism), or is reality determined by human understandings and perspectives (relativism)? It may seem obvious that there is “something real” that we can research, especially where physical objects and phenomena are concerned. The *realist* approach assumes that there is a “truth” that we can access with appropriate research techniques. Realism is the basis for many quantitative research studies, but it rarely applies to qualitative research. Qualitative research generally takes a *relativist* approach when exploring more subjective phenomena, such as perceptions, ideas, understandings, or assumptions. This accepts that what is “real” and “true” for one person or at a particular place and time may not be universal, and that each person’s “reality” is shaped by their culture, background, experiences, and so on. *Critical realism* differs again – this is the perspective that there is indeed some objective reality (which can include the real feelings

and ideas that people hold), that reality exists independently of our views, but our understanding is shaped by our perspective and methods. What we observe is often only the surface, while underlying structures, mechanisms, and relationships that we cannot always observe directly are what drive those events. A critical realist researcher, therefore, seeks not just to describe surface events but to uncover the hidden processes that explain why they occur. Because this article only looks at a small number of qualitative methods (interviews, focus groups, surveys), we assume that most veterinarians exploring qualitative research are adopting a *relativist* or *critical realist* perspective.

To give an example, the research by Gordon *et al.* (2025) investigates aspects of professionalism that support veterinarians’ career success. A realist approach would not work – “professionalism” is an abstraction and its nature, maybe even its existence, is different for different people. A relativist approach allows different perspectives and ideas to be explored, but no single, definite truth can be presented. This still means the research is valuable – the research has found some consensus on what professionalism is, why it matters and how it might be fostered. This focus on improving things for people and the profession fits with a critical realist, as well as a relativist, ontology.

Epistemology: what is knowledge?

Epistemology asks about the nature of knowledge – how do we “know” what we know (or think we know), what knowledge can we trust, and what can we aim to find out through research? Epistemology determines what we see as true knowledge or evidence (for many in the veterinary profession, this means knowledge based on empirical evidence) and what we see as biased, untrustworthy, and unreliable. A topical example is the different views on whether qualitative research with small sample sizes, in-depth but subjective information, and limited generalisability is as valuable as large-scale studies based on quantifying items or phenomena. Clearly, epistemologies need to be relevant to the research aims and goals. Determining the prevalence of leptospirosis in a region requires a quantitative approach, while learning about the perceptions and experiences of people diagnosed with leptospirosis requires a qualitative approach (Prinsen *et al.* 2023).

Positivism is an epistemological approach that assumes that the relationship between the world and our perceptions of it is direct – we can know reality through an objective and unbiased collection of data (which fits with a realist perspective). Current thinking,

however, prefers *postpositivism*, which recognises that the research questions we ask, the methods we use, the theories we prefer, and our definitions of what counts as research are never fully objective. Postpositivism is compatible with qualitative research; positivism is not. Even more usual within qualitative studies is a *constructivist* approach, which considers that the world, and what we know of it, is constructed through our ideas, concepts and values and as those change, so does what we know. Knowledge is social, cultural, moral, ideological, political – these are not just positions that people take in conversation, for instance, but genuine differences in ways of seeing the world.

Understanding ontology and epistemology is a crucial first step in answering questions about research *positioning*, *positionality*, or *standpoint*. In qualitative research, these terms have related but distinct meanings. *Positioning* refers to how a researcher locates themselves in relation to the topic, participants, and knowledge being produced. *Positionality* is the broader acknowledgment that a researcher's social, cultural, and professional identities, experiences, and assumptions influence every stage of the research process (Holmes 2020). *Standpoint* usually refers to an explicit theoretical or philosophical perspective that informs how knowledge is interpreted and valued (Harding 1996). Including a brief positionality statement helps readers understand how the researcher's background shapes the study. For example, a veterinary researcher might write: "As a practising veterinarian and educator, my interpretations are informed by clinical experience and professional norms that may differ from those of clients or students." Examples of positionality statements can be found in Braun and Clarke (2022) and Holmes (2020). These statements clarify the researchers' perspectives and worldview as they affect motivations for doing the research, reasons for choosing particular methods, and so on. Personal and professional backgrounds, experiences, biases, and social contexts all affect how researchers approach specific topics, carry that research out, and interpret the findings. For these reasons, researchers' positionality needs to be acknowledged and made explicit by the author or authors when reporting qualitative findings.

Individual interviews, focus groups and surveys: what they offer

Three widely used qualitative methods are interviews with individual participants, focus groups (i.e. a guided discussion with a group of participants), and surveys. Each has strengths and limitations.

Interviews and focus groups

Interviews for research are usually *semi-structured*. A fully structured interview would have a set of questions that the interviewer must ask with little or no variation (as, for example, with census data collection). This is rare, as it does not allow for flexibility to explore interesting aspects, ask follow-up questions, or provide much clarification. Much more common are semi-structured interviews. These are flexible and conversational yet still structured through an interview guide that consists of a list of key questions and prompts, which can be used to explore answers in more depth. This gives the flexibility to expand, explore, explain and understand participants' perspectives. Some interview structure is essential – without it, the interview will almost certainly go off topic, take too long, stray into irrelevancies and, at worst, fail to gather any relevant information.

Interviews allow researchers to explore participants' thoughts, feelings, and experiences, capturing detailed, first-hand insights into their experiences. The conversational approach of a semi-structured interview lets the interviewer build rapport and trust, which is especially important for sensitive topics (e.g. euthanasia, stress, and wellbeing). On the downside, interviews can be time-consuming. Potential participants need to be identified and invited, suitable times and venues arranged, then interviews need to be recorded (with participant consent), transcribed, checked (even artificial intelligence-based transcription tools make mistakes), and then a systematic approach to coding and analysing the transcript is needed.

Focus groups allow for data collection from a larger number of people, and for discussion, debate, and the sharing of ideas. Participants often "bounce" ideas off each other and come up with insights that individual interviews might not, and which the researcher may not have expected. They do, however, have the same challenges as individual interviews, and some additional ones as well. Interviewers need to be prepared to keep people on time and on topic, to manage potential conflicts and disagreements, and to ensure all members can contribute without compelling anyone to disclose information they may not want to share.

For interviews and focus groups, it is best to use an *interview guide* with open-ended questions and prompts – a *topic guide*, not a rigid script. Answers need to be recorded and transcribed; this constitutes the raw data, so participants must be informed that they will be recorded. It is also important for researchers to be flexible and allow time for stories, surprises, and follow-ups on interesting or unexpected points.

Surveys

Hard copy or online surveys present a set of predetermined questions to each participant, with options for answering. Answers might be closed, in which case the answer options are pre-set (e.g. Likert-type rating scale items, multiple-choice options, dichotomous yes/no options, etc.) or open-ended, in which participants respond in their own words.

Advantages are that, if quick to answer and seen as interesting or relevant, surveys can quickly collect large amounts of data from a large number of people. They are faster and easier to arrange and distribute than interviews and may be more convenient and less intimidating for participants. Additionally, the answers may be easier to code and analyse. Surveys may be most suitable for topics that are less sensitive or do not need in-depth exploration, when time and resources are limited, for exploratory research to identify issues that can be followed up in more depth with interviews, or when anonymity is a concern.

On the downside, survey questions, even open-ended ones, do not allow for the same depth or clarification as an interview. Survey questions are also harder to develop than they seem. For certain topics, surveys can draw on established, evidence-based measures that have been developed and validated through prior research (e.g. the widely accepted scales for personality, stress, wellbeing, burnout, and job satisfaction). Using these measures helps ensure reliability and comparability across studies. However, results still need to be interpreted carefully, as context, wording, and the population being surveyed can all influence how responses should be understood. Mixed-methods survey designs often combine standardised psychological instruments with open-ended qualitative questions to provide both breadth and depth of understanding. Quantitative measures (e.g. personality or wellbeing scales) can indicate general patterns, while accompanying qualitative questions allow participants to elaborate on their experiences in their own words. This approach is legitimate when the qualitative component is analysed separately and interpreted within its own epistemological frame, rather than treated as supporting “proof” for the quantitative findings. Clear articulation of each component’s purpose enhances rigour and transparency (Creswell and Plano Clark 2011; Creswell 2014). Any cut-off points for deciding whether someone is “extroverted”, or “well”, for example, should not be used for research or feedback to participants, as the validity and reliability for a given individual, group or profession is often not known. **Box 1** provides some suggestions for designing questions.

Box 1. Tips for designing qualitative research questions and managing data collection

Surveys

- Keep questions short, clear, and relevant to participants (or allow for a “Not Applicable” response).
- Ensure participants can skip questions they don’t want to answer.
- Where surveys include dichotomous “yes/no” or Likert-type rating scale answers, provide an opportunity for participants to elaborate with some open-ended questions.

Focus groups and interviews

- Watch for power dynamics, particularly if you are interviewing students, colleagues or clients.
- Reflect on your own influence: what assumptions are you bringing and how might they shape the questions you ask and the way you respond to answers?
- Avoid going over time.

All qualitative methodologies

- Provide context: why are you researching this issue? Who will see the data? How long will it take?
- Pilot your questions with a small group of people to check clarity and time burden.
- Avoid questions that invite guesswork or assumptions rather than participants’ own direct knowledge or experience.
- Avoid leading questions (e.g. “How good do you think our programme is?”); loaded questions (e.g. “A lot of people have told us ... What is your opinion?”), double-barrelled questions that ask about more than one issue but only allow one answer (e.g. “How much do you enjoy working from home and in the office?”) or questions that are impossible to answer (e.g. “How do you get to work each day?” Yes/No).

Ethics and participant care

Ethical and legal requirements for research involving people are largely consistent across disciplines. In most jurisdictions, these obligations are outlined in national legislation and institutional policies, such as data protection laws and human research ethics frameworks (e.g. the Declaration of Helsinki and frameworks of local human research ethics committees or institutional review boards). As with quantitative research, qualitative projects must meet the standards for informed consent, privacy, data security, and conflict of interest management (Israel and Hay 2011; Wiles 2013). The main difference is one of degree: open-ended questions and in-depth discussion often produce rich narratives that may inadvertently disclose identifiable or sensitive information. Qualitative researchers, therefore, need to take particular care with data anonymisation, storage, and procedures for managing disclosures that might require mandatory reporting.

There are key ethical principles that all researchers must consider when conducting research with human participants (note that it’s preferable to refer to people as “participants” rather than “subjects” of research). Some key points to consider include informed consent, privacy, and fairness.

Informed consent means that potential participants need to be informed about the study and free to choose whether to take part or not. Study information must be clear, relevant, and honest. Participants need

to be allowed to decline the invitation and, if they do take part, to skip questions they do not want to answer. Ethically, participants must be free to choose whether or not to contribute. From a data quality point of view, it is relatively easy to find and deal with missing data, but nearly impossible to manage responses that are resistant or random when participants do not want to respond. Researchers also need to consider how to manage participants who change their minds about taking part (this is rare but can happen). For individual interviews, participants can be identified and their responses removed up to the point where data analysis involves integrating information from all participants. Removing individual contributions is usually not possible in anonymous surveys or focus groups. In focus groups, each participant's contribution is related to the others, and it is sometimes not possible to know who said what from the transcripts. In all studies, informed consent needs to be managed and discussed up front. Interview guides, including initial discussions about consent and privacy as well as the questions and prompts, should be submitted for ethical review prior to the research starting.

In relation to privacy, data may be anonymous (no information connects the participant to their data) or confidential (the researcher/s know whose data is whose, but others do not). Unless participants agree in writing, their identities and any information that could identify them or connect individuals to their responses should not be released. This includes participants in focus groups, who may be asked to sign an agreement that they will not discuss information shared within the group with others outside the group.

Power dynamics can also complicate the research. Researchers must be aware of professional or social imbalances. Relationships between veterinarian and client, veterinarian and student, and employer and employee need particular care, as there can be issues of privacy and perceived pressure to participate.

Another issue is social justice, for example, taking care to include a range of voices (e.g. in terms of gender, ethnicity, professional role). It is important not to exacerbate existing injustices in data collection and analysis, conclusions, and reporting, or to over-generalise conclusions to groups that were not represented.

A final point is participant and researcher wellbeing. Qualitative research can mean sharing information that is challenging, confronting or painful, so strategies and resources to manage potential distress need to be considered in advance. Information given to participants can include suggestions about possible support resources, and researchers need to consider their own resources for support and self-care.

Getting started: planning a qualitative project

As with all research, planning a qualitative study involves a sequence of deliberate choices. The focus in qualitative research is on exploration and understanding rather than proving or disproving a hypothesis. Decisions about how to frame the research question, select an appropriate method, and recruit participants determine the type of knowledge that can be generated. In veterinary contexts, where questions often concern the interplay of people, animals, and complex environments, careful planning is essential. A well-designed project requires a clear purpose: researchers must articulate what they seek to explore, why the issue matters, and how it can be approached most effectively.

This section introduces the practical steps involved in initiating a qualitative study. It outlines how to develop a strong research question, select methods that are suited to that question, and consider appropriate sampling strategies. These early decisions form the foundation for a study that is both feasible and capable of providing meaningful insights into the lived realities and challenges of veterinary practice.

In planning and reporting interviews and focus groups, researchers can refer to the *Consolidated Criteria for Reporting Qualitative Research* (COREQ; Tong *et al.* 2007). COREQ provides a 32-item checklist covering researcher reflexivity, study design, and reporting transparency. Using it during study design – not only at the write-up stage – helps ensure that recruitment, data collection, and analysis decisions are clearly justified and that readers can assess the study's credibility.

Start with a good question

The foundation of any good qualitative or quantitative study is a clear, focused research question. In qualitative research, questions usually invite exploration rather than confirmation. Unlike quantitative research, which asks, "how many?" or "to what extent?", qualitative research inquires "how?" and "why?". These questions reveal experiences, meanings, and decision-making processes within real-world contexts. For instance, instead of asking "What proportion of new graduates feel confident handling client complaints?", a qualitative approach might investigate "How do new veterinary graduates experience and respond to client dissatisfaction?" This shift in framing encourages deeper reflection and allows the complexity of individual experiences to be captured.

Qualitative questions should be open-ended, driven by curiosity, and as far as possible free from assumptions, for example, about what the answers should be. They are often best developed with input from

those closest to the issue. Many researchers collaborate with practitioners and clients to ensure relevance when refining questions. For instance, a study of German veterinarians specialising in hospice care employed interviews to craft questions that captured the balance between professional and personal boundaries in their work (Dürnberger and Springer 2025).

Choose a suitable method

The chosen method should align with the research question. Interviews are the most widely used qualitative tool in veterinary research, enabling participants to share their stories in depth. They are particularly advantageous for building rapport when exploring sensitive topics or making decisions in uncertain situations. Semi-structured interviews, which are guided by key topics but flexible enough to follow the participant's lead, strike a good balance between structure and openness. For example, in a study of veterinarians working in companion animal hospice, interviews revealed complex coping strategies and boundary-setting practices that would be overlooked in structured surveys (Dürnberger and Springer 2025).

Open-ended surveys provide a more scalable alternative. Although they may lack the depth and rapport found in interviews, they are valuable for gathering insights from a broader audience, particularly when anonymity is important or the subject matter is less emotionally charged. For instance, Coe and colleagues (2008) conducted focus groups and open-text surveys to investigate client–veterinarian communication, revealing nuances of empathy, cost discussions, and grief.

Combining methods often produces the best results. Researchers might begin with a survey to identify key themes and then use interviews to explore those themes in greater depth. This type of mixed qualitative design is particularly beneficial in under-researched areas where researchers seek both breadth and depth.

Collect data: sampling

Qualitative sampling is purposive; participants are chosen because they possess experience or insights into the research topic. The aim is not to statistically represent a population but to capture a variety of perspectives. Small sample sizes are typical, often comprising 10–20 participants, but what matters most is that the participants are rich in information and well-positioned to address the research question.

Diversity in sampling can enhance the depth of analysis. This may involve variations in roles, age, gender, practice type, or geographical location. For instance, a Canadian study on veterinarians' mental

health interviewed a mix of urban and rural practitioners, recent graduates and senior veterinarians, ensuring a breadth of perspectives (Campbell *et al.* 2023).

Sampling can also be layered or staged. Researchers might begin with a broad group and then narrow their focus to a subset whose responses warrant closer attention. Snowball sampling, where participants recommend others, can be particularly useful when attempting to recruit from small or specialised groups. For example, a qualitative study on equine veterinarians' job satisfaction in the USA recruited 37 current and former practitioners through convenience and snowball sampling, allowing researchers to capture active and less commonly heard voices in this field (Whitaker *et al.* 2025). This approach is especially valuable when studying niche communities like animal behaviour consultants, regulatory veterinarians, or veterinarians in remote regions, where normal sampling frames may not be available.

Qualitative research is often iterative. Researchers may refine their sampling strategy as they learn more during data collection. This iterative process also applies to data collection methods. Researchers conducting interviews or focus groups may adjust their questions as data collection progresses and new information comes to light. This flexibility enables them to pursue emerging lines of inquiry and adjust to what is most significant for participants.

Thematic analysis: making sense of the data

Once data have been collected, the central challenge of qualitative research is to make sense of it in a way that is both systematic and meaningful. Thematic analysis offers a widely used and flexible approach to identifying and interpreting patterns across qualitative datasets (Braun and Clarke 2021a, 2021b, 2022). It is particularly relevant to veterinary research, where understanding professional experiences, decision-making processes, and client interactions often requires moving beyond description to interpretation.

Why thematic analysis?

Thematic analysis is one of the most accessible and widely used methods for analysing qualitative data. It enables researchers to identify patterns across the data, whether these come from interviews, focus groups, or open-ended survey responses. As a flexible analytic approach, thematic analysis can be applied across different qualitative designs and theoretical perspectives.

Crucially, thematic analysis does not require specialised software or advanced training. While there are software tools that can assist with coding and organising data, meaningful thematic analysis can be carried

out using a simple spreadsheet, highlighters, or index cards. The value is in the quality of the analysis, not the software.

This approach can be used inductively (i.e. with themes developed from the data itself) or deductively (i.e. with themes informed by pre-existing theories or frameworks). Many studies employ both methods, starting with broad concepts but remaining open to what participants say. For example, a survey on veterinary burnout might begin with established constructs such as emotional exhaustion or depersonalisation, but might then discover new interpretations or experiences while analysing the data.

Thematic analysis is particularly well-suited to applied fields, such as veterinary practice, where researchers aim not only to describe experiences but also to inform practical improvements in education, communication, or service delivery.

There are several forms of thematic analysis, which vary in their philosophical assumptions and analytic procedures. The approach described here follows Braun and Clarke's *reflexive thematic analysis* (RTA), which views theme development as an interpretive and iterative process shaped by the researcher's reflexivity (Braun and Clarke 2021a, 2021b, 2022). Other forms of thematic analysis, such as *codebook* or *template analysis* (e.g. King 2012), use more structured frameworks or shared coding among multiple researchers. Depending on the research question and epistemological stance, these alternative approaches may sometimes be more suitable (Box 2).

Box 2. Different forms of thematic analysis

Reflexive thematic analysis: Themes are constructed through researcher interpretation and reflexive engagement (Braun and Clarke 2021a, 2021b, 2022).

Codebook or coding reliability thematic analysis: Uses predefined codes and seeks inter-coder consistency; useful for larger teams or structured projects.

Template analysis: Organises data around a hierarchical coding template that can be revised iteratively (e.g. King 2012).

Six phases to reflexive thematic analysis

This section has been adapted from Braun and Clarke (2022); examples are provided to show application to veterinary research.

Reflexive thematic analysis provides a flexible and accessible way to analyse qualitative data, especially useful for practice-based research in veterinary contexts. RTA is more than just a mechanical coding exercise; it involves interpretation and meaning-making (Braun and Clarke 2021a, 2021b, 2022). It acknowledges that themes are not passively "discovered" but actively constructed by the researcher through an iterative and reflective process with the data.

Although presented in six distinct phases, reflexive thematic analysis is inherently recursive. Researchers often move back and forth between phases, deepening their understanding and refining their interpretations as the process unfolds (Box 3).

Box 3. Key tasks when performing reflexive thematic analysis

Adapted from Braun and Clarke (2021a, 2021b, 2022)

Familiarisation with the data

- Reading or listening to the material multiple times;
- Annotating ideas, reflections, and notable phrases;
- Recording initial observations in reflexive notes or analytic memos.

Generating initial codes

- Highlighting segments of the data that seem significant or thought-provoking;
- Creating short, descriptive or conceptual codes that capture key ideas;
- Applying multiple codes where appropriate;
- Using reflexive notes to track decision-making, insights, and analytic shifts.

Constructing initial themes

- Reviewing and clustering related codes into thematic groups;
- Identifying a core organising concept that gives each theme meaning;
- Mapping connections between codes, subthemes, and themes;
- Drafting tentative descriptions of what each theme captures.

Reviewing themes

- Returning to the coded data extracts for each theme to assess consistency;
- Checking whether each theme captures a meaningful pattern across cases;
- Re-examining the dataset to ensure important data have not been overlooked;
- Clarifying distinctions between themes to avoid overlap or redundancy.

Defining and naming themes

- Writing concise analytical summaries of each theme;
- Identifying the central organising concept and how it shapes interpretation;
- Renaming themes for clarity, specificity, and resonance;
- Documenting why certain themes were prioritised or reframed.

Producing the report

- Introducing the rationale for using reflexive thematic analysis;
- Presenting each theme with supporting data extracts and analytical commentary;
- Situating findings within the broader context of the research question and relevant literature;
- Reflecting on the researcher's influence and standpoint in shaping the analysis.

Phase 1: familiarisation with the data

The analytical process starts with thorough immersion in the data (Braun and Clarke 2021a, 2021b, 2022). Whether sourced from interviews, focus groups, or open-text surveys, the data must be read and re-read to build familiarity with both content and context. This phase helps the researcher notice both obvious content and subtler details, such as tone, pace, or hesitation. For example, a veterinary nurse's comment that "we just get on with it – it's not our place to question" might point to themes related to team hierarchy, moral agency, or emotional silencing. Unlike more structured approaches, RTA encourages researchers to engage with the material subjectively and thoughtfully.

Personal reactions, surprises, and emotional responses are regarded as valuable analytical resources.

Phase 2: generating initial codes

In this phase, the researcher systematically identifies features of the data that seem meaningful or relevant to the research question (Braun and Clarke 2021a, 2021b, 2022). Coding is an active, interpretive process in which the researcher labels aspects of the data in ways that reflect their evolving understanding of it.

For example, a comment such as “I hate when I have to prioritise economics over ethics – it makes me feel complicit” might be coded as *moral discomfort*, *economic constraints*, and *professional compromise*. These codes are provisional and adaptable, evolving as familiarity with the data increases. RTA does not aim for consistency across multiple coders. Instead, it prioritises transparency about how the researcher’s theoretical stance and lived experience influence the coding process.

Phase 3: constructing initial themes

Once a set of codes has been generated, the researcher begins to organise them into potential themes. A theme reflects a shared pattern of meaning that addresses the core concerns of the research, i.e. the research question. Themes are not merely summaries of topics, but interpretive stories crafted by the researcher (Braun and Clarke 2021a, 2021b, 2022).

For example, codes such as avoiding emotional conversations, not debriefing after euthanasia, and colleagues not talking about feelings might form a candidate theme titled *The culture of emotional containment*. This theme reflects not only what participants said but also how meaning was constructed within a specific professional context. Themes are determined by relevance and richness, not frequency. A single vivid account can carry more analytical weight than multiple surface-level comments.

Phase 4: reviewing themes

Themes are then refined and tested against the dataset to ensure they are analytically robust and well-supported (Braun and Clarke 2021a, 2021b, 2022). This process may involve reworking boundaries, collapsing similar themes, or discarding those that lack coherence. For example, a theme initially labelled *Veterinary stress* might be revised into two separate themes: *Moral fatigue in ethical grey zones* and *Invisible pressures in client relationships*. This phase enhances both conceptual clarity and depth.

Reviewing themes provides an opportunity to strengthen the analytical narrative. It ensures that the information shared with readers is both data-based and analytically compelling.

Phase 5: defining and naming themes

With the thematic structure in place, each theme is further developed and clarified (Braun and Clarke 2021a, 2021b, 2022). This involves explaining what the theme is about, what it includes and omits, and how it connects to the overall research question. This phase also provides an opportunity to review reflexive notes and ensure that the final themes accurately reflect a transparent and thoughtful engagement with the data. For example, a theme titled *Stress* might be more effectively called *Absorbing the emotional weight of ethical decisions* if this better captures the main story. Clear naming helps readers to quickly understand the analytic focus and stops themes from becoming vague or too broad.

Phase 6: producing the report

The final phase involves creating a clear, interpretive account of the data and presenting it in line with the study’s aims and research question (Braun and Clarke 2021a, 2021b, 2022). Thematic analysis goes beyond just listing quotes; it includes developing an analytical narrative that combines data, interpretation, and reflexive awareness. For example, a report on *Navigating ethical uncertainty in rural practice* might include participant quotes that illustrate both practical decision-making and underlying emotional tensions, along with a discussion of the structural pressures and normative assumptions that shape these experiences.

In qualitative reporting, participant quotations are used to illustrate and support the researcher’s interpretation, not to replace it. A results section composed primarily of unelaborated quotations lacks the necessary analytic commentary that links data to themes and interpretation.

Throughout the write-up, transparency about the analytic process is vital. Readers should understand how the researcher progressed from raw data to interpretive insight.

This six-phase approach provides a structured yet adaptable way to analyse qualitative data. It promotes both analytical rigour and creative insight, which are vital when engaging with the messy, complex realities of lived experience.

Common misconceptions

Despite its accessibility, reflexive thematic analysis is often misunderstood, especially by those new to qualitative research or approaching it from a quantitative perspective. Two misconceptions are particularly common, and both can compromise the rigour and integrity of the analysis if they go unaddressed.

The first is the idea that themes *emerge* from the data as if they are already waiting to be discovered. This view suggests that with enough reading, the “right” themes will naturally reveal themselves to the researcher. However, reflexive thematic analysis is

not a passive process. Themes do not exist independently within the data; they are actively *created* through careful engagement, comparison, and interpretation. The researcher plays a key role in deciding what is important, making connections, and choosing the best way to show meaning. Treating themes as pre-existing can hide the effort involved in interpretation and create a false sense of objectivity.

The second misconception relates to the researcher's role. In quantitative paradigms, the researcher's neutrality is often assumed. Conversely, reflexive thematic analysis openly recognises that the researcher's positionality in relation to the research topic, experiences, and assumptions influences every phase of the process. Researchers are not neutral observers but active participants in meaning-making. Their disciplinary background, professional role (e.g. veterinarian, educator, or policy advisor), and personal experiences inevitably shape what they notice, how they code, and how they interpret themes. Far from being a flaw, this subjectivity enhances reflexive thematic analysis. It ensures the analysis remains grounded in real-world contexts and responsive to the complexity of lived experience. However, the subjective nature of interpretation means that analysis of the same set of qualitative data may produce different results with different researchers. Credibility can be strengthened when multiple researchers code separately, declare their positions, and then reach consensus on themes.

Recognising potential misconceptions and addressing them through open and reflective practice is essential for producing credible and insightful qualitative research. In veterinary settings, where professional roles and relationships can influence both data collection and interpretation, being transparent about the researcher's influence is not only methodologically sound but also ethically important (Box 4).

Box 4. Pitfalls to avoid in qualitative research

- Overgeneralising: small, non-random samples are not meant to speak for everyone.
- Overfactualising: themes are interpretations, not facts.
- Insufficient transparency: readers need to know how researchers developed their themes.
- Ignoring diversity: if researchers only sample similar participants, they will get narrow findings.
- Over-relying on artificial intelligence: these tools can be valuable for transcription but are not suitable for data coding or interpretation; their analyses risk being drawn from the internet as a whole at least as much as from the specific data provided.
- Underestimating the time: transcription and analysis are labour-intensive.

Practical tool

To help put these principles into practice, a simple checklist is provided as Supplementary Material: *Can we trust this qualitative research?* This tool summarises

key points to consider at each stage of a study, from framing the research question through to reporting. It is designed for everyday use and should be frequently consulted by the researcher while planning, analysing, and writing up qualitative projects. It complements existing frameworks such as Braun and Clarke's *One size fits all? What counts as quality practice in (reflexive) thematic analysis?* (Braun and Clarke 2021b) and their *20 Questions for Thematic Analysis* checklist, available on the authors' textbook website.¹

Conclusion: making room for complexity

Qualitative methods complement rather than compete with quantitative research. They add depth to veterinary evidence by explaining how and why people think, act, and decide, providing insights into client behaviour, team dynamics, and professional reasoning. These tools are accessible and do not require specialist training. With a clear question, curiosity, care for participants, and a structured approach, veterinarians and researchers can use interviews, focus groups, surveys, and reflexive thematic analysis to generate useful findings. Making room for this complexity builds a more balanced evidence base that supports better communication, care, and systems in everyday veterinary work.

Note

Examples supported by citations are drawn from the published literature. Examples without citations, usually illustrating suboptimal practice, are based on situations encountered in our professional work. These are not entirely fictional but are not attributed to a specific source.

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¹<https://study.sagepub.com/thematicanalysis/student-resources/20-questions>

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