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Qualitative research: Criteria of evaluation

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Abstract
Qualitative research is not evaluated based on the criteria used in quantitative research. Qualitative researchers reject the criteria of evaluation used by quantitative researchers. Quantitative researchers use the criteria of reliability, validity, and generalizability for evaluation. Qualitative researchers have developed alternative criteria for evaluation based on the research methodology followed and some other dimensions. These criteria include various dimensions of rigor, ethical integrity, and artistry. Various researchers have suggested a number of criteria for evaluation in qualitative research. The study reviews the range of evaluation criteria available in qualitative research from different perspectives. The study argues that the choice of evaluation criteria cannot be arbitrary and needs to be compatible with the nature of research question. It depends on methodology, aims, and assumptions of the research. Based on arguments, qualitative researchers are urged to select the criteria for evaluation with caution and only after considering all the aspects of research.

Keywords: qualitative research, evaluation criteria, rigor, integrity, generalizability

Introduction

Qualitative research is an important type of research which is used when statistical or quantitative approach is not helpful in arriving at relevant findings (Corbin and Strauss, 1990). It is a type of research that produces findings not arrived at by statistical procedures or by other means of quantification. Some of the data collected in qualitative research may be quantified, but the bulk of the analysis is interpretative. So, it can have different meanings for different people. For this reason, it becomes difficult in qualitative research to come to a common conclusion. Since one of the problems in qualitative research is to arrive at a common conclusion, one of the biggest challenges confronting qualitative researchers is how to ensure quality and trustworthiness of their research. It is all too easy to hope that the quality of research results in 'knowledge claims that are so powerful and convincing in their own right that they carry the validation with them, like a strong piece of art' (Kvale, 1996) [18]. In reality, it is difficult to argue and justify the criteria for evaluation of qualitative research. Qualitative researchers need to justify their research, otherwise academicians regard qualitative research as 'merely subjective assertion supported by unscientific method' (Ballinger, 2006) [1]. Qualitative researchers need to demonstrate the value and integrity of their research. For achieving this, qualitative researchers need to develop criteria for evaluation and need to confirm validity and reliability of their research. They also need to see that if the evaluation criteria for qualitative research differ from that for quantitative research, then they need to determine what those evaluation criteria should be. Otherwise, it might be difficult to convince skeptical audiences, funding bodies, and ethical panels.

The traditional approaches used for evaluating quantitative research are reliability, validity, and generalizability. The same evaluation criteria might not hold true for qualitative research (Baxter, 2009). [2] In qualitative research, the evaluation criteria are based on trustworthiness, credibility, dependability, conformability, transferability, and authenticity (Lincoln and Guba, 1985).

The paper reviews the alternative criteria which have been proposed by different qualitative researchers. It also tries to consider how researchers might make appropriate choices from this range of alternatives. The paper argues that the criteria adopted must be compatible with the specific nature of the research problem. The problem will guide the choice of methodology, aims, and epistemological assumptions. Based on the above-mentioned issues, the evaluation criteria need to be decided.

Traditional evaluation criteria for research

The general criteria used for evaluation of quantitative research are those of reliability, validity, and generalizability. The above concepts provide a basic framework for conducting and evaluating traditional quantitative research.

Reliability refers to the proportion of variance attributable to the true score of the latent variable (DeVellis, 2003). A measure is reliable to the extent that independent but comparable measures of the same trait or construct of a given object agree. Reliability depends on how much of the variation in scores is attributable to random or chance errors (G.A. Churchill, 1979). Reliability is usually determined based on internal consistency. Internal consistency reliability is concerned with the homogeneity of items (DeVellis, 2003). This indicates that reliability is more concerned with the consistency of the means of data collection. This is largely irrelevant in case of qualitative research. Qualitative research does not look for consistency and so, does not aim to attain consistency. Qualitative research aims to collect and analyze the responses of a participant at a specific time, place, and

context. It also assumes that situations may not be exactly replicated. For example, the results obtained based on analysis of a specific interview may depend on the researcher's approach and the interactions among the researcher and the participants in that specific context and situation. The results might not be replicable in other contexts and situations. Another researcher, or even the same researcher, interviewing the same participant in a different situation and context may not come with exactly the same results.

Validity refers to the degree to which the research truly measures what it is supposed to measure and nothing else. A measure is valid when the differences in observed scores reflect true differences on the characteristic one is attempting to measure and nothing else (G.A. Churchill, 1979). This criterion assumes that the phenomenon being investigated is invariant in an undisputed and objective sense. However, qualitative researchers view this as inappropriate. In qualitative research, as has been already discussed previously, results obtained from the analysis of one interview may differ substantially from the results obtained from the analysis of another interview. Qualitative research involves subjective interpretations delivered by both participants and researchers. Analysis of one interview or focus group in qualitative research may open up a limitless field of possible interpretations (S.D. Churchill, 2000).

Generalizability indicates whether the findings from a specified sample can be extrapolated to the wider population (Sweeney and Soutar, 2001). In qualitative research, as already discussed above, researchers do not seek to extrapolate the findings from a specified sample to a wider population. Contrary to that, qualitative researchers are keen to understand how the findings from a specific interview or focus group might be transferred and applied on other individuals in a different set of contexts and situations. Overall, qualitative researchers are more interested in the depth and in the richness of data rather than mere generalizability of data. So, qualitative researchers are not interested in a random sample like quantitative researchers. They do purposive sampling and choose those respondents who can add to the depth and the richness of data.

Based on the above arguments, it can be understood that for qualitative researchers, the integrity of the research process and the quality of the results would seem to require evaluation criteria of a different order – criteria that are responsive to ideals and goals of qualitative research. The criteria would need to allow the researchers to acknowledge and know the complexity of data interpretation which reflect the lives of the participants (Savin-Baden and Fisher, 2002).

The criteria for evaluation in qualitative research need to be explicit so that strengths and limitations of the research are understood. Also, critical thoughtfulness and rigor become embedded in the research approach. This also helps in the research being transparent. Finlay (2003) has emphasized that it is important for researchers to state their research criteria explicitly and reflexively.

Based on the above arguments, it can be well understood that it is important to analyze qualitative research based on the specified evaluation criteria. However, qualitative researchers have divergent opinions regarding the choice of evaluation criteria (Willig, 2001). Researchers have also noted that the issue of quality criteria is not well resolved and needs further criticism (Guba and Lincoln, 1994).

Evaluation criteria in qualitative research

Researchers have tried to find a suitable criterion for evaluating qualitative research. Developing criteria for evaluating qualitative research becomes important because qualitative research is not evaluated based on reliability, validity, and generalizability as done for quantitative research. The above point has already been emphasized upon in the previous section. Qualitative researchers differ in their views on the evaluation criteria for qualitative research (Seale, 1999). Researchers generally agree that research needs to be trustworthy and should demonstrate both rigor and relevance. Trustworthiness represents the validity of research as done in quantitative research. Rigor represents the process of arriving at the results and relevance represents whether the end-results are relevant or not.

Lincoln and Guba (1985) have proposed four criteria for evaluation of qualitative research. These include internal validity, external validity, reliability, and objectivity. The above-mentioned four criteria were described by them as credibility, transferability, dependability, and conformability.

Credibility refers to the believability or the truth in research findings. Lincoln and Guba (1985) focus to the extent findings make sense. Participants might be given the interview transcripts and the research reports and might be asked to either agree or disagree with them. This check tries to ensure the credibility of the findings. Credibility can also be achieved by persistent observation and triangulation of data. Credibility helps in ensuring internal validity of the research findings. Credibility can also be built through prolonged engagement in the field, persistent observation, and triangulation of data.

Transferability refers to whether the results obtained from the analysis can be applied to other settings and contexts. This acts as a check for external validity of the findings. In qualitative research, researchers provide a detailed description of the settings and the context in which research is conducted. This is done to give the readers enough information to judge the applicability of the findings to other settings.

Dependability refers to the idea of reliability as applied in quantitative research. A measure is reliable when independent but comparable measures of the same trait or construct of a given object agree. Reliability depends on how much of the variation in scores is attributable to random or chance errors (G.A. Churchill, 1979). Reliability cannot be checked in qualitative research as it is done in quantitative research. Qualitative researchers ensure dependability by having proper documentation of data, methods, and taking proper decisions about research.

Conformability refers to the objectivity of research during data collection and data analysis. There needs to be congruency between two or more independent persons about the accuracy, relevance, or meaning of the data (Polit and Beck, 2012). Conformability also indicates a means to demonstrate quality. Analysis of the methodology used in the research might be emphasized upon by the researcher to establish conformability. Techniques such as triangulation (of data, researcher, and context) can also be useful tools of conformability.

Different types of studies require different types of evaluation criteria. For example, ethnographic studies need to be judged based on plausibility and credibility, and also its relevance (Hammersley, 1992). Also, the intensity of application of the evaluation criteria need to be adjusted based on the target audience. For example, in the field of medicine, more detailed engagement with the evidence might be required than it is required in other cases.

Researchers have also identified other attributes for evaluation of qualitative research. Henwood and Pigeon (1992) identified seven attributes for the evaluation of qualitative research. They are mentioned below.

1. Researchers develop categories and sub-categories from the concepts which emerge after the analysis. Data collected by the researchers need to fit into the categories and sub-categories which are formed. This is called the *importance of fit*. Researchers demonstrate this by clearly showing how the different categories and sub-categories emerge from the available data.
2. A set of well-developed concepts related through statements of relationship need to emerge. They together constitute an integrated framework that can be used to explain or predict phenomena. This is called *integration of theory*. The relationships among the units of analysis and the degree to which they can be integrated or generalized need to be discussed.
3. *Reflexivity* refers to the role which the researcher plays in every aspect of the qualitative research analysis.
4. Qualitative research analysis will not be of any value if the entire process is not properly documented. *Documentation* might refer to the use of words to describe an event, a piece of scenery, a scene, an experience, an emotion, or a sensation. It will also depend on the perspectives of the person doing the depicting.
5. The researcher needs to continuously develop and modify any emerging theory. Sampling needs to be done on the basis of emerging concepts, with the aim being to explore the dimensional ranges or varied conditions along which the properties of the concepts vary. Also, the cases which do not fit well with the theory developed need to be analyzed because they might generate new knowledge.
6. In qualitative research, viewpoints expressed by the participants are the most important. Researchers might interpret the collected data differently from the viewpoints expressed by the participants. So, it is important to explain any differences which might arise between the interpretations of the researchers and those of the participants.
7. The research results obtained need to have applications beyond the particular research context. This is ensured by transferability of the research findings. *Transferability* requires that the raw data and the results obtained may be extrapolated to other similar situations and conditions. This means that the findings can be generalized or transferred to other settings or groups.

Researchers have argued that criteria concerned with conformability and accuracy are meaningless (Madill *et al*., 2000). They propose three alternative criteria. These are internal coherence, deviant case analysis, and reader evaluation. Internal coherence requires that the analysis is logically connected without contradictions. Deviant case analysis involves considering extreme examples and relates to showing the context and limits of any emerging theory. Reader evaluation requires that the reader on going through the analysis should be able to arrive at their own conclusions and those conclusions should not deviate to a great extent from the conclusions arrived at by the researchers. This also relates to the reader's understanding and insights into the analysis. Verbatim quotations or extracts from the data might be provided to the readers to allow them to arrive at their own interpretations. These interpretations might then be compared with those arrived at by the researchers.

Researchers have also suggested that qualitative research is more of an art than science. So, several literary dimensions have been suggested for the evaluation of qualitative research. Some of these dimensions are substantive contribution, aesthetic merit, reflexivity, impact, and expression of a reality (Richardson, 2000). This is more important for ethnographic studies. Ethnography is both a science and an art. It is scientific in the sense of being true to a world known through the empirical senses and art in the sense of expressing what one has learned through evocative writing techniques and form (Richardson, 2000).

Bochner (2001) has also emphasized on the need of more art for laying stress on ethical dimensions. Sociological research cannot be evaluated based on methodological rigor only but also on ethical, political, and personal sociology that listens to the voices of ill, disabled, and other silenced persons in order to empower, engage emotionally, and give sociology a moral and ethical centre (Bochner 2001). The evaluation criteria for qualitative research mentioned by Bochner (2001) are:

a. Detail, of the commonplace, of feelings as well as facts.
b. Narratives that are structurally complex and take account of time as it is experienced.
c. A sense of the author, their subjectivity, and 'emotional credibility'.
d. Stories that tell about believable journeys through the life course.
e. Ethical self-consciousness: respect for others in the field, and for the moral dimensions of the story.
f. A story that moves the reader at an emotional as well as rational level. (Green and Thorogood, 2004)

The artistic dimension has also been focused upon by researchers like Polkinghorne (1983). He proposed the dimensions of vividness, accuracy, richness, and elegance to judge the power and trustworthiness of phenomenological research.

The power and art of qualitative research has been clearly explained by Bochner (2001), Madill *et al*. (2000), Richardson (2000), and Polkinghorne (1983). The dimensions for evaluation criteria mentioned by them reflect the art involved in qualitative research. Apart from trustworthiness and richness of data, the contribution of qualitative research lies in the fact that it depicts the ambiguity of experiences, the diversity and complexity of the social world. Qualitative research can, and should be judged on its ability to 'draw the reader into the researcher's discoveries allowing the reader to see the worlds of others in new and deeper ways' (Finlay,

2006a).

Qualitative research may also be evaluated based on the criteria developed by Finlay (2006a). The criteria are mentioned below.

1. **Clarity:** It needs to be seen whether the research makes sense. It also needs to be checked whether the research is systematically worked, and whether it is described thoroughly, coherently, and clearly.
2. **Credibility:** Credibility requires that the respondents identified for participating in the research must be true representatives who can throw light upon the phenomenon accurately. It also depends on the extent to which the findings match with the evidence and are convincing. The author needs to make logical arguments, and rigorous analysis which can be open to external audit. The interpretations made by the researchers need to be logical, plausible, and justified. The readers should be able to follow the conclusions reached by the researchers even though the readers might disagree with the conclusions.
3. **Communication:** The research findings need to be communicated in a manner so that the readers are attracted towards them. Readers should be able to connect their own experiences and understandings with the research findings.
4. **Contribution:** The research needs to add to the existing knowledge in the field of qualitative research. The research findings should address some aspects of human social life. It needs to enrich the understanding of human living conditions. The research should be able to act as a guide for future actions. It needs to provide a direction based on which future research can be conducted.

The above discussions emphasized the range of criteria based on which qualitative research may be evaluated. All the above criteria emphasized the importance of rigor and trustworthiness in qualitative research. The criteria mentioned require research to be coherent and logical, systematic, and to show integrity. The research needs to be relevant as emphasized in the criterion on contribution. The research also needs to create an impact on the society. It is also emphasized that qualitative research is more of an art than science. It should allow the readers to explore the impact and social relevance of the findings. The criteria should also help the readers to evaluate the strengths and weaknesses of the research conducted.

Choice of evaluation criteria for different qualitative research methodologies

There are a number of available methodologies which are followed in qualitative research. Some of them are grounded theory, psychoanalysis, and phenomenology. Each of the methodologies varies considerably in its aims and assumptions. As a result, it is evident that the evaluation criteria for each of the methodologies will be different (Finlay, 2006b).

Sometimes the use of a multiple-strategy approach might increase the conceptual density of the findings. Credibility of the findings might be established by conducting focus groups with the participants or with discussions with other researchers. This also helps in enhancing the transferability of the research to other settings and conditions (Goodacre, 2006). Researchers have also agreed that ethics is an important criterion for evaluation in qualitative research. This might be important when the research deals with disabled people or people from socially backward or disadvantaged classes. In such cases, understanding among researchers helps to maintain integrity, credibility, and trustworthiness of research (Curtin, 2006; Curtin and Clarke, 2005). It also ensures that the voices of people are heard. However, it sometimes becomes difficult to maintain these aspects during the writing phase of the analysis, and also to maintain the extent to which the concerned people were represented in the research.

The impact of methodology can be clearly visible in some studies. In one study done by Steward (2006), both quantitative (survey-based) and qualitative (phenomenological interview) methods were used. Validation was checked through triangulation and validation based on participants. However, the two methodologies produced contradictory results. This was because participants differed in their responses to surveys and interviews. This might provide an opportunity for the researcher to introspect the reasons for obtaining different results. This might also act as an opportunity for the researcher to analyze the multiple perspectives and alternative constructions.

Researchers have linked evaluation criteria with epistemology. Ballinger (2006) [1] has proposed four criteria for the evaluation of qualitative research. These criteria are coherence, evidence of systematic and careful research conduct, convincing and relevant interpretation, and sensitivity to the role played by the researcher. Again, it has been urged that the researcher needs to be realistic in applying the above-mentioned evaluation criteria. Realistic epistemologies will show evidence of being systematic and scientific. Researchers conducting research based on grounded theory, phenomenology, conversion analysis, and ethnography are expected to draw their conclusions based on specified and realistic procedures which ensure trustworthiness. On the other hand, researchers involved in relativist approach (for example, discourse analysis) will tend to value more reflexive modes which focus on multiple understandings and interpretations.

Coherence represents the extent to which the aims and methods of a piece of research match and link to the way the researchers account for their role. Evidence of systematic and careful research conduct depends on the methodology adopted. For example, it is important in participatory research that researchers think through their relationships with the participants and also consider the ethical issues relating to the selection of participants and their preparation to act as co-researchers. Convincing and relevant interpretation also depends on the methodology adopted. For example, in discourse analysis, it is important that the researchers present their work to a variety of different audiences to evaluate how compelling their explanations are. Finally, researchers need to be sensitive in the specific role played by them. The research methodology adopted by the researcher needs to be consistent with the requirements of the research problem. The researcher needs to be objective and should provide a transparent description of the methodology. The researcher also needs to

highlight different perspectives of the research findings. The choices made by the researcher for determining the evaluation criteria are interlinked with the nature of the research conducted. The nature of research depends on methodology, aims, and assumptions. As mentioned earlier, researchers might adopt a realist approach or a relativist approach. Researchers adopting realist approach usually favor evaluation criteria proposed by Lincoln and Guba (1985) and Henwood and Pigeon (1992). Researchers adopting relativist approach favor evaluation criteria proposed by Richardson (2000) and Bochner (2001). Researchers adopting relativist approach appreciate rigor and seek to provide evidence of systematic work.

The above evaluation criteria are merely suggestive and it depends entirely on the researchers which evaluation criteria will be chosen. The intensity, rigor, ethical integrity, and artistry will be determined by the researchers. The evaluation criteria might also change depending on the requirements of the situation and the context. The most important aspect in qualitative research is perhaps transparency or honesty as proposed by Savin-Baden and Fisher (2002). Qualitative researchers have a responsibility to make their epistemological position clear, conduct their research in a manner consistent with that position, and present their findings in a way that allows them to be evaluated properly (Madill *et al*., 2000).

Conclusion

Researchers have developed different forms of evaluation criteria for qualitative research. This article reviewed some of those criteria which may help to ensure the quality, integrity, rigor, and relevance of qualitative research. Qualitative researchers need to apply the suitable evaluation criteria based on the specific research at hand and the appropriateness of the evaluation criteria in the specific situation and context. As it has been emphasized in the discussions, different types of evaluation criteria are available and some of the criteria are overlapping. Researchers need to choose the appropriate evaluation criteria based on the different assumptions and the methodologies adopted. If the research is aiming to be objective and systematic, then rigor needs to be operationalized through member checking and triangulation. In case of persuasiveness, researchers need to demonstrate trustworthiness and credibility by providing sufficient evidence. This can be done by providing quotations or methodological audit or by making a case which is firmly grounded in theory. If the researchers want to empower others, then they need to explicitly address ethical and power dimensions. Researchers need to decide whether rigor, ethical integrity, or artistry is important. Based on that, researchers might choose triangulation, participant validation, or reflexivity. Researchers need to demonstrate that they are critical about the methodological and epistemological issues. This can be achieved by researchers through proper choice of criteria and means for evaluation of qualitative research. Only then the strengths and robustness of qualitative research will be ensured.

References

1. Ballinger C.Demonstrating rigor and quality? In: L. Finlay and C. Ballinger (Ed.) Qualitative research for allied health professionals: challenging choices. Chichester, East Sussex: John Wiley. 2006.
2. Baxter J. Content analysis'. In: R. Kitchin and N. Thrift (Ed.), International encyclopedia of human geography. Oxford, UK: Elsevier, 2009; 1:275-280.
3. Bochner AP. Narrative's virtues', Qualitative Inquiry, 2001; 7(2):131-156.
4. Churchill GA. A paradigm for developing better measures of marketing constructs', Journal of Marketing Research, 1979; 16(1):64-73.
5. Churchill SD. Phenomenological psychology'. In: A.D. Kazdin (Ed.), Encyclopedia of psychology. Oxford: Oxford University Press. 2000.
6. Corbin J Strauss, A Grounded Theory Research: Procedures, cannons, and evaluative criteria, Qualitative Sociology, 1990; 13(1):3-21.
7. Curtin M. Using biographical research with disabled young people'. In: L. Finlay and C. Ballinger (Eds.), Qualitative research for allied health professionals: challenging choices. Chichester, East Sussex: John Wiley. 2006.
8. Curtin M, Clarke G. Living with impairment: learning from disabled young people's biographies', *The British* Journal of Occupational Therapy, 2005; 68(9):401-408.
9. De Vellis RF. Scale Development Theory and Applications (2nd ed.). Applied Social Research Methods Series Thousand Oaks, CA: Sage Publications. 2003, 26.
10. Finlay L. The reflexive journey: mapping multiple routes'. In: L. Finlay and B. Gough (Eds.) Reflexivity: a practical guide for researchers in health and social sciences. Oxford: Blackwell Publishing. 2003.
11. Finlay L. Qualitative research towards public health'. In: K311 Block 2 *Researching Health*. Milton Keynes, B Ckinghamshire: The Open University. 2006a.
12. Finlay L. Mapping methodology'. In: L Finlay and C Ballinger (Eds.) Qualitative research for allied health professionals: challenging choices. Chichester, East Sussex: John Wiley. 2006b.
13. Goodacre L. Women's perceptions on managing chronic arthritis', The British Journal of Occupational Therapy, 2006; 69(1):7-14.
14. Green J, Thorogood N. Qualitative methods for health research. London: Sage. 2004.
15. Guba GG, Lincoln YS. Competing paradigms in qualitative research'. In: N K Denzin and Y Lincoln (Eds.) Handbook of qualitative research. Thousand Oaks, CA: Sage. 1994.
16. Hammersley M. What's wrong with ethnography?. Methodological explorations. London: Routledge. 1992.
17. Henwood KL, Pigeon NR. Qualitative research and psychological theorising, British Journal of Psychology, 1992; 83(1):97-112.
18. Kvale S. InterViews: an introduction to qualitative research interviewing. Thousand Oaks: Sage. 1996.
19. Lincoln YS, Guba E. Naturalistic enquiry. Beverley Hills, CA: Sage. 1985.
20. Madill A, Jordan A, Shirley C. Objectivity and reliability in qualitative analysis: realist, contextualist and radical constructionist epistemologies', British Journal of Psychology, 2000; 91:1-20.

21. Polkinghorne D. Methodology for the human sciences. Albany: Suny Press. 1983.
22. Polit DF, Beck CT. Nursing research: Principles and methods. Philadelphia, PA: Lippincott Williams & Wilkins. 2012.
23. Richardson, L. The consequences of poetic representation'. In: C Ellis and M Flaherty (Eds.) Investigating subjectivity. Thousand Oaks, CA: Sage. 2000.
24. Savin-Baden M, Fisher A. Negotiating 'Honesties' in the Research Process, British Journal of Occupational Therapy, 2002; 65(4):191-193.
25. Seale C. The quality of qualitative research. London: Sage. 1999.
26. Steward B. Investigating invisible groups using mixed methodologies'. In: L Finlay and C Ballinger (Eds.) Qualitative research for allied health professionals: challenging choices. Chichester, East Sussex: John Wiley and Sons. 2006.
27. Sweeney JC, Soutar GN.Consumer Perceived Value: The Development of a Multiple Item Scale', Journal of Retailing, 2001; 77(2):203-220.
28. Willig C. Introducing Qualitative Research in Psychology: Adventures in Theory and Method. Buckingham: Open University Press. 2001.