The Qualitative Report

Volume 23 | Number 1 How To Article 16

1-26-2018

Inductive and Deductive: Ambiguous Labels in Qualitative Content Analysis

Mohammad Reza Armat
Nursing instructor, PhD candidate in Nursing, Department of Medical-Surgical Nursing, School of Nursing and Midwifery, North Khorasan University of Medical Sciences, Bojnurd, Iran.

Abdolghader Assarroudi
PhD in Nursing, Department of Medical-Surgical Nursing, School of Nursing and Midwifery, Sabzevar University of Medical Sciences, Sabzevar, Iran., assarroudia@medsab.ac.ir

Mostafa Rad
PhD, School of Nursing and Midwifery, Sabzevar University of Medical Sciences, Sabzevar, Iran

Hassan Sharifi
PhD candidate, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran

Abbas Heydari
PhD, Evidence-Based Caring Research Center, Professor, Department of Medical-Surgical Nursing, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran.

Inductive and Deductive: Ambiguous Labels in Qualitative Content Analysis

Abstract

The propounded dualism in Content Analysis as quantitative and qualitative approaches is widely supported and justified in nursing literature. Nevertheless, another sort of dualism is proposed for Qualitative Content Analysis, suggesting the adoption of "inductive" and/or "deductive" approaches in the process of qualitative data analysis. These approaches have been referred and labelled as "inductive" or "conventional"; and "deductive" or "directed" content analysis in the literature. Authors argue that these labels could be fallacious, and may lead to ambiguity; as in effect, both approaches are employed with different dominancy during the process of any Qualitative Content Analysis. Thus, authors suggest more expressive, comprehensive, yet simple labels for this method of qualitative data analysis.

Keywords

Inductive, Deductive, Qualitative Research, Content Analysis

The Qualitative Report 2018 Volume 23, Number 1, How To Article 6, 219-221

Inductive and Deductive: Ambiguous Labels in Qualitative Content Analysis

Mohammed Reza Armat
North Khorasan University of Medical Sciences, Bojnurd, Iran

Abdolghader Assarroudi and Mostafa Rad
Sabzevar University of Medical Sciences, Sabzevar, Iran

Hassan Sharifi and Abbas Heydari
Mashhad University of Medical Sciences, Mashhad, Iran

The propounded dualism in Content Analysis as quantitative and qualitative approaches is widely supported and justified in nursing literature. Nevertheless, another sort of dualism is proposed for Qualitative Content Analysis, suggesting the adoption of "inductive" and/or "deductive" approaches in the process of qualitative data analysis. These approaches have been referred and labelled as "inductive" or "conventional"; and "deductive" or "directed" content analysis in the literature. Authors argue that these labels could be fallacious, and may lead to ambiguity; as in effect, both approaches are employed with different dominancy during the process of any Qualitative Content Analysis. Thus, authors suggest more expressive, comprehensive, yet simple labels for this method of qualitative data analysis. Keywords: Inductive, Deductive, Qualitative Research, Content Analysis

The dualism propounded in Qualitative Content Analysis (QCA), suggests the adoption of “inductive” or “deductive” approaches or modes of reasoning in the process of qualitative data analysis (Elo & Kyngäs, 2008; Mayring, 2014). The label “conventional” is given to QCA when the mode of reasoning is inductive; whereas, the labels “directed,” or “deductive” are assigned when deductive mode is adopted during the data analysis (Hsieh & Shannon, 2005; Mayring, 2000, 2014).

There is a subtle point here that could be misleading. In effect, both modes of inductive and deductive reasoning are simultaneously used in each QCA. Hence, assigning such static labels to QCA could be illogical, inexpressive, and ambiguous. Authors argue that the labels “inductive” or “conventional” are not literally equivalent; additionally, they do not reflect the both modes of inductive and deductive reasoning, inevitably employed in QCA. The same is true for the labels “deductive” or “directed,” which solely denote deductive mode of reasoning. In other words, labelling the QCA as "inductive" or "deductive" would imply that the analyst exclusively chooses one, and only one of the “inductive” or “deductive” reasoning modes during the data analysis.

The inductive (conventional) QCA is used when there is lack of, or limited previous theories or research findings (Elo & Kyngäs, 2008; Hsieh & Shannon, 2005; Mayring, 2000, 2014). In this approach, the analyst's mind is not entirely blank at the beginning of the study; instead, he has the research question(s), study aim(s), and/or some pertinent assumptions, practically directing his analysis (Harding, 2013; Schreier, 2014). This is an instance of deduction. Moreover, as the analysis progresses, new categories will emerge inductively, making tentative hypotheses (Thorne, 2000; Bernard, 2011). The analyst, then, would test or examine these hypotheses during the rest of the analysis process (Neuendorf, 2002). Such

testing, once again, is an instance of deduction. Hence, in what is referred as inductive QCA, the analyst inevitably employs both modes of reasoning, in a way that he/she begins with inductive mode, and as the new categories emerge, he/she uses both approaches, keeping the "induction" dominant.

On the other hand, the analyst uses the deductive (directed/framework) QCA when some views, previous research findings, theories, or conceptual frameworks regarding the phenomenon of interest exist (Elo & Kyngäs, 2008; Hsieh & Shannon, 2005; Mayring, 2014). The researcher begins the analysis, using the pre-existing categories (analysis matrix) imposed by the theory or previous research findings, which is clearly the instance of deduction. However, when some coded segments of the text do not fit the categorization matrix, it is possible for new categories to be "inductively" created or emerged (Elo & Kyngäs, 2008); which is the instance of induction; though it is less dominant than deduction.

As it can be seen, the analyst accomplishes the qualitative data analysis, using both the inductive and deductive approaches, concurrently, but with different dominancy. In other words, the researcher's mind constantly switches between the induction and deduction modes of reasoning during a QCA (Harding, 2013). Thus, authors believe that labelling QCA with the labels "inductive" and/or "deductive" could be fallacious and misleading.

Among the introduced labels of QCA in the literature, "directed" seems to be more justified, because it denotes that the analysis is guided by existing theory or knowledge. Whereas, the label "conventional" is not expressive enough and does not make scientific sense. Having a broad scope of meaning, the latter does not literally convey a definite methodological approach, and could even call to mind the "quantitative" content analysis, because the content analysis traditionally has begun with quantitative approach (Krippendorff, 2004).

In sum, use of labels such as "inductive," "conventional," and "deductive," may cause fallacy in audiences' mind, particularly novice researchers. Application of clarified and precise labels is strongly recommended in the scientific literature. Moreover, labels should not be static, and must be dynamically reconsidered based on the new knowledge, experiences, and perceptions (Meleis, 2011). Therefore, it is imperative to replace current labels of QCA with new comprehensive and expressive, yet simple labels, such as "inductive-dominant QCA" and "deductive-dominant QCA."

References

Bernard, H. R. (2011). *Research methods in anthropology: Qualitative and quantitative approaches.* Walnut Creek, CA: AltaMira Press.

Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, *62*(1), 107-115.

Harding, J. (2013). *Qualitative data analysis from start to finish.* Singapore, Singapore: Sage Publications Asia-Pacific Pte. Ltd.

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277-1288.

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*. Singapore, Singapore: Sage Publications Asia-Pacific Pte. Ltd.

Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research, 1*(2). Retrieved from http://nbn-resolving.de/urn:nbn:de:0114-fqs0002204

Mayring, P. (2014). *Qualitative content analysis: Theoretical foundation, basic procedures and software solution.* Klagenfurt, Austria: GESIS Leibniz Institute for the Social Sciences. Retrieved from http://nbn-resolving.de/urn:nbn:de:0168-ssoar-395173

Meleis, A. I. (2011). *Theoretical nursing: Development and progress.* Tokyo, Japan: Wolters Kluwer Health.

Neuendorf, K. A. (2002). *The content analysis guidebook.* New Delhi, India: Sage Publications India Pvt. Ltd.

Schreier, M. (2014). Qualitative content analysis. In U. Flick (Ed.), *The SAGE Handbook of Qualitative Data Analysis* (pp. 170-183). Singapore, Singapore: SAGE Publications Asia-Pacific Pte. Ltd.

Thorne, S. (2000). Data analysis in qualitative research. *Evidence Based Nursing, 3*(3), 68-70.

Author Note

Mohammad Reza Armat is a Nursing instructor and PhD candidate in Nursing in the Department of Nursing, School of Nursing and Midwifery, North Khorasan University of Medical Sciences, Bojnurd, Iran.

Abdolghader Assarroudi, PhD, is with the School of Nursing and Midwifery, Sabzevar University of Medical Sciences, Sabzevar, Iran. Correspondence regarding this article can be addressed directly to: assarroudia@medsab.ac.ir.

Mostafa Rad PhD, is with the School of Nursing and Midwifery, Sabzevar University of Medical Sciences, Sabzevar, Iran.

Hassan Sharifi, is a PhD candidate in Nursing with the School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran.

Abbas Heydari, PhD, is a Professor with the Evidence-Based Caring Research Center, Department of Medical-Surgical Nursing, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran.

Article Citation

Armat, M. R., Assarroudi, A., Rad, M., Sharifi, H., & Heydari, A. (2018). Inductive and deductive: Ambiguous labels in qualitative content analysis. *The Qualitative Report, 23*(1), 219-221. Retrieved from http://nsuworks.nova.edu/tqr/vol23/iss1/16