

Qualitative Secondary Analysis: A Case Exemplar

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ABSTRACT

Qualitative secondary analysis (QSA) is the use of qualitative data that was collected by someone else or was collected to answer a different research question. Secondary analysis of qualitative data provides an opportunity to maximize data utility, particularly with difficult-to-reach patient populations. However, qualitative secondary analysis methods require careful consideration and explicit description to best understand, contextualize, and evaluate the research results. In this article, we describe methodologic considerations using a case exemplar to illustrate challenges specific to qualitative secondary analysis and strategies to overcome them. *J Pediatr Health Care.* (2017) ■■, ■■-■■■.

KEY WORDS

Critical illness, ICU, qualitative research, secondary analysis

BACKGROUND

Health care research requires significant time and resources. Secondary analysis of existing data provides an efficient alternative to collecting data from new groups or the same subjects. Secondary analysis, defined as the reuse of existing data to investigate a different

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research question (Heaton, 2004), has a similar purpose whether the data are quantitative or qualitative. Common goals include to (a) perform additional analyses on the original data set, (b) analyze a subset of the original data, (c) apply a new perspective or focus to the original data, or (d) validate or expand findings from the original analysis (Hinds, Vogel, & Clarke-Steffen, 1997). Synthesis of knowledge from meta-analysis or aggregation may be viewed as an additional purpose of secondary analysis (Heaton, 2004).

Qualitative studies use several different data sources, such as interviews, observations, field notes, archival meeting minutes, or clinical record notes to produce rich descriptions of human experiences within a social context. The work typically requires significant resources (e.g., personnel effort/time) for data collection and analysis. When feasible, qualitative secondary analysis (QSA) can be a useful and cost-effective alternative to designing and conducting redundant primary studies. With advances in computerized data storage and analysis programs, sharing qualitative data sets has become easier. However, little guidance is available for conducting, structuring procedures, or evaluating QSA (Szabo & Strang, 1997).

QSA has been described as “an almost invisible enterprise in social research” (Fielding, 2004, pg. 98). Primary data are often reused; however, descriptions of this practice are embedded within the methods section of qualitative research reports rather

than explicitly identified as QSA. Moreover, searching or classifying reports as QSA is difficult because many researchers refrain from identifying their work as secondary analyses (Hinds et al., 1997; Thorne, 1998). In this article, we provide an overview of QSA, its purposes, and modes of data sharing and approaches. A unique, expanded QSA approach is presented as a methodologic exemplar to illustrate considerations.

When feasible, QSA can be a useful and cost-effective alternative to designing and conducting redundant primary studies.

TABLE 1. Research question comparison

Primary study	QSA
What is the process of care and communication in weaning LTMV patients from mechanical ventilation?	⇒ What are the defining characteristics and cues of psychological symptoms such as anxiety and agitation exhibited by patients who are experiencing prolonged critical illness?
What interpersonal interactions (communication contacts, extent, and content of communications) contribute to weaning success or are associated with inconsistent/plateau weaning patterns?	⇒ How do clinicians discriminate between various psychological symptoms and behavioral signs?
What therapeutic strategies (e.g., medications/nutrients, use of instruction or comfort measures, rehabilitative treatments) contribute to weaning success or are associated with inconsistent/plateau weaning patterns?	⇒ What therapeutic strategies (e.g., medications, nonpharmacologic methods) do clinicians undertake in response to patients' anxiety and agitation?
What social (patient, family, clinician characteristics) and environmental factors (noise, lighting, room size/arrangement, work pattern, workload) contribute to weaning success or are associated with inconsistent/plateau weaning patterns?	⇒ How do physiologic, social, and behavioral characteristics of the patient influence the clinician's interpretation and management of anxiety and agitation? What contextual factors influence interpretation and management of psychological symptoms and behavioral signs?

QSA TYPOLOGY

Heaton (2004) classified QSA studies based on the relationship between the secondary and primary questions and the scope of data analyzed. Types of QSA included studies that (a) investigated questions different from the primary study, (b) applied a unique theoretical perspective, or (c) extended the primary work. Heaton's literature review (2004) showed that studies varied in the choice of data used, from selected portions to entire or combined data sets.

MODES OF DATA SHARING

Heaton (2004) identified three modes of data sharing: formal, informal, and auto-data. *Formal data sharing* involves the accessing and analyzing of deposited or archived qualitative data by an independent group of researchers. Historical research often uses formal data sharing. *Informal data sharing* refers to requests for direct access to an investigator's data for use alone or to pool with other data, usually as a result of informal networking. In some instances, the primary researchers may be invited to collaborate. The most common mode of data sharing is *auto-data*, defined as further exploration of a qualitative data set by the primary research team. Because of the iterative nature of qualitative research, when using auto-data it may be difficult to determine where the original study questions end and discrete, distinct analysis begins (Heaton, 1998).

AN EXEMPLAR QSA

Below we describe a QSA exemplar conducted by the primary author of this article (J.T.), a member of the original research team, who used a supplementary approach to examine concepts shown but not fully investigated in the primary study. First, we describe an overview of the original study on which the QSA was based. Then, the exemplar QSA is presented to

illustrate (a) the use of auto-data when the new research questions are closely related to or extend the original study aims (see Table 1), (b) the collection of additional clinical record data to supplement the original data set, and (c) the performance of separate member checking in the form of expert review and opinion. Considerations and recommendations for use of QSA are reviewed with illustrations taken from the exemplar study (see Table 2). Finally, discussion of conclusions and implications is included to assist with planning and implementation of QSA studies.

The Primary Study

Briefly, the original study was a micro-level ethnography designed to describe the processes of care and communication with patients weaning from prolonged mechanical ventilation in a 28-bed medical intensive care unit (Broyles, Colbert, Tate, & Happ, 2008; Happ et al., 2007a; Happ, Swigart, Tate, Hoffman, & Arnold, 2007b; Happ, Tate, Swigart, DiVirgilio-Thomas, & Hoffman, 2010). Both the primary study and the QSA were approved by the institutional review board at the University of Pittsburgh. Data were collected by two experienced investigators, and a PhD student–research project coordinator. Data sources consisted of sustained field observations; interviews with patients, family members and clinicians; and clinical record review, including all narrative clinical documentation recorded by direct caregivers.

During iterative data collection and analysis in the original study, it became apparent that anxiety and agitation had an effect on the duration of ventilator weaning episodes, an observation that helped us formulate the questions for the QSA (Tate, Dabbs, Hoffman, Milbrandt, & Happ, 2012). Thus, the secondary topic was closely aligned as an important facet of the primary phenomenon. The close, natural relationship between the primary and QSA research questions is shown in the

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