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Ensuring continuity and credibility of research through audit trail: Guidelines and examples from case studies

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Abstract
There is lack of awareness among investigators to use audit trail as a technique to document the development of research projects and to ensure credibility and continuity of research projects. Therefore the purpose of this paper is to showcase the usage of audit trail as a strategic and congruent method to reflect the rigor and credibility of conducting research for both quantitative and qualitative research. This article explains step by step guidelines using Halpern’s modified audit trail model on two different case studies. The cases were taken from healthcare and higher education sectors. The authors hope with the provision of clear audit procedures and excerpts taken from the cases will encourage researchers to adopt audit trail as a data management strategy and evidence of research trustworthiness.

Keywords: Audit trail, research continuity, trustworthiness, quality assurance, higher education, healthcare.
Qualitative research was initiated to understand social behaviour in its natural setting through lived experiences (Woolf, 2006). The increasing prominence of qualitative research in scientific and educational communities is motivated by the emergence of new social contexts and perspectives due to global diversification. This has led to a strong debate with quantitative researchers about issues in quality management and evidence of validity and reliability. Among the criticisms are qualitative research lacked scientific rigor and credibility associated with traditional quantitative methods (Horsburgh, 2003). This is due to the nature of qualitative research, which is carried out against an ever-changing setting (Barbour, 2001) where continuous reflection and revision of research methods and questions are encouraged (Woolf, 2006). Although there is still a strong reliance on quantitative research methods to provide statistical evidence of research credibility, it is the researcher’s responsibility to persuade the scientific community that the analysis and findings of qualitative investigations are systematic, objective, and valuable (Wolf, 2003).

Concerns were raised on whether the assessment criteria for quantitative research are relevant for qualitative research. Past researches have shown that using quantitative terms to measure the credibility of qualitative research is inappropriate (Morse, Barrett, Mayan, Olson, & Spiers, 2002). Moreover, it is improper to import or translate quantitative terms into measures of credibility suitable for qualitative research (Cutcliffe & McKenna, 2004). There is also difficulty in establishing a consensus on quality criteria since there is no cohesive body of theory or methodology that can describe qualitative research altogether (Rolfe, 2006). Despite this, it is important for qualitative research to have a quality procedure so that it will enable researchers to put forward thorough qualitative studies with stronger or equal value to quantitative studies (Akkerman, Admiraal, Brekelmans & Oost, 2008). There is a debate that qualitative researchers should focus on research rigor which includes the planning and implementation of research rather than the validity and reliability of research (Twycross & Shields, 2005). Rigor also stresses on whether qualitative research is conducted in a logical and systematic manner. Nonetheless, it is important for researchers to know about the quality criteria and management methods for qualitative research. Flynn, Schroeder, and Sakakibara (1994) viewed quality management as a philosophy that emphasizes on the maintenance and continuous improvement of strategies to meet or exceed the standards set by an organizational body or stakeholders. Despite the apparent need for quality management procedures, it is difficult to find appropriate validation techniques within the literature databases (Akkerman, et al., 2008). There is a necessity to look at measures of accuracy and trustworthiness from different perspectives to ensure the worthiness be it qualitative or quantitative findings.

**Trustworthiness as quality criteria for qualitative research**

Guba (1981) identified four aspects of trustworthiness that is appropriate for qualitative research: (a) truth value, (b) applicability, (c) consistency, and (d) neutrality. Truth value is similar to internal validity. In qualitative research, truth value is ascertained from insight of lived experiences as perceived by research participants. Truth value can be described as credibility (Lincoln & Guba, 1985) and should provide precise interpretations of lived experiences that others who share that experience would immediately identify the similarities. If differences are observed, it should clearly show how each theme was derived from the descriptions. The researcher needs to return to the original text to ensure that all conclusions are explained in the researcher’s interpretive scheme (Koch, 1994).

The second aspect of applicability is similar to external validity, which is the transferability of research findings to other contexts. There are disputes that this criterion may be irrelevant since qualitative research is conducted in naturalistic settings with less control over research variables. However, Lincoln and Guba (1985) argued that applicability is addressed if the researcher is able to provide ample descriptive data for comparison.


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Appendix 1

Legend:

HCR: Hospital at Central Region

Pt1 – Pt6: Pre-test and Pilot test
P1 - P38: Patients' interview questionnaire
D1 - D9: Doctors' interview questionnaire
D11 : Diary of events (HCR)

D12 : Diary of events (HSR1)
D13 : Diary of events (HSR2)
C1 : Critical Incident
R1 – R3 : Reflective Thought

01 : Observation (HCR) – Notices
02 : Observation (HCR)
03 : Observation (HSR) – Notices
04 : Observation (HSR)