

## The Need for Best Practices

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- ❖ **Mixed methods research in the health sciences:** A priority exists in health science research to develop new methodologies to improve the quality and scientific power of data that is leading to an extraordinary surge in methodological diversity. This diversity reflects the nature of the problems facing public health, such as disparities among populations, age groups, ethnicities, and cultures; poor adherence to treatment thought to be effective; behavioral factors contributing to disability and health; and translational needs for health research. The diversity also signals a growing acceptance of qualitative and social science research, the formation of interdisciplinary research teams, and use of multi-level approaches to investigate complicated health problems, such as the patient's point of view and cultural and social models of illness and health.

Contributing to this interest has been the increased methodological sophistication of mixed methods research in the social and behavioral sciences. NIH-funded investigators are using research approaches, such as in-depth interviews, field observations, and patient records to understand individual experiences, participant involvement in interventions, and barriers to and facilitators of treatment. These approaches often are combined with clinical trials, surveys of attitudes and beliefs, and the epidemiological measures to better understand health problems (Plano Clark, 2010).

- ❖ **Recent evidence:** Evidence in the published literature attests to the current use of mixed methods approaches in health-related research, such as in cardiology (Curry, Nembhard, & Bradley, 2009), pharmacy (Almarsdottir & Traulsen, 2009), family medicine (Stange, Crabtree, & Miller, 2006), pediatric oncology nursing (Wilkins & Woodgate, 2008), mental health services (Creswell & Zhang, 2010; Palinkas, Horwitz, Chamberlain, Hurlburt, & Landsverk, 2011), disabilities (Mertens, 2009), and public health nutrition (Klassen, Smith, Black, & Caulfield, 2009). The settings vary from the clinic (McVea et al., 1996) to the social context of daily activities and relationships (Pasick et al., 2009). The growing interest in mixed methods research recently has been documented in a study of funded NIH investigations that incorporated “mixed methods” or “multimethods” in their abstracts. This study demonstrated a dramatic increase in the use of these words in funded projects since 1996 (Plano Clark, 2010). The federally funded mixed methods investigations spanned 23 different NIH institutes, with many supported by the National Institute of Mental Health, the National Institute of Nursing Research, and the National Cancer Institute.
- ❖ **New guidelines needed:** Despite the expanding interest in mixed methods research in health fields and at NIH, no recent guidelines for “best practices” exist to assist scientists developing applications for funding or to aid reviewers assessing the quality of mixed methods investigations. The 2001 NIH OBSSR report, “Qualitative Methods in Health Research: Opportunities and Considerations in Application and Review” (NIH, 2001) was created to assist investigators using qualitative methods in submitting competitive applications for support from NIH. One section of this report addressed “combined” quantitative and qualitative research, recognizing that combined approaches had gained “broad appeal” in public health research. In a brief section, this “combined” research discussion advanced four general models for mixed methods research and suggested considerations for deciding on the most appropriate models. As we revisit this report, we see that the recommendations for “combined” research are out of date and not in step with current knowledge in the field of mixed methods research or real-world health problems calling for diverse methodologies.
- ❖ **Models for guidelines:** As our Working Group moved forward, we became aware of other existing reports that could assist us in our task. For example, in 1995, as an outgrowth of the NIH Conference on Complementary and Alternative Medicine Research Methodology, a report was issued providing a “methodological manifesto” for quantitative research in alternative medicine (Levin et al., 1997). This report was helpful as we considered a core set of recommendations for mixed methods research. In 2002, the National Science Foundation (NSF) issued a “User-Friendly Handbook for Project Evaluations” (Frechtling, 2002). This report included a chapter providing an overview of quantitative and qualitative data collection methods, thus suggesting to us the importance of clarifying the nature of mixed methods research. We also reviewed the website for the Robert Wood Johnson project on qualitative research (Cohen & Crabtree, 2008), “The Qualitative Research Guidelines Project.” From reviewing this website we learned that a Web-based delivery mode for our “best practices” would be feasible, and that such a delivery system would be helpful in providing material that could be easily understood and used. Finally, we examined criteria for evaluating mixed methods research that recently have been presented in the health science and mixed methods literature (O’Cathain, 2010; Schifferdecker & Reed, 2009). We found this material useful to help us design a checklist that might be used by individuals reviewing mixed methods applications.



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