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Research Integrity: A Survey of ASHA's

Education and Publication Practices

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SYNOPSIS

Abstract. As responsible academicians and clinicians, we are expected to engage in scholarship that embraces established and evolving ethical principles and practices. The purpose of this session was to report and discuss the preliminary results of surveys regarding what is taught and what is learned in our graduate programs about the responsible conduct of research (RCR). Results revealed that faculty and students tended to disagree on the comparative importance of selected topics pertaining to RCR. These findings have important implications for the preparation of the next generation of scholars about scientific integrity, to be discussed by a reaction panel.

Purpose

Research reflects scientists' efforts to increase and refine knowledge in a systematic and cumulative manner. The values and codes of conduct we bring to research are central to the integrity of our scholarship. As stewards of knowledge in the discipline of Communication Sciences and Disorders (CSD), academicians and clinicians are expected to engage in scholarship. This implies that we are expected not only to use scientific methods proficiently, but also to know how to conduct research ethically and responsibly.

Research integrity in CSD was the focus of this seminar, made possible by a research grant on this topic led by Sharon Moss, Director of Research at the American Speech-Language Hearing Association (ASHA; grant ORI/NIH # 1 R01 NS44534-01). Preliminary survey data were reported. The Council of Academic Programs in Communication Sciences and Disorders and ASHA have a keen interest in learning about research integrity as it is perceived to apply to graduate curricula in speech-language pathology and audiology. After establishing a baseline of what is being taught and learned, ASHA's longterm goal is to establish the responsible conduct of research (RCR) as part of the basic education of CSD researchers. This Roundtable Discussion presented preliminary findings of the Research Integrity project.

Methods

Two surveys were developed and fielded. Survey I was directed to faculty members; Survey II, to students. Surveys I and II were designed to determine what is being taught in educational programs preparing students for careers in CSD, and what is being learned, respectively.

Surveys were sent to directors of all graduate programs in CSD (n=261) who forwarded them to faculty who teach courses in research methods, research ethics, critical analysis of published research, and/or those who interact/work with students in research activities. Surveys also were sent to all students enrolled in masters, doctoral (clinical and research), or post-doctoral work in CSD.

The areas addressed in Surveys I and II (faculty and students, respectively) were:

- research misconduct (fabrication, falsification, plagiarism)
- responsibility for reporting research misconduct
- authorship
- mentor-trainee relationships
- intellectual property
- human participants and animal subjects protections

- accuracy and vitality of the research record
- conflicts of interest

Results

A total of 137 faculty members responded to Survey I. Faculty represented 45 master's-level only programs and 23 master's- and doctoral-level programs.

Survey II was fielded to all master's, doctoral (clinical and research), and postdoctoral students in all graduate programs in CSD. A total of 237 students responded. Students represented 25 master's-level only programs and 14 master's- and doctoral-level programs.

Responses to Surveys I and II were received from 48% of CSD doctoral granting institutions (n = 29) and 41% of Carnegie Doctoral/Research Universities with CSD programs. Preliminary analysis demonstrated that faculty reported research ethics issues are taught in the laboratory or comparable mentoring setting (69%). In contrast, students reported that research ethics is learned primarily in research methods courses (77%).

Both faculty and students reported that research ethics is most frequently taught/learned in a lecture or group discussion (rank 1), in the context of student research activities (rank 2), and through the use of case studies (rank 3).

Faculty ranked fabrication, plagiarism and falsification as most important (rank 1, 2 and 3), whereas students ranked protecting privacy of research participants, fabrication, and plagiarism as most important (rank 1, 2, 3), with falsification of data ranked fourth. A supplemental analysis looked at the rating of importance to scientific integrity. Faculty rated 24 of 37 items as "highly important"; students rated 17 of the same items as "highly important."

Discussion and Conclusion

Despite growing public awareness of abuses of research participants and instances of scientific misconduct over several decades (e.g., Beecher, 1966; Faden, Lederer & Moreno,

1996; Resnik, 1998, and others), and despite the proliferation of reports, articles, legal cases, and books on the subject (e.g., The Belmont Report, 1979), it was not until the early 1990's that U.S. scientists started attending to research ethics in a comprehensive manner (Emanuel, et al., 2003). In 1991, the U.S. Department of Health and Human Services published the *Report of the Department of Health and Human Services Review Group on Research Misconduct and Research Integrity*. In 1992 and 1993, the Panel on Scientific Responsibility and the Conduct of Research (Committee on Science, Engineering, and Public Policy [COSEPUP]) wrote *Responsible science: Ensuring the integrity of the research process*, volumes I and II, respectively. With the cooperation of the U.S. Congress, The National Institutes of Health have promulgated numerous guidelines for awardees and applicant institutions, and the Office of Research Integrity (ORI) of the Department of Health and Human Services has taken a leadership role in helping assure the conduct of researchers in the United States meet the highest standards of research integrity.

The policy of the federal government is that all researchers should receive education in RCR. In 2000, the ORI published the *PHS Policy on Instruction in the Responsible Conduct of Research (RCR)*, which identified core instructional areas, including human research participant protections, mentoring, intellectual property, authorship, conflict of interest and areas of related concern. In 2002, the Institute of Medicine published *Integrity in scientific research: Creating an environment that promotes responsible conduct*. In 2003, ASHA revised the Code of Ethics to include rules of conduct by researchers and authors. These publications, among many others, provided the basis for the ambitious research project reported in this seminar.

ASHA is taking a leadership role in the understanding of educational practices in CSD. Preliminary analyses demonstrate that research institutions in our discipline are integrating RCR content into core curricula as well as research laboratories, but much work remains to be done.

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