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University Faculty Perceptions of Research Practices and Misconduct

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ABSTRACT

This poster presentation shares descriptive results from a national survey, funded by the U.S. Office of Research Integrity, to investigate the perceptions of research misconduct by faculty researchers from four disciplinary areas (biology, social work, sociology, and psychology). About 4,500 faculty from 107 randomly selected research-intensive and master's universities were invited to participate. Respondents assessed scenarios depicting more and less serious researcher misbehavior and reported how likely they would be to take those actions under the same circumstances. They also rated their perceptions of how wrong the actions were, how likely the actions were to become known to others, and what sanctions might be applied if the actions were to become known. Of the vignettes rated, participants were least likely to respond that they would take the same actions related to IRB noncompliance and most likely to indicate that they would publish suspicious data to avoid problems with a collaborator. Participants indicated fairly low probabilities of most questionable research practices being discovered by others, regardless of vignette. However, if the actions were in fact detected, they estimated a 40-60% likelihood that shame/guilt and/or other sanctions would occur.

INTRODUCTION

Studies have shown that serious misconduct in academic research (e.g., data fabrication) is uncommon, whereas questionable research practices (e.g., courtesy authorship) occur on a fairly regular basis (Fanelli, 2009; John, Lowenstein, & Prelec, 2012). Yet limited research has been undertaken to understand why researchers engage in these behaviors (Martinson, Anderson, Crain, & DeVries, 2006; Mumford, Connelly, Murphy, Devenport, Antes, Brown, et al., 2009), in spite of the critical attention that misconduct cases bring from scientists, policymakers, and the public. As in other areas of human endeavor, understanding the complex causes of misbehavior is critical in formulating appropriate prevention structures or remedies.

This study was designed to explore the influences that drive faculty investigators when making the challenging ethical decisions that arise in the course of their research activities. Researchers shared their perceptions of what they would choose to do in certain circumstances, including those that involve high pressure (e.g., when evaluation for tenure is looming and publications are needed to ensure success). Other factors, such as the role of perceptions of organizational justice and external funding expectations, were also explored. In this study, for the first time, masters/comprehensive universities were targeted to allow comparisons with research-intensive institutions on possible differences in research cultures and environments. The study focuses on regular, full-time university faculty from four disciplinary fields: biology, psychology, sociology, and social work, the latter of whom have not previously been studied in regard to ethics in research.

PARTICIPANTS

A total of 4,556 faculty researchers from 107 universities in the U.S. were invited to participate in the study using a mixed-mode methodology involving postal mail and email, known as The Tailored Design Method (Dillman, Smyth, & Christian, 2008). The universities were randomly selected from the Carnegie Endowment Classifications for research intensive and masters-large institutions, and then a differential proportion of the regular, full-time faculty from each of the four disciplines were randomly selected for the project (33% from the Biosciences, 50% from Psychology, & 100% from the Social Work & Sociology/Criminology departments). Contact information was drawn from university websites.

Approximately 39% of the sample responded - 31% returned paper surveys and an additional 7% completed the instrument on Qualtrics. After removing records with insufficient addresses, ineligible participants (e.g,. non-researchers), etc., data were available for 1,735 faculty respondents.

About half of the respondents were from R1 universities (*N*=915, 53%), and half from Masters Large/Comprehensives (*N*=815, 47%).

Disciplinary field:
Biology (*n*=430, 24.8% of R's)
Psychology (*n*=521, 30.0%)
Soc & Crim (*n*=509, 29.3%)
Social Work (*n*=244, 14.1%)
Other (*n*=30, 1.7%)

Primary position:
Asst Prof (*n*=459, 26.7%)
Asc Prof (*n*=507, 29.5%)
Full Prof (*n*=598, 34.7%)
Admin (n=135, 7.8%)
Other (*n*=22, 1.3%)

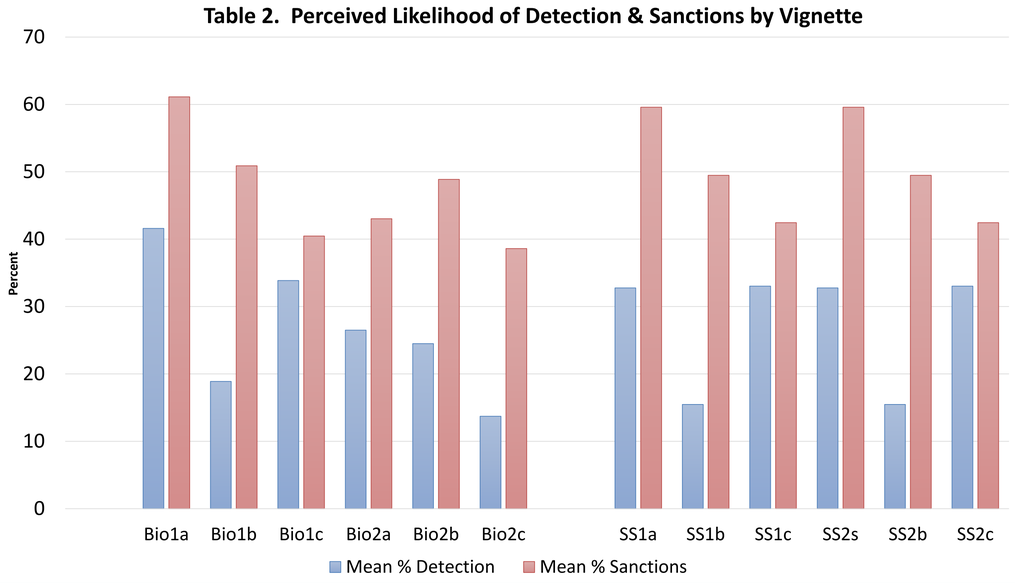
RESULTS

Table 1. Perceived Probability of Misconduct [1]

Scenario/Vignette	n	Mean %	S.D.
Biologists			
1a. Agrees student can skip IRB approval for adding sample to study	425	6.7	16.7
1b. Quietly deletes suspicious data received from senior collaborator	427	11.0	20.4
1c. Reneges on promise of student lead authorship	429	7.8	18.3
2a. COI: Encourages hiring of needed collaborator's wife	425	14.5	24.5
2b. Overlooks collaborator's potential overbilling for clinical services	421	14.6	24.1
2c. Writes peer review to personal advantage	421	14.0	25.2
Social Scientists			
1a. Agrees student can skip IRB approval for adding sample to study	1282	6.4	16.3
1b. Quietly deletes suspicious data received from senior collaborator	1275	13.8	22.4
1c. Reneges on promise of student lead authorship	1276	11.8	23.5
2a. Reassigns student, w/ no report to IRB, after id'd data sent to others	1282	9.6	18.7
2b. Writes peer review to personal advantage	1280	11.3	19.4
2c. Publishes suspicious data from collaborator	1268	46.7	39.7

1. Respondents' estimates of the likelihood they would take the same action as depicted in the scenario (0-100%)

Table 2. Perceived Likelihood of Detection & Sanctions by Vignette



METHOD

Participants completed a 30-minute study instrument regarding their perspectives on six research practice situations, structured as three hypothetical scenarios which each included three vignettes. Scenarios were adapted from the Ethical Decision-Making Measures developed by Mumford, et.al. (2006). All vignettes depicted a researcher taking actions that were ethically questionable. Respondents shared their perceptions of the likelihood they would take the same action, and rated the likelihood of detection and sanctions if they did take those actions in their own institutions. They also assessed the wrongness of each action and their colleagues' likely view of them. In addition, respondents reported the external funding expectations and fairness of resource allocation in their own departments and universities.

Two survey versions were used, one for the biology sample and one for the other three social science disciplines. The two versions shared one scenario with three of the same vignettes (listed as the first three vignettes in Table 1), slightly modified to reflect the nature of the research being conducted. The other scenario was different between the instrument versions, but did share a similar vignette regarding a conflict of interest in peer review.

RESULTS AND DISCUSSION

Vignette 1a depicted a researcher choosing not to request approval from the IRB for a change in age group in a study sample. As shown in Table 1, both biology and the social science respondents reported a mean likelihood of about 6% that they would do this. Similarly, the social scientists reported in Vignette 2a that there was a 9.6% average probability they would simply reassign a student who breached confidentiality by sending an identifiable dataset to another group of researchers. These results have implications for how IRBs develop procedures and monitor researcher compliance with them.

An apparent striking result was the probability the social scientists reported that they would proceed with publishing data that they suspected might be compromised in order to avoid problems with a collaborator. Further analysis is needed to explore possible explanations for this result.

Respondents were also queried on the likelihood, if they did take the action depicted in each vignette, that their action would be detected by their colleagues, university administrators, and funders/publishers, and if detected, that sanctions such as censure action, ban from research, and shame/guilt would apply. In Table 2, the three detection and three sanction variables were averaged and are shown as mean responses for each vignette. For example, for the action in Vignette 1a (Biology), respondents perceived on average a 42% probability of being detected and if detected, a 61% probability of having sanctions occur.

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