Ethics in Behavioral Research:

A Module for
FCS/GERN 696: Research Methods

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Module 1: Ethics to Promote the Aims of Research

Background: The first module aims to introduce students to ethics in research, with a particular focus on how ethical standards are necessary to promote knowledge, truth, and avoidance of error. Students will review the professional code of ethics developed by their respective professional organizations to identify research-related standards (Gerontology Association of America, 2009; Academy of Nutrition and Dietetics, 2009). Students will engage in critical dialogue to develop a list of ethics considerations necessary for research to produce knowledge, maintain truth, and avoid error. Discussion of these considerations will lead into a discussion of the second domain of the module, focusing on funded research.

After completing this module, students will be able to:
1. Describe the importance of ethical standards in research to promote knowledge, truth, and avoidance of error in research.
2. Evaluate a professional code of ethics to identify research-related standards.

Pre-Lesson Student Assignment:
- Ask students to retrieve a code of ethics for their respective professional fields, read the code, and bring a copy to class (electronic or print).

Lesson Outline, Module 1

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<th>Time</th>
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<tbody>
<tr>
<td><strong>Introduction</strong></td>
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<tr>
<td>5 minutes</td>
<td>Student learning outcomes (SLOs)</td>
<td>Review SLOs on slide 5.</td>
<td>N/A</td>
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<tr>
<td><strong>Objective 1: Describe the importance of ethical standards in research to promote knowledge, truth, and avoidance of error in research.</strong></td>
<td>Standards to promote knowledge, truth, and avoidance of error (slide 6)</td>
<td>Divide class into working in groups of 2-3 students. Ask each group to develop a list of ethics considerations necessary for research to: • produce knowledge, • maintain truth, • and avoid error.</td>
<td>Exam questions (#2, #4, pg. 13)</td>
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<tr>
<td>20 minutes</td>
<td>Codes of ethics</td>
<td>Ask students to use a code of ethics developed for practitioners in their fields of study to inform their work. They should be prepared to discuss the list of key ethics considerations they develop. Also, they should prepare to reflect on how their respective codes of ethics affect various areas of practice (slide 7).</td>
<td>Code of ethics assignment (slide 7)</td>
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**Conclusion**

| 5 minutes    | Summary                      | Ask students to develop a list of ethics considerations necessary for research to produce knowledge, maintain truth, and avoid error.                                                                                                                                 | N/A                                            |

**Readings/Source Materials:**


Module 2: Ethics to Promote Accountability to the Public

Background: Scientific integrity when conducting research is critical, as scientific evidence is used when making practice-based decisions that impact individuals and populations. For example, a non-federal board of scientists, known as the Dietary Guidelines Advisory Council, is convened every five years to review current scientific evidence in the field of nutrition, and to produce a report that serves as guidance for the development of the Dietary Guidelines for Americans (DGA). Key policy decisions, such as the requirements of the National School Lunch Program and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), are then based on the current DGA. Research impacts practice; therefore, ethical standards in research promote accountability to the public. In this domain, key strategies to promote public accountability will be discussed, including avoidance of potential biases in funded research (e.g., by using objective research designs and avoiding fabrication of data and reporting bias) (Nicklas et al., 2011) and experimenter bias. The potential of peer review for promoting research accountability will be discussed.

After completing this module, students will be able to:
1. List at least five guidelines to promote scientific integrity in funded research.
2. Discuss strategies to address key threats to scientific integrity.
3. Evaluate potential impacts on individuals and populations served by the profession when ethical standards of research are not upheld.
4. Critique the peer review process.

Pre-Lesson Student Assignment:
• Divide students into three groups. Assign one of the following articles to each group for pre-class reading:
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<tbody>
<tr>
<td>5 min</td>
<td><strong>Introduction</strong></td>
<td>Student learning outcomes (SLOs) Funding-related bias in research</td>
<td>N/A</td>
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<tr>
<td></td>
<td></td>
<td>Review SLOs on slide 10. Use figure on slide 11 to discuss a continuum of potential for bias by different funding methods for scientific activities.</td>
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</table>
|       | **Objective 1:** List at least five guidelines to promote scientific integrity in funded research.  
**Objective 2:** Discuss strategies to address key threats to scientific integrity.  
**Objective 3:** Evaluate potential impacts on individuals and populations served by the profession when ethical standards of research are not upheld.  
**Objective 4:** Critique the peer review process. | 40 min | Scientific integrity, impacts of breaches in scientific integrity, peer review (slides 12-19)  
Ask students to divide into assigned working groups. They will use questions posted on slides 12-19 to discuss the assigned article and prepare to share what the article says about threats to scientific integrity and means of preventing them. | Exam questions (#2, #5, pg. 13); post-module reaction paper (slide 22) |
| 5 min | **Conclusion**                                                       | Summary                                                                                                          | N/A        |
|       |                                                                     | To review, use questions on slide 20.                                                                            |            |

**Readings/Source Materials:**

Module 3: Ethics to Promote Fair Collaborations

Background: Collaboration, and particularly inter-disciplinary collaboration, promotes diversity of perspective in research design and interpretation. However, standards to protect individual intellectual property are important for fostering fair collaborative relationships. Trust, accountability, respect, and fairness are critical values related to this domain. Students will review authorship guidelines of a major journal in their respective fields to identify standards in place to promote fair collaborations. Furthermore, students will discuss advantages and disadvantages of collaborations; they will then identify beneficial fields of expertise that would augment a study in their area of research interest.

After completing this module, students will be able to:
1. Describe key considerations in research to promote collaboration while protecting intellectual property.
2. Discuss guidelines for authorship in place by respected professional journals in a given field.

Pre-Lesson Student Assignment:
Divide students into three groups. Assign one of the following articles to each group for pre-class reading:

Lesson Outline, Module 3

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<tbody>
<tr>
<td>Introduction</td>
<td>Student learning outcomes Fair collaboration</td>
<td>Review SLOs on slide 24. Use questions on slide 25 to engage students in a discussion of the benefits of fair collaboration and how to promote it.</td>
<td>N/A</td>
</tr>
<tr>
<td>5 minutes</td>
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<tr>
<td>Objective 1: Describe key considerations in research to promote collaboration while protecting intellectual property.</td>
<td>Benefits of collaboration, peer review, author rights, and authorship policies</td>
<td>Divide students into three working groups, and ask them to discuss the assigned articles, using the questions on slides 26-28 as a guide.</td>
<td>exam question (#1, pg. 13)</td>
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<td>30 minutes</td>
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<tr>
<td><strong>Objective 2: Discuss guidelines for authorship in place by respected professional journals in a given field.</strong></td>
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<td>10 minutes</td>
<td>Journal authorship policies</td>
<td>Ask students to visit the website of a selected research journal and read the authorship guidelines. Ask them to look for policies that promote fair authorship (if present), and prepare to share with the class (slide 29).</td>
<td>oral discussion; exam question (#1, pg. 13)</td>
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### Conclusion

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<tr>
<td>5 minutes</td>
<td>Summary</td>
<td>Ask students to indicate a field of expertise outside their area with which they could potentially collaborate. What would be the benefits? When would they discuss authorship rights?</td>
<td>N/A</td>
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**Readings/ Source Materials:**

Module 4: Ethics to Promote Human Subjects in Research

Background: Many students enrolled in FCS/GERN 696 will be completing a thesis or directed project involving human subjects. Exposure to ethical standards for protection of human subjects as a part of this course will prepare them for designing studies that maintain respect for persons and promote beneficence and justice. Students will learn about past ethics breaches that stimulated development of legislation to protect human subjects and Institutional Review Boards (e.g., the Tuskegee Study of Untreated Syphilis, Nuremberg war crimes, and the Milgram experiment). Students will be presented with scenarios relevant to their respective fields of studies, and will evaluate the scenarios based on ethical principles for research involving human subjects. They will be asked to develop a research concept related to one of the scenarios, and describe measures they would employ to promote fairness in selection of subjects and to minimize risk. They will then develop a draft informed consent form based on the research concept.

After completing this module, students will be able to:

1. Describe basic ethical principles for research involving human subjects, including respect for persons, beneficence, and justice.
2. Evaluate key ethical considerations related to subject selection.
3. Develop a list of risks and benefits to human subjects related to a given research design.

Pre-Lesson Student Assignment:

Lesson Outline, Module 4

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<tr>
<td>5 minutes</td>
<td>Student learning outcomes</td>
<td>Review SLOs on slide 32.</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Objective 1:</strong> Describe basic ethical principles for research involving human subjects, including respect for persons, beneficence, and justice.</td>
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<td>exam questions (#3, 6, pg. 13)</td>
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<tr>
<td>Treatment of subjects leading to established guidelines</td>
<td>Discuss previous ethical breaches (Tuskegee Syphilis Trial, Milgram Trials, etc.) and legislation that followed (slides 33-34).</td>
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<td>Belmont Report Case 1</td>
<td>Discuss respect for persons, beneficence, and justice (slides 35-37). Ask students to consider impacts of putting into practice key ethical considerations (slides 38-39). Ask students to respond to the following prompt: Case 1: Discuss ethical considerations of “An Experimental Study of the Effect of Evaluative Labeling on Speech Fluency”</td>
<td>in-class assignment (Case 1, slide 40)</td>
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Lesson Outline, Module 4 (continued)

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**Objective 3:** Develop a list of risks and benefits to human subjects related to a given research design.

**Objective 4:** Develop an informed consent form using an Institutional Review Board template.

| Application of ethical principles to protect human subjects | Ask students to respond to the following prompt: Case 2: Imagine you are developing a survey to implement with introductory nutrition students at CSULB to assess body image and its relationship to demographic characteristics. You plan to offer extra credit to study participants. Discuss this study in light of the three ethical principles outlined in the Belmont Report (respect for persons, beneficence, and justice). Work in teams to develop language for your assigned section of the informed consent document. Use the template on the CSULB IRB website: http://web.csulb.edu/divisions/aa/research/compliance/humans/ | in-class assignment (Case 2, slides 41-42) |

**Conclusion**

| 5 minutes | Summary | Ask how many students plan to use human subjects in their research. What protections will need to be in place? | N/A |

**Readings/Source Materials:**

Additional Background Information

Research Ethics-Related Exam Questions

1. Which of the following is a key strategy used to promote collaborative work while also protecting intellectual property?
   a. Have a discussion early in the research discussion regarding authorship (who will be listed and in what order).
   b. Develop a policy that the lead researcher will always be listed as first author on papers related to his/her work, and that the lead researcher will determine order of authorship for remaining contributors.
   c. Wait until after research is complete to determine authorship by contributions made by each key person.
   d. Ask study reviewers (not involved in the study) to determine order of authorship to reduce bias.

2. Which of the following scenarios has the LEAST potential for research funders to bias research findings:
   a. Investigator develops topic and methods and presents to a funder, allowing funder to suggest modifications prior to providing funds.
   b. Funder determines topic and methods for conducting the investigation.
   c. Funder provides money to a general fund, but investigator determines topic area and methods for conducting the investigation.
   d. Funder offers to ghost write a paper to share findings of the investigator’s work to reduce the workload of the investigator.

3. What is achieved by the ethical principles of respect for persons, beneficence, and justice? (Indicate the effect of addressing each of these.)

4. List two strategies we discussed in class to promote knowledge, truth, and avoidance of error in research.

5. Name one potential impact on individuals and one potential impact on populations when ethical research standards are not upheld.

6. Researcher A desires to investigate the impact of a new drug (vs. new drug plus dietary therapy vs. control) on slowing progression of disease in Alzheimer’s patients. He plans to recruit patients from a memory care facility, and proposes to assign patients randomly to one of the three groups (two treatment groups and one control group). Evaluate this research idea for each of the three ethical principles we discussed in class related to human subjects protection: respect for persons, beneficence, and justice.