

# Week 4. Working with Humans

## SOLUTIONS TO PREPARATORY QUESTIONS.

Q1. Which of the following best represents ethical considerations regarding the care and handling of participants in experimental research?

- A. Providing false information to participants to maintain the integrity of the experiment.
- B. Ensuring participants are fully informed about the nature and purpose of the study before participation. **[Correct]**
- C. Withholding information about potential risks to participants to avoid biasing their responses.
- D. Ignoring participant preferences and comfort to maintain experimental control.

Q2. Which of the following is not a valid section of a consent form?

- A. Participant's Rights
- B. Institution and Researcher Information
- C. Detailed Experiment Protocol **[Correct]**
- D. Purpose of Experiment

Q3. Which of the following is not a critical consideration when working with children in experimental research?

- A. Obtaining informed consent from both the legal guardians (parents) and children.
- B. Providing appropriate instructions to parents to avoid bias and interference.
- C. Adapting the experiment duration to suit the children's age group.
- D. Compensating children financially after the completion of the experiment. **[Correct]**

Q4. What is a key consideration when conducting experimental research involving participants with disabilities?

- A. Ensuring accessibility and accommodations to facilitate participation. **[Correct]**
- B. Excluding participants with disabilities to maintain the integrity of the study results.
- C. Providing impaired participants with alternative forms of compensation, such as gift cards.
- D. Ensuring informed consent is obtained only from legal guardians or caretakers due to the participants' impairments.

Q5. Blurring faces of study participants in pictures while publishing them corresponds to:

- A. Anonymization Only **[Correct]**
- B. Pseudonymization Only
- C. Randomization Only
- D. Both Anonymization and Pseudonymization

Q6. When designing the informed consent forms for your participants, please describe in detail the rights of participants.

Following are the rights of a participant:

- Right to withdraw from the study
- Right to request deletion of data
- Right to be informed about the risks and benefits of participation
- Right to be informed about the objectives of the study
- Right for data protection and privacy prevention.

Q7. Please illustrate through bullet points, the considerations you will make when using proxy users to evaluate a smart walking stick for blind people. Also comment whether the use of proxy users would impact the validity of your study and in what ways.

Following are the considerations regarding having proxy users:

- Instead of considering participants who are able-bodied and have not interacted with blind people, you will recruit participants who have a blind relative or who work closely with blind people (caregivers), because their experiences and perceptions will be relatively closer to blind people and different from completely able-bodied participants.
- Another consideration is to use the pair of a blind person and their caregiver (or close family relative) as users to test the walking stick. Both the blind person and their caregiver can collectively partake in the experimental task and respond to study questions together.
- If there are multiple tasks or multiple stages in the research, then the proxy users (caregivers) may be used for some of these tasks but not all of them. The participation of proxy users should be limited and for preliminary evaluations only. These preliminary evaluations with proxy users should be followed up with the actual blind people.

Yes, the use of proxy users will impact the validity of the research because it can be a major source of bias in the data. *First*, proxy users may differ from the blind people in how they navigate in their daily lives. *Secondly*, blind people may have other senses which are enhanced (such as hearing) which will not be the case with able-bodied people. *Finally*, if you are using proxy users, it has to be reported properly in your findings as a limitation in your study.