



PSYCHOLOGICAL INVESTIGATIONS

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OUTLINE FOR THE LECTURE

- Psychology as a science
- Research investigations in psychology
- Ethical considerations in psychological research



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PSYCHOLOGY AS A SCIENCE

FOUNDATION FOR THE STUDY OF PSYCHOLOGY

- Despite their different foci, all domains of psychology is empirically-based (i.e., research-based).
- With some of the questions addressed by psychology being common in our daily living, why can't we simply use our intuitions in addressing these problems?
 - Example: What make people feel happy?



SAMPLE: FACTORS CONTRIBUTING TO HAPPINESS



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Being Young



5



4



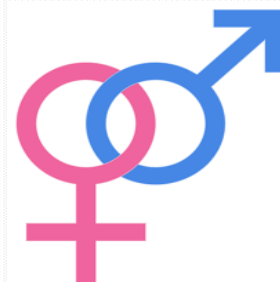
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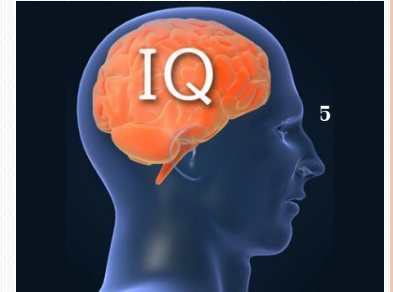
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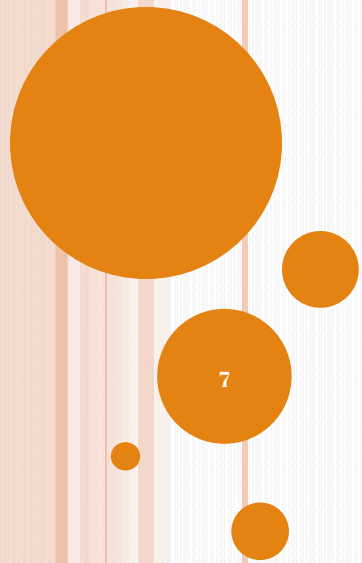
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ATTEMPTS TO UNDERSTAND OUR MINDS

- Our intuitions are not always accurate.
- Sometimes, it is hard to make a conclusion based on our intuitions or unique experiences.





THE SCIENCE OF PSYCHOLOGY

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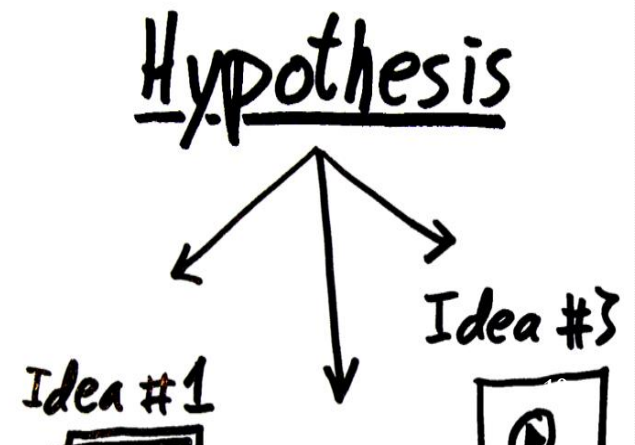
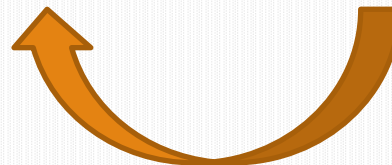
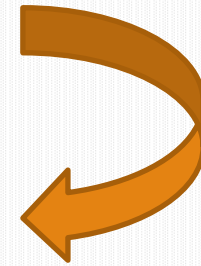
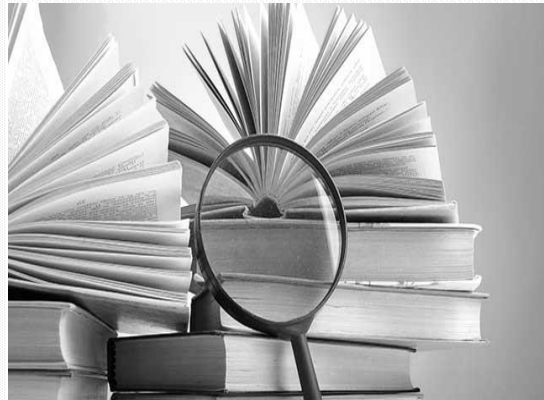
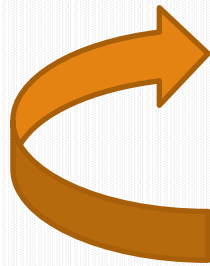
- The science of psychology is based on systemic research evidences, rather than intuitions.

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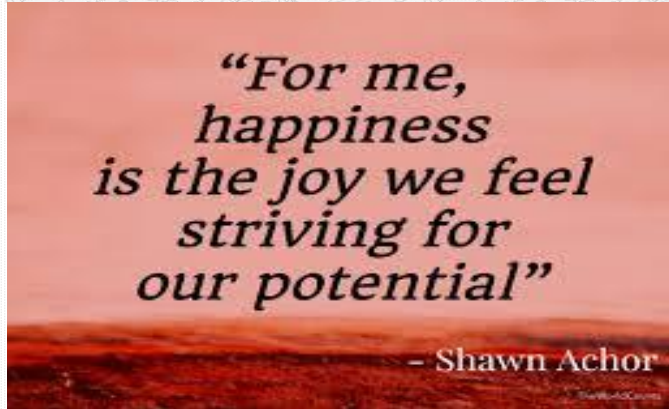
- Advantages of research evidences
 - Relatively low errors due to the systematic research procedure:
 - Based on literature reviews, research questions and hypotheses are proposed.
 - Relevant data are collected in the real world.
 - Data were analyzed to see whether the hypotheses are supported.

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- Research Evidences



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- Advantages of research evidences:
 - Clarity and precision – research investigations demand a clear definition of what is studied.
 - Exactly, what is happiness?

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- Advantages of research evidences:
 - Clarity and precision – research investigations demand a clear definition of what is studied.
 - When a research study is conducted, a clear definition of “happiness” needs to be given.



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- Advantages of research evidences:
 - Reviews by other researchers are conducted before the conclusions/ findings are circulated.



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- Points for consideration in using research evidences:
 - There are no perfect ways to study the minds!



RESEARCH INVESTIGATIONS

STEPS FOR RESEARCH INVESTIGATIONS

- Based on an extensive literature review, a research question is raised.
- Select and define the psychological construct(s) in the question (i.e., study variable(s)).
- Select an appropriate research design.
- Select an appropriate research tool for data collection.
- Make sure that all is done within the ethical standards.



POINTS TO CONSIDER: RESEARCH HYPOTHESIS

- Narrow down your research question as much as you could.
- Make it specific so that you could propose a research hypothesis.
 - Rather than asking “What cause people to become aggressive?”, the hypothesis asks:
 - Does childhood bullying lead to aggression?
 - Does authoritarian parenting style lead to aggression?
 - Does frustration lead to aggression?



POINTS TO CONSIDER: STUDY VARIABLES

- Based on your research question, a study variable is defined:
 - If you're interested in studying aggression, consider various types of aggression.
 - Select the type that fits with your research question.



POINTS TO CONSIDER: RESEARCH DESIGNS

- After research question(s) and study variable(s) are defined, a proper research design is selected.
- Sample research designs:
 - Case study design
 - Experimental study design
 - Correlational study design

SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 1) CASE STUDY

- A detailed, generally longitudinal, portrait of one or a few participants on the study variable.
- Example:
 - Studying Tom's aggression across his life span.



SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 1) CASE STUDY

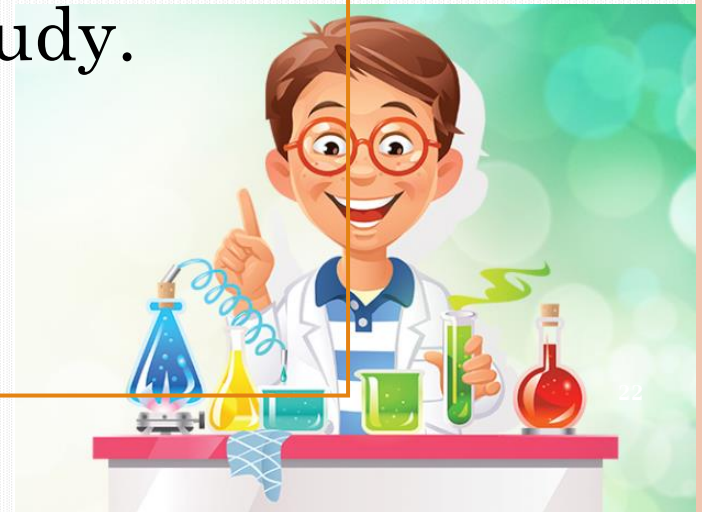
○ Evaluations:

- Pros: Detailed, with changes being documented.
- Cons: The information obtained may be unique to Tom, not applicable to other people. Data collection can be time-consuming.



SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 2) EXPERIMENT

- A researcher controls/manipulates one variable (i.e., an independent variable) to see whether changes occur in another variable (i.e., a dependent variable) as a result.
- This design generally includes more participants than a case study.



SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 2) EXPERIMENT

- Example:
 - Would exposing students to different levels of stress lead them to different levels of aggression?
 - Independent variable (IV): Stress
 - Dependent variable (DV): Aggression



SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 2) EXPERIMENT

- Example:
 - Would exposing students to different levels of noises lead them to different levels of aggression?
 - Independent variable (IV): _____
 - Dependent variable (DV): _____



SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 2) EXPERIMENT

- Another example of experimental research: Milgram study (1961) (*Ethically controversial*)

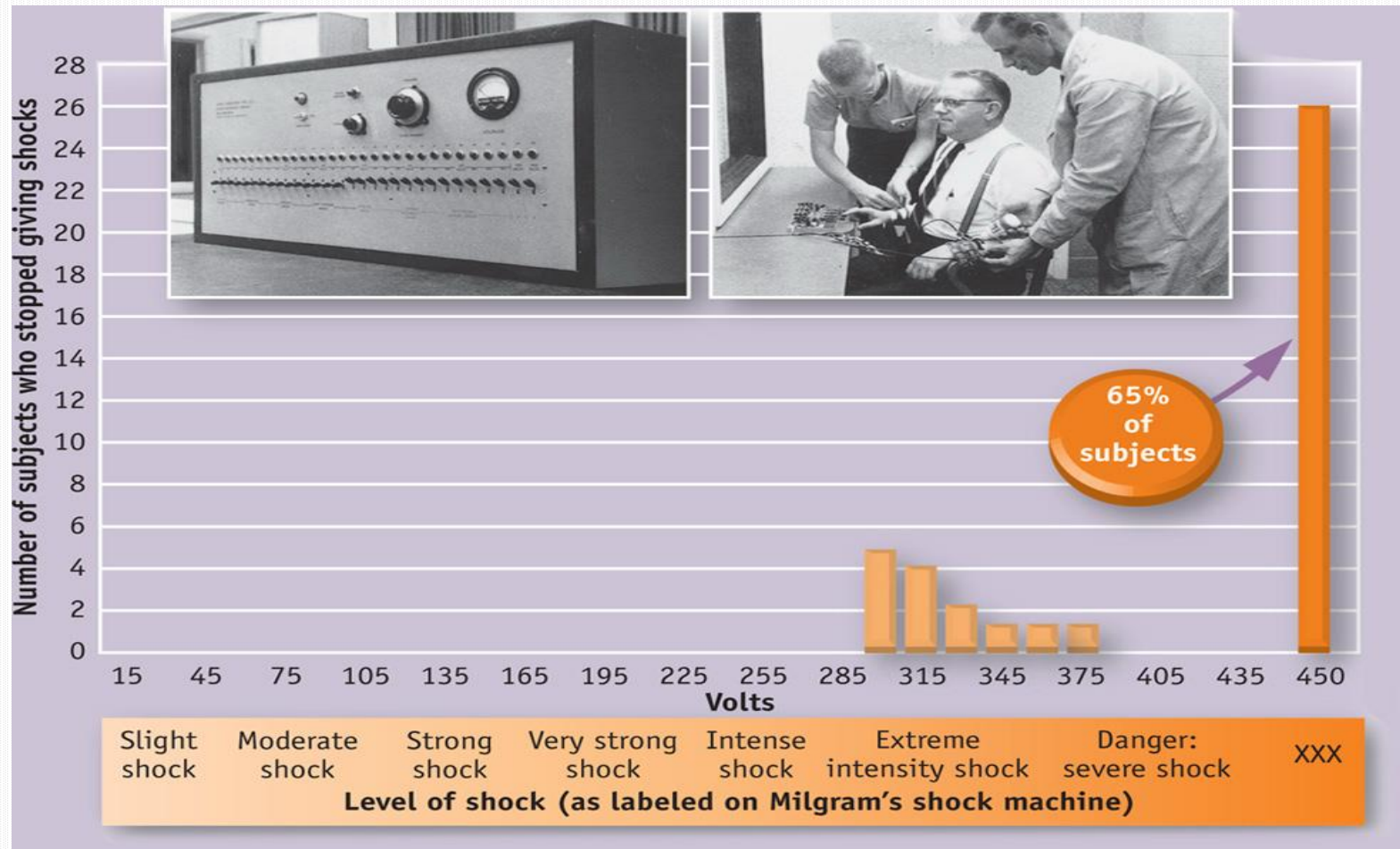
https://www.youtube.com/watch?v=xOYL_Cy5PVgM:

- Will changing an environmental factor result in changing one's level of obedience?



SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 2) EXPERIMENT

- Experimental research: Milgram study (1961)



SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 2) EXPERIMENT

- Sample experimental research: Milgram study (1961):
 - Would the level of obedience change if
 - The instruction is given by an authority or non-authority figure?
 - There is or there is not a dissenter/protester?



SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 2) EXPERIMENT

- Advantage:
 - Conclusions about the cause and effect can be drawn.
- Disadvantage:
 - Some variables cannot be manipulated/controlled for ethical reasons.



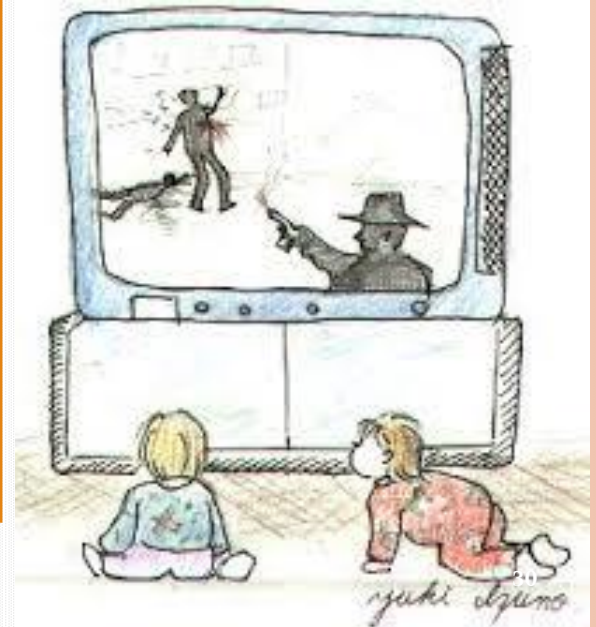
SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 3) CORRELATION

- Examining association(s) between two or more variables.
- Example: Would there be an association between the number of hours of violent TV exposure and childhood aggression?



SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 3) CORRELATION

- Correlation exists if a change in one variable is associated with a change in another.
 - Changes in hours watching TV
 - Changes in the levels of aggression



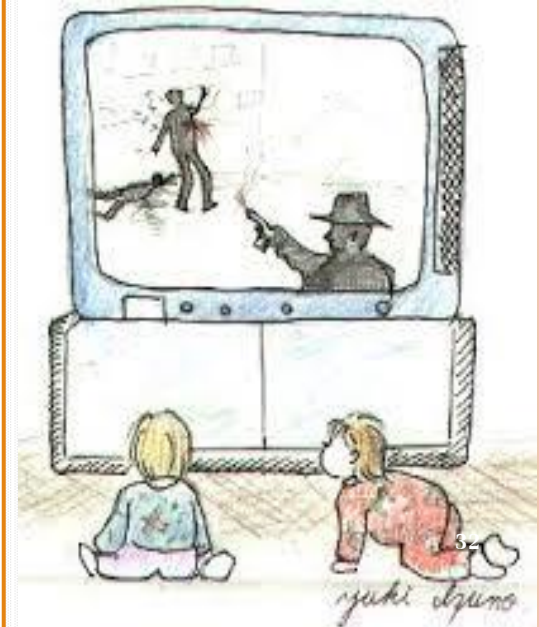
SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 3) CORRELATION

- Factors to consider
 - How strongly are the two variables correlated results in the size of the correlation:
 - The stronger, the bigger correlation.
 - The weaker, the smaller correlation.



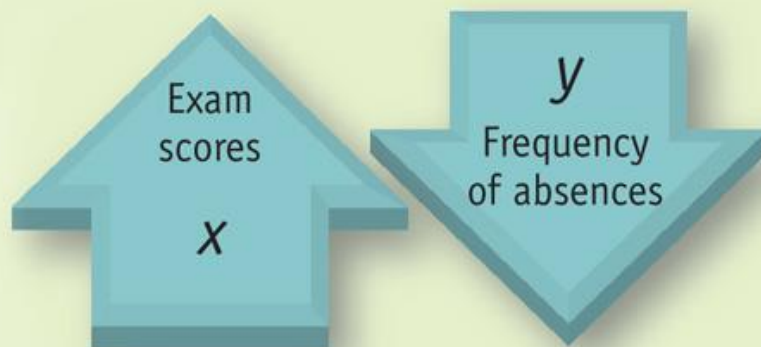
SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: 3) CORRELATION

- Factors to consider
 - The direction of the relationship:
 - Positive: The more hours of violent TV, the more aggressive the children become.
 - Negative: The more hours of violent TV, the less aggressive the children become.
 - Which direction is more likely, positive or negative correlation?

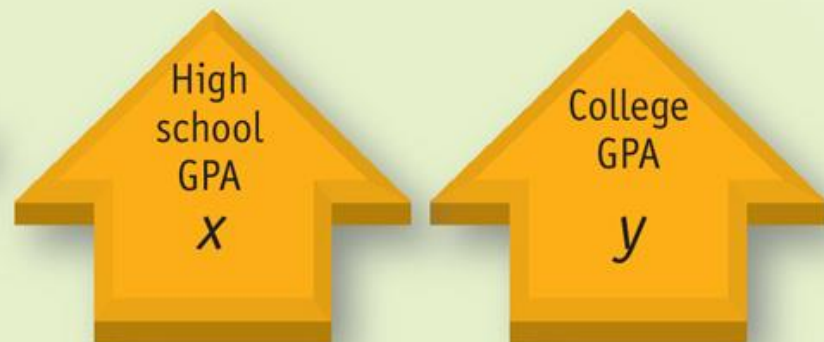


SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: CORRELATION

- Correlational Research: Looking for association(s) between two or more variables



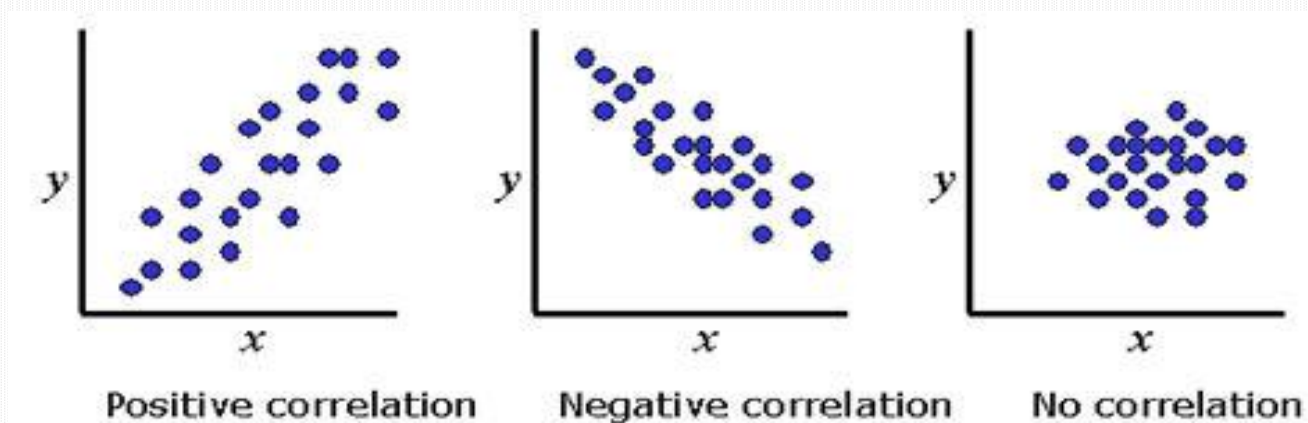
Negative correlation



Positive correlation

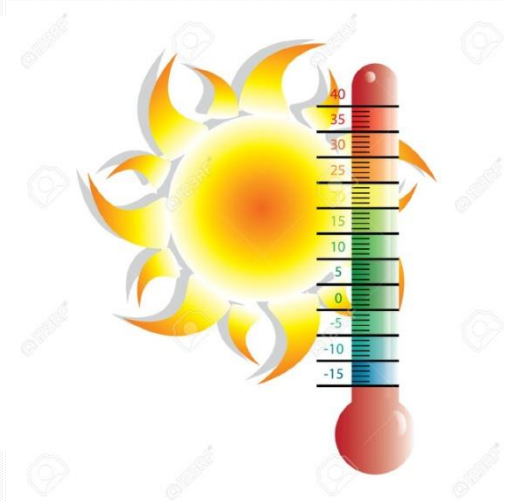
SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: CORRELATION

- Advantages
 - Correlation allows investigations of a broader array of psychological phenomena.
 - Some of these phenomena cannot be studied in experimental studies.



SAMPLE RESEARCH DESIGNS IN PSYCHOLOGY: CORRELATION

- Disadvantages of using correlations.
 - Correlations only indicate that the two variables are associated, not implying causes-and-effects.
 - A third variable could cause the association.



PSYCHOLOGICAL INVESTIGATION & ETHICAL CONSIDERATION

- To ensure the wellness of those participating in psychological research, permission is to be obtained from an Institutional Review Board prior commencing the research.
- Participants will be informed about the scope of the study and voluntarily agree to participate in the study.

