

1. A psychologist studied the effects of fluoxetine on anxiety in humans.

There were 30 participants in the study. Participants were divided into three groups. Participants in Group PLACEBO were given placebo pills containing no fluoxetine. Those in Group 10MG were given pills containing 10 milligrams of fluoxetine, and those in Group 40MG were given pills containing 40 milligrams of fluoxetine. Participants were each given 30 pills and instructed to take one per day.

At the start of the experiment all participants completed the General Anxiety Questionnaire, then completed the same questionnaire one month later after they had completed taking all the pills. These predrug and postdrug questionnaire scores were used to calculate an "Anxiety Difference Score" for each participant and that score was recorded. Anxiety difference scores ranged in value from 0.7 to 4.3, with higher scores indicating greater reduction in general anxiety levels.

Answer the questions that follow.

- (a) The **dependent** variable in this study is _____

Provide the operational definition for the DV below.

- i. Step 1:

- ii. Step 2:

- (b) The **independent** variable in this study is _____

Provide the operational definition for the IV below.

- i. Step 1:

- ii. Step 2:

2. To study the effects of environment on cheating behavior, a social psychologist recruited 20 subjects.

All subjects were placed in a room where they were seated in front of a laptop computer and a bowl containing 100 Peanut M&M candies. The 20 subjects were randomly divided into two groups.

Subjects in group CLEAN were placed in a room containing only a desk, chair, laptop, and bowl of candy. The laptop and desk had been wiped clean and contained no dust or spots.

Subjects in group DIRTY were placed in a similar room with the same type of desk, chair, laptop and candy bowl. But the room contained a full trashcan, stacks of papers and books, boxes of old electronic equipment and wires, and old pizza boxes. Talcum powder was lightly sprayed in the room, including parts of the desk, to make it look as though the room had not been cleaned.

The subjects in both groups were instructed to play a trivia game on the computer. For each trivia question they answered correctly, the subjects were told they could take one candy from the bowl. They subjects received no further instructions and were left alone in the room for 10 minutes to complete the trivia game.

Cheating behavior was measured as the number of extra candies that were taken from the bowl. If a subject took more than one candy for each correct trivia answer, or took candy for incorrect answers, those candies were added to the total number of extra candies taken. Total number of extra candies taken was recorded for each subject.

Answer the questions that follow.

- (a) The **dependent** variable in this study is _____

Provide the operational definition for the DV below.

i. Step 1:

ii. Step 2:

- (b) The **independent** variable in this study is _____

Provide the operational definition for the IV below.

i. Step 1:

ii. Step 2:

3. A social psychologist studied the effects of physical attractiveness on perceptions of guilt, and recruited 30 subjects for her study.

All subjects were shown a forward facing face photograph of a person of the opposite gender (i.e., male participants were shown photos of females, and female participants were shown photos of males). They were then presented with a story regarding an alleged white collar crime that the person in the photo committed. All participants were given the exact same story to read, which contained the facts of the case. The story was written in such a way so as to be neutral in terms of guilt or innocence.

Subjects in the condition ATTRACTIVE were shown an opposite sex photo of an attractive person. Subjects in condition UNATTRACTIVE were shown an opposite sex photo of an unattractive person. Four separate color photos were used: attractive male or female, and unattractive male or female. Each photo had been scored for attractiveness prior to the start of this study.

After viewing the photo and reading the story, subjects were asked to rate on a scale of 1 to 10, how guilty they believed the person in the photo was of the crime told in the story. These guilt scores were recorded.

Answer the questions that follow.

- (a) The **dependent** variable in this study is _____

Provide the operational definition for the DV below.

i. Step 1:

ii. Step 2:

- (b) The **independent** variable in this study is _____

Provide the operational definition for the IV below.

i. Step 1:

ii. Step 2:

4. A cognitive psychologist studied the effects of different alarm sounds on response times in airline pilots.

Twenty-five airline pilots were used in the study. Each pilot was placed into an cockpit jet simulator, and performed a simulated takeoff, 15 minute simulated flight, and simulated landing. During the simulated flight, an alarm sounded indicating that the autopilot had been turned on. Each pilot then was required to reset the autopilot by pressing two buttons. The alarm sound continued until the pilot reset the autopilot.

Pilots in the condition CHIRP received a warning signal that consisted of quick and high pitched chirps. Pilots in the condition KLAXON received a warning signal that consisted of alternate high pitch – low pitch buzzing sounds. Pilots in the condition VOICE received a recorded male voice repeating the phrase "autopilot engaged".

All pilots received an alarm sound, then reset the autopilot control. The time (in seconds) from the start of the warning sound to the reset of the autopilot was recorded as each pilot's response time.

Answer the questions that follow.

- (a) The **dependent** variable in this study is _____

Provide the operational definition for the DV below.

i. Step 1:

ii. Step 2:

- (b) The **independent** variable in this study is _____

Provide the operational definition for the IV below.

i. Step 1:

ii. Step 2:

5. A cognitive psychologist conducted a study to examine the effects of word familiarity on cognitive load of subjects performing a discrimination task. Sixteen (16) participants were selected for the study and randomly assigned to one of two conditions, FAMILIAR or UNFAMILIAR.

Subjects in the FAMILIAR condition were seated in front of a computer screen and given a handheld box with one button on the box. They were then presented with 20 words that appear commonly in the English language (e.g., “house”, “car”, “run”). Each word was presented for five seconds. Ten of those words were nouns, and ten of the words were verbs. Nouns and verbs were presented in random order. The subjects were asked to press the button if the word they saw on the screen was a noun.

Subjects in the UNFAMILIAR condition were exposed to the same protocol, except the 20 words they were presented with were uncommon English words (e.g., “enunciate”, “aquifer”, “prestidigitation”).

For each noun that was presented to the subjects in both conditions, the time (in seconds) from the initial presentation of the word on the screen to the time that the button was pressed was recorded as the “reaction time”. Increased cognitive load was operationally defined as an increase in reaction time. For all subjects the reaction time scores ranged from 0.5 to 5.2 seconds.

Answer the questions that follow.

- (a) The **dependent** variable in this study is _____

Provide the operational definition for the DV below.

i. Step 1:

ii. Step 2:

- (b) The **independent** variable in this study is _____

Provide the operational definition for the IV below.

i. Step 1:

ii. Step 2: