Question 1

A psychologist conducted a study at her home during an annual activity of children wearing masks and going door-to-door receiving candy. Some of the children arrived alone, while others arrived in a group. Over the course of the night, the psychologist asked half of the children to remove their masks when they arrived at her door. The remaining half kept their masks on. The psychologist told every child to take only one piece of candy. She then went inside the house, leaving the bowl of candy outside. This gave children the opportunity to take additional candy. The psychologist measured the percentage of children who took additional candy. The psychologist’s hypotheses were that children would take more candy when they were alone and that children would take more candy when they were masked. The results are shown in the graph below; assume all differences are significant.

A. Identify the operational definition of the dependent variable in this study.

B. Explain how the data support or do not support each of the psychologist’s hypotheses.

C. Explain why the psychologist cannot generalize her findings to all children.

D. Explain why the study is not a naturalistic observation.

E. Explain how each of the following might have played a role in the children’s behavior.
   - Modeling
   - Deindividuation
   - Lawrence Kohlberg’s preconventional stage
General Considerations

1. Answers should be presented in sentences and must be cogent enough for the meaning of the response to come through. Spelling and grammatical mistakes do not reduce the score of a response, but spelling must be close enough that the reader is convinced of the word.
2. Do not score any notes made on the question section of the booklet. Score only what has been written in the blanks provided in the booklet.
3. Definitions alone will not score, but they may be used to enhance the application.
4. Within a point, a student will not be penalized for misinformation unless it directly contradicts correct information that would otherwise have scored a point. A correct application with an incorrect definition is not considered a direct contradiction and should score the point.
5. Rubric examples provided for each point are not to be considered exhaustive.
6. Responses that simply parrot or repeat the terms from the question will not score.
7. A response can score a point only if it clearly conveys what part of the question is being answered. It is possible to infer what part of the question is being answered if it is consistent with the order of the question.

Point 1 (A): Operational definition of dependent variable
Responses must indicate that the operational definition of the dependent variable is the percentage/number of children who took additional/extra pieces of candy.
- Score: “Whether the child/children took additional candy.”
- Do NOT score operational definitions of the independent variable (mask/no mask, solo/group).
- Do NOT score references to “some candy,” which does not specify additional/extra pieces.

Point 2 (B): Data support
Responses must indicate that the data do not support the hypothesis that children would take more candy when alone (hypothesis 1) AND that the data support the hypothesis that children would take more candy when masked (hypothesis 2).

Point 3 (C): Generalizability
Responses must indicate that the psychologist cannot generalize because of sampling bias, OR there was no random sampling/selection procedure, OR the psychologist only used children in her neighborhood.
- Score examples to illustrate that the sample was not representative of the population of children.
- Do NOT score random assignment alone.
- Do NOT score insufficient sample size alone.

Point 4 (D): Naturalistic observation
Responses must indicate that the study is not naturalistic observation because the researcher is interacting with subjects OR is manipulating a variable.
- Score any relevant example of the researcher interacting with the children.
- Score experiment or experimentation as an indication of manipulating a variable.
Point 5 (E): Modeling

Responses must indicate that in reference to taking candy, children imitated what they saw others do.

- Score references to modeling that occurs outside of the situation and that influences taking candy (e.g.,
  parents modeled stealing in the past, leading to children taking more candy).
- Do NOT score references to children’s obedience.

Point 6: Deindividuation

Responses must indicate that because deindividuated children felt anonymous, they were more likely to take extra candy.

- Score responses that indicate taking extra candy results from a feeling of anonymity, a loss in sense of self/identity, or a loss in self-awareness or individuality.
- Do NOT score descriptions of diffusion of responsibility (“feel less responsible”).

Point 7: Lawrence Kohlberg’s preconventional stage

Responses must indicate that taking candy is linked to the children’s narrow self-interest in gaining a tangible reward or avoiding punishment.

- Do NOT score references to conventional (compliance or obedience) or post-conventional (abstract) stages.
A- The operational definition of the dependent variable in this study is whether or not the child took additional candy.

B- The data did support the psychologist's hypothesis that children would take more candy when masked but did not support that children would take more candy when they were alone. Only 28.7% of alone children took additional candy while 78.0% of children in groups took additional candy. Only 28.3% of children who took their masks off took additional candy while 78.6% of children who kept their masks on took additional candy.

C- The psychologist cannot generalize her findings to all children as it only included U.S. children that went door-to-door receiving candy and since it only included children that wore masks.

D- This study is an experiment and not a study as the psychologist randomly asked half of the children to remove their masks which was placed in treatment into them which makes the study an experiment.

E- Modeling could have occurred if the children in a group saw others in the group taking additional candy and decided to take additional candy. Deindividuation would have occurred to the children in groups that kept their masks on as they would have a sense of anonymity (that they were anonymous) and may decided to take additional candy. If the children were in Lawrence Kohlberg's preconventional stage, the children may not consider any moral consequences and could elect to take additional candy.
A. The dependent variable in this study would be defined as whether the children took additional candy regardless of whether they were trick-or-treating solo or with a group of children.

B. The data supports the psychologist's hypothesis that masked children would take additional candy more often than ones who removed their masks. For example, 25.6% of one children took additional candy as compared to 75.7% of their masked counterparts and 58.2% of masked children in a group took additional as compared to 25.8% of non-masked group trick-or-treaters. However, the data does not support her claim that one children would take more candy solo whereas both masked and non-masked the group percentages of candy taking were higher.

C. Psychologist cannot generalize her findings to all children because there may have been external factors that were not controlled for, they cannot assume causation in all cases.

D. This study is not a naturalistic observation because the participants' environment can be manipulated when they are asked by the psychologist to remove their masks. The manipulation of variables makes this an experiment rather than a naturalistic observation.

E. Modeling: the children may have been imitating behaviors that they have learned in their lives.
A psychologist conducted a study at her home during an annual activity of children wearing masks and going door-to-door receiving candy. Some of the children arrived alone, while others arrived in a group. Over the course of the night, the psychologist asked half of the children to remove their masks when they arrived at her door. The remaining half kept their masks on. The psychologist told every child to take only one piece of candy. She then went inside the house, leaving the bowl of candy outside. This gave children the opportunity to take additional candy. The psychologist measured the percentage of children who took additional candy. The psychologist's hypotheses were that children would take more candy when they were alone and that children would take more candy when they were masked. The results are shown in the graph below; assume all differences are significant.

A. Identify the operational definition of the dependent variable in this study.
B. Explain how the data support or do not support each of the psychologist's hypotheses.
C. Explain why the psychologist cannot generalize her findings to all children.
D. Explain why the study is not a naturalistic observation.
E. Explain how each of the following might have played a role in the children's behavior.
   - Modeling
   - Deindividuation
   - Lawrence Kohlberg's preconventional stage

Deindividuation: when trick-or-treating in groups of children, rather than as individuals, kids feel more likely to act on their own impulses. The group mindset and deindividuation effect led the children to act as a group due to deindividuation.

Lawrence Kohlberg's preconventional stage: the children were not considering the effects that their actions may have at a later time.
were only concerned with the initial reward presented to them at the time (carzy) and fail to think of the consequences since they are in the preconventional stage.
The dependent variable is defined as what is being measured (the result). In this experiment, the operational definition can be found if the psychologist who went back inside watched the kids take extra candy by looking through the window or putting a hidden camera on the porch to capture the children's actions after she went back inside.

The data supports the psychologist's hypotheses because the graph shows a higher percentage of those who took additional candy were wearing masks and were in groups. Those who were alone but had masks on took more candy than those alone without masks and those in a group with masks on took more than the group without masks.

The psychologist cannot generalize her findings to all children because of the range in age and the fact that even without masks and being solo the children still took additional candy. The children in a group also took more than those alone.

The study is not a naturalistic observation because there are variables being manipulated. The psychologist asked half of the kids to remove their masks. There are an independent variable and a dependent variable making it an experiment.
Question 1 is reprinted for your convenience.

1. A psychologist conducted a study at her home during an annual activity of children wearing masks and going door-to-door receiving candy. Some of the children arrived alone, while others arrived in a group. Over the course of the night, the psychologist asked half of the children to remove their masks when they arrived at her door. The remaining half kept their masks on. The psychologist told every child to take only one piece of candy. She then went inside the house, leaving the bowl of candy outside. This gave children the opportunity to take additional candy. The psychologist measured the percentage of children who took additional candy. The psychologist’s hypotheses were that children would take more candy when they were alone and that children would take more candy when they were masked. The results are shown in the graph below; assume all differences are significant.

A. Identify the operational definition of the dependent variable in this study.
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   - Deindividuation

Lawrence Kohlberg’s preconventional stage

Naturalistic observation can be defined as a behavior seen and therefore carried out from that observation. However, modeling is the behavior being observed. It could have played a role in the children’s behavior because if one child takes an additional piece of candy (models the behavior) than another child will likely follow and so on and so forth.

Deindividuation refers to conformity and justification in a group setting. “If others are doing it, then

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why can't I do the same." Deindividuation could have played a role in behavior by justifying the group's actions. Everyone did it so it would be weird not to. Kohlberg's preconventional stage is defined as the stage in development when there are morals set in place and kids have a sense of right and wrong. Children know right from wrong. This stage could have played a role in the children's behavior through the act of stealing. The children know they're supposed to only take one piece but when the opportunity to steal more appears they go for it or they leave it. Some kids did not take additional candy due to the lower percentage or those in this stage that believe it is wrong to steal.
Question 1

Note: Student samples are quoted verbatim and may contain spelling and grammatical errors.

Overview

The responses were expected to demonstrate an understanding of the major components of research methods in terms of an experiment and how specific psychological terminology applies to the scenario. The responses needed to address a psychologist’s study of children going door to door asking for candy, and whether the children would take additional candy when they were alone or in a group and masked or not masked. The responses needed to demonstrate understanding of an experiment by identifying the operational definition of the dependent variable, explaining how the data support or do not support the hypotheses, discussing why findings may not be generalizable to a population, and indicating understanding of the differences between a naturalistic observation and an experiment. Additionally, the responses needed to demonstrate knowledge of specific concepts within learning, social psychology, and development by discussing how modeling, deindividuation, and Kohlberg’s preconventional stage of morality might have played a role in the children’s behavior.

Sample: 1A
Score: 6

The response earned point 1 because it indicates that the operational definition is “whether or not the child took additional candy.” This response references candy-taking behavior, which can be measured, and it references additional candy. The response earned point 2 because it correctly states that the data support the hypothesis that children would take more candy when they were masked AND that the data do not support the hypothesis that children would take more candy when they were alone. The response earned point 3 because it provides an example of sampling bias, in this case that the psychologist only included “U.S. children” in her study. The response earned point 4 because it correctly identifies the study as an experiment because the psychologist manipulated a variable. The response earned point 5 because it describes children seeing other children take additional candy and that they decided to take additional candy themselves. The response earned point 6 because it connects a sense of anonymity to taking additional candy. The response did not earn point 7 because it does not demonstrate a connection between taking additional candy and the narrow self-interest of gaining a reward or avoiding punishment.

Sample: 1B
Score: 4

The response earned point 1 because it indicates that the operational definition is “whether the children took additional candy.” This response references candy-taking behavior, which can be measured, and it references additional candy. The response earned point 2 because it correctly states that the data do support the hypothesis that children would take more candy if they were masked AND that the data do not support the hypothesis that children would take more candy when they were alone. The response did not earn point 3 because it does not describe biased sampling, random selection, or representative samples. The response earned point 4 because it notes that the psychologist manipulated a variable. The response did not earn point 5 because it does not apply imitation specifically to candy-taking behavior. The response did not earn point 6 because it does not describe a sense of anonymity or loss of sense of self as leading children to take additional candy. Instead, the response describes modeling and conformity. The response earned point 7 because it describes the narrow self-interest of gaining a reward.
Sample: 1C
Score: 2

The response did not earn point 1 because it does not identify the operational definition as the percentage of children who take extra candy. The response did not earn point 2 because it does not draw conclusions about both hypotheses. The response did not earn point 3 because it does not describe sampling bias or representative sampling. The “range in age” is not stated as a specific problem that would limit the representativeness of the sample. The response earned point 4 because it notes that the psychologist manipulated a variable. The response earned point 5 because it describes one child observing another child taking a piece of candy and then repeating the same behavior. The response did not earn point 6 because it focuses on conformity and other phenomena, not on the connection between a sense of anonymity and taking additional candy. The response did not earn point 7 because it describes other stages of moral development. Having a sense of right and wrong and knowing what one is supposed to do are not characteristic of the preconventional stage.