

Solutions about Types of Data

Consider a scenario of a researcher that collects demographic data in a survey, and answer the following questions about the different types of data that they encounter in this survey:

1. A researcher collects demographic data from her participants. She asks participants for their city of birth.

Which level of measurement is this?

A: Nominal B: Ordinal C: Interval D: Ratio

City of birth is nominal because it can only be labelled in mutually exclusive categories.

There is no natural order to cities.

2. She then asks participants to report the number of hours they spent exercising in the past week.

Which level of measurement is this?

A: Nominal B: Ordinal C: Interval **D: Ratio**

Number of hours is a ratio scale because there is a true zero and equal intervals in units of time.

3. The researcher collects data on anxiety using the Beck Anxiety Scale. In this scale, scores range from 0-44, but a score of zero simply means low anxiety rather than a total lack of anxiety.

Which level of measurement is this?

A: Nominal B: Ordinal **C: Interval** D: Ratio

The Beck Anxiety Scale is an interval level because scores can be ordered and there are equal intervals between adjacent scores. It is not a ratio scale because there is no true zero. A true zero would mean a total lack of anxiety, which is difficult to substantiate.

4. The researcher asks participants to select their level of activity in general from the following: sedentary, light physical activity, moderate physical activity, or vigorous physical activity.

Which level of measurement is this?

A: Nominal **B: Ordinal** C: Interval D: Ratio

Level of activity is ordinal because the categories are mutually exclusive and have a natural rank order.