

Is Age Considered a Qualitative or Quantitative Variable?

Authored by
stats writer

May 12, 2024

RECOMMENDED CITATION

stats writer (2024). *Is Age Considered a Qualitative or Quantitative Variable?*.
PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=143994>

Age is considered a quantitative variable, as it can be measured and expressed numerically. It represents a continuous, numerical value that can be used to make comparisons and calculations. This is in contrast to a qualitative variable, which represents a characteristic or attribute that cannot be measured numerically. Age, being a quantitative variable, allows for statistical analysis and can be used to make meaningful conclusions in research studies.

Is Age Considered a Qualitative or Quantitative Variable?

In statistics, there are two types of variables:

Quantitative Variables: Variables that represent a measurable quantity. Examples include:

Square footage Height Weight Population size

Qualitative Variables: Variables that take on names or labels and fit into categories. Examples include:

Eye color Gender Marital Status Dog breed

One question that students often have is:

Is age considered a qualitative or quantitative variable?

The short answer:

Age is a quantitative variable because it represents a measurable quantity.

For example, if someone is 35 years old then we know they are 5 years older than a 30 year-old but 5 years younger than a 40-year old.

We couldn't say the same thing about a qualitative variable like "eye color" because it doesn't make sense to compare "blue" vs "green" vs "brown" eyes in numerical terms.

Also, since age is a quantitative variable this means we can calculate summary statistics for it, such as:

Measures of central tendency like the mean, median, and mode. Measures of dispersion like the range, interquartile range, and standard deviation.

For example, if we have a dataset that contains the ages of 100 individuals, we could calculate the mean age, median age, the range of ages, and so on.

We could not do the same for qualitative variables.

When Is Age Not a Quantitative Variable?

The only scenario where age would not be considered a quantitative variable is when we use age brackets.

For example, suppose an economist wants to study the relationship between annual income and age so he sends out a survey to 1,000 individuals and asks them to indicate their age bracket as one of the following:

Under 18 18 to 35 35 to 52 53 to 70 Over 70

In this scenario, age would be considered a qualitative variable because each individual would fall into a certain age category as opposed to a specific numerical age value.

In this scenario, we couldn't calculate summary statistics like the mean and median because we don't actually know the specific age of each individual.

The following tutorials offer additional information about types of variables: