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General Psychology

1: What is the difference between a hypothesis and a theory? Gives examples

A hypothesis is either a suggested explanation for an observable phenomenon, or a reasoned prediction of a possible causal correlation among multiple phenomena. In science, a theory is a tested, well-substantiated, unifying explanation for a set of verified, proven factors.

2: What is a difference between a positive correlation and a negative correlation? Give examples. In a negative correlation, the variables move in inverse, or opposite, directions. In other words, as one variable increases, the other variable decreases. For example, there is a negative correlation between self-esteem and depression. In other words, the higher your self-esteem, the lower your feelings of depression. When two variables have a positive correlation, it means the variables move in the same direction. This means that as one variable increases, so does the other one. In the example above, we noted that the students who attended school more frequently had the highest GPAs. As the days present at school decreased, so did the GPA.

3: Using an example, what is the difference between a population and a sample? A **population data set contains all members of a specified group (the entire list of possible data values). A **sample** data set contains a part, or a subset, of a population. The size of a sample is always less than the size of the population from which it is taken.**

**4: What is the role of skepticism in Scientific research ?
Skepticism helps scientists to remain objective when**

performing scientific inquiry and research. It forces them to examine claims (their own and those of others) to be certain that there is sufficient evidence to back them up.

5: What is debriefing ? Why is it important? Debriefing is the procedure that is conducted in psychological research with human subjects after an experiment or study has been concluded. It involves a structured or semi structured interview between the researcher and the subjects whereby all elements of the study are discussed in detail. Debriefing brings a foundation to

6: What are the advantages and disadvantages of case studies?

Case studies allow a lot of detail to be collected that would not normally be easily obtained by other research designs. The data collected is normally a lot richer and of greater depth than can be found through other experimental designs. Case studies tend to be conducted on rare cases where large samples of similar participants are not available. One of the main criticisms is that the data collected cannot necessarily be generalized to the wider population. This leads to data being collected over longitudinal case studies not always being relevant or particularly useful.

7: What is the difference between genotype and phenotype? Gives examples. A genotype refers to the genetic characteristics of an organism. A phenotype refers to the physical characteristics.

8: What is corpus callosum? What is its function? Explain.

The corpus callosum is the primary commissural region of the brain consisting of white matter tracts that connect the left and right cerebral hemispheres. The main function of the corpus callosum is the communication between the two hemispheres; the different

parts of the corpus callosum connect similar areas of each hemisphere.

9: Describe two brain areas with roles essential for language functioning

Two brain areas with roles for language functioning are; 1) Broca's area located in the frontal lobe. 2) Wernicke's area, important for speech comprehension, is also located in the temporal lobe.

10: Describe the relationship between chromosomes, Dna and genes. Genes are segments of deoxyribonucleic acid (DNA) that contain the code for a specific protein that functions in one or more types of cells in the body. Chromosomes are structures within cells that contain a person's genes. Genes are contained in chromosomes, which are in the cell nucleus.