

Math and psychology

[Science](#), [Mathematics](#)



The Use of Statistics in Psychology

Author: The Role of a Psychologist

I believe the role of a psychologist is to help people understand the underlying cause of abnormal or detrimental behavior and give them the tools to modify or change the behavior or the underlying issues. Statistics is the study, collection, organization and interpretation of data. My first thought when I read that I needed to take a course in statistics to get my bachelors degree in psychology, was " Why do I have to take a course in statistics and what does that have to do with wanting to help people? I could not believe there was a reason to use a form of math outside of the math needed to run a normal business. I was planning to use an accountant for that sort of math, so why did I need to know anything beyond the basics? Where was the correlation between statistics, of all things, and psychology? My first psychology instructor, assured us that statistics was a necessary tool to a psychologist and that as we went further in the course, we would learn more about how to use that tool. I decided to reserve my

I believe there are two main uses for statistics in the field of psychology. ? I believe statistical data is used in psychological research. For instance it may be used to answer a hypothesis. It is used to determine if the hypothesis is proven to be true or false. In other words, statistics may be used as a scientific way of answering some questions. ? An example of this in psychology might be the hypothesis that an abused child may grow up to abuse their children unless they get some sort of counseling.

Statistical data taken from 300 psychologist case files shows that of the 300 abused children, 190 of them had at least 1 parent who was abused as a child. Additionally, in 72 cases both parents had been abused as children. Of

the 300 cases, only 32 children had parents who either had not been abused as children or who declined to answer the question. I feel this study shows significant statistical data that the hypothesis that abused children may grow up to abuse their children without some sort of counseling is true. The second use of statistical data in the field of psychology is by the clinical psychologist. A clinical psychologist must review published research studies to keep abreast of the latest scientific information that may pertain to their cases. These studies provide statistical analysis of the data and in some cases how issues were resolved. If a treatment is successful in a statistically significant number of cases, it might be a treatment that is implemented in a similar case.

To double a recipe of Ratatouille Let's take a look at the ingredients for the original recipe: • • • • • • • • • • • • • • 2 cups diced peeled eggplant 2 cups sliced zucchini 1/2 teaspoon salt 1 1/3 cups uncooked spiral pasta 1 cup sliced onion 1 tablespoon olive oil 1 (14.5 ounce) can diced tomatoes, undrained 2 tablespoons tomato paste 1 teaspoon dried oregano 1/2 teaspoon garlic powder 1/2 teaspoon dried basil Dash pepper 1 cup shredded part-skim mozzarella cheese

To double the quantities of items with a whole number amount is easy, but what about those fractions? Let's focus on the 1 1/3 cups uncooked spiral pasta. To double that, we multiply by 2. $1 \frac{1}{3} \times 2$ Change each fractional amount to an improper fraction. $= \frac{4}{3} \times \frac{2}{1}$ Multiply numerator times numerator and denominator times denominator to get: $= \frac{8}{3}$ Now simplify. $= 2 \frac{2}{3}$ cups of pasta

References Ratatouille Pasta. (2009). Allrecipes.

Retrieved April 10, 2009, from <http://allrecipes.com/Recipe/RatatouillePasta/Detail.aspx>