

# Stats without Tears

Relational Symbols			
=	equals is the same as	≠	is not equal to is different from
>	greater than	<	less than
≥	greater than or equal to	≤	less than or equal to
>>	much greater than	<<	much less than
≅	approximately equal to		

sample	population		
subset of population	entire population	$n$	$N$
number of members of sample or population		$n$	$N$
			number of members

## Roman Letters

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**P**  $P(B|A)$  = the probability that event  $B$  will happen given that event  $A$  definitely happens. It's usually read as the probability of  $B$  given  $A$ .  
**y** Caution: the order of  $A$  and  $B$  may seem backward to you at first.  
**1**  $P_{80}$  or  $P80$  = 80th percentile ( $P_k$  or  $Pk$  =  $k$ -th percentile)  
**.0**  $p$  = probability of failure on any one trial in binomial  
**0**  $p_i$  = probability of failure on any one trial in binomial  
**D**  $p_i$  = probability of failure on any one trial in binomial

“beta” = in a hypothesis test, the acceptable  
 risk of rejecting the null hypothesis when it is true. **power** of  
 the test.

$\mu$  mu, pronounced “mew” = mean of a population.

nu: see *df*, above.

rho, pronounced “roe” = linear correlation coefficient of a population.

“sigma” = standard deviation of a population.

$\hat{\sigma}_x$  “sigma-sub-x-bar”; see SEM above.

$\hat{\sigma}_p$  “sigma-sub-p-hat”; see SEP above.

$\hat{\sigma}$  “sigma” = summation. (This is upper -case sigma. Lowercase sigma,  
 $\sigma$ , means standard deviation of a population.

$\chi^2$  “chi-squared” = distribution for multinomial experiments and  
 contingency tables.