

## A FEW STATISTICAL DECISION MAKING *RULES OF THUMB*

- To optimize your chances of reaching statistical significance which means *REJECTING  $H_0$* , carry all statistical calculations out to at least 3 decimal places.
- When using a *Statistical Table*, such as a Chi Square Table, always compare your answer FIRST to the value in the column associated with your degrees of freedom which is associated with the least risk of committing **TYPE I ERROR**, which is *rejecting  $H_0$  when you should have accepted, i.e., calling your results statistically significant when they are not.*
- Never *ACCEPT  $H_0$*  until you have checked your statistical answer against the value in the  $p = .05$  column of your table. This means, it is incorrect to *ACCEPT  $H_0$*  at probability levels of, say,  $p = .01$ , or  $p = .001$ .
- When comparing your calculated statistic to a tabled value, the rule is, **IF YOUR CALCULATED STATISTIC IS EQUAL TO OR GREATER THAN THE TABLED VALUE YOU MAY REJECT  $H_0$  AT THE PROBABILITY LEVEL associated with that table entry value.**
- If your calculated statistic is not *equal to or greater than* the tabled value at the least risk probability level in the table, go to the next risk level and see if you can reject  $H_0$  there, then on to the next. **DO NOT GIVE UP and ACCEPT  $H_0$**  until you reach the  $p = .05$  level.
- If your calculated statistic is smaller than the tabled value at the  $p = .05$  level, you must **ACCEPT  $H_0$** .
- When using a statistics program on a computer, any probability levels that a statistics program produces should be considered **NOT SIGNIFICANT** and lead to your **ACCEPTING  $H_0$**  if the reported  $p$  value is larger than  $p = .05$ . If the reported  $p$  value =  $.05$  you could reject  $H_0$  at  $p = .05$ , but if the reported value was  $p = .06$  or even  $p = .0577$ , you would have to **ACCEPT  $H_0$** .