

Medical statistics: understanding basics for medical research

Nilanjan Chowdhury

Sikkim Manipal Institute of Medical Sciences

E-mail: drsanjoy@hotmail.com, naks1993@gmail.com

Purpose

Statistics is the cornerstone of any study but we are least comfortable with this. My aim is to outline basic points so that clinical studies become easier in future.

Methods

Sample size is calculated based on study population which in turn represents target population. Nature of any study will depend on this. Data collection and statistical analysis will establish hypothesis. Comparing is done by chi-square for proportions, t-test for mean and Mann-Whitney U test for mode.

Results

Test of significance is done by p-value which is calculated by chi-square (proportions), t-test (mean) and Mann-Whitney U test (median). Different studies like PCO progression, Myopia progression, strabismus surgery results etc are analysed.

Conclusions

Truth speaks for itself but tackling lies is statistically important (con-founders etc) and will be easier after this study. We all know " there are three kinds of lies: lies, damned lies and statistics."