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What do medical students think about bio statistics education?

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Abstract

Biostatistics classes can cause many medical students to feel frustrated and frantic. Why is biostatistics part of the body of knowledge that is deemed essential and fundamental for the medical student and eventual practitioner? This is a question that many perplexed (because of trying to comprehend biostatistics) medical students ask. To reiterate, not perceiving the practical role (not just the test-taking role) of biostatistics may didn't better motivate medical students to learn—and avoid want to learn—the language, purpose and practicality of biostatistics.

Keywords: Medical students, biostatistics, learning, attitude

Introduction

What Do Medical Students Think about Bio statistics Education?

I would like to share my personal experience in biostatistics teaching and attitude of medical students regarding statistics in the Department of Community Medicine of G. R. Medical College Gwalior. I have been working in the same college as Professor in Community Medicine and I taught the subject biostatistics to the first part of the MBBS Final professional students.

“Statistics is above all the subject most disliked by (medical) students.”^[1]

Several Studies have suggested that medical students are receiving inadequate training on health and biostatistics topics,² although more country-specific research is needed, but we expect that learning statistic may hold true in all countries. As physician know if someone's blood pressure is too high, who decided what a fever temperature was, or if a white blood cell count is out of whack? *Statistics*. Additionally, finding trends in populations are vital to our current understanding of disease/injury and treatments. Examples include determining carcinogens, such as cigarettes or asbestos, finding the source of an outbreak, or determining the best treatment for an ACL tear. Statistics has given us the background to stand upon when determining optimums of care. Most medical students struggle with statistics. Heck, anyone that's not a math major can feel a little uneasy when they find out a statistics class is required. Medical undergraduate and post graduate students find Common Struggle and difficult to find the relevance in a statistical example. Finding out how many times you will get heads versus tails on a coin toss might seem irrelevant when envisioning helping people that are bleeding, screaming, or dying. But the reason you don't just learn anatomy out of a text book is because of the known variability between humans. We use averages and assumptions all the time, but until you look at a cadaver and realize humans can have an extra vertebra the variability found within each individual may not sink in. Medical students find Statistics confusing always because the answer is not cut and dry, like tetanus is caused by *Clostridium tetani*. In statistics you do not memorize and regurgitate equations. It is the concept of the equations that is important to remember and when you would use it. Medical students should comfortable with the purpose of the equation before trying to enter any numerical values. Determine what question is trying to be answered and then choose the equation designed to give the desired result with the known information^[3] Most of the Post graduate students (MD, MS) come to me when they are completing their thesis/dissertation just asking to calculate 'p' value but most of them do not know but its meaning! Most of them want that their result must be statistically significant irrespective of their little sample size and without any much importance of it. It's statistically significant! Woohoo! But what does that mean? Statistical significance is used to indicate how big a difference lies between

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