ECRONICON OPEN ACCESS

EC ANAESTHESIA
Short Communication

The Complexity of Bio Statistical Analysis Helping or Hindering to Share Professional Work and Experiences!

Abul Kalam Azad* and Rabiul Alam

Classified Pediatric Anesthesiologist/Associate Professor, Combined Military Hospital, Dhaka, Bangladesh

***Corresponding Author:** Abul Kalam Azad, Classified Pediatric Anesthesiologist/Associate Professor, Combined Military Hospital, Dhaka, Bangladesh.

Received: August 26, 2019; **Published:** September 27, 2019

Revised Declaration of Geneva adopted by the World Medical Association General Assembly on October 14, 2017 in Chicago stated that "I will share my medical knowledge for the benefit of the patient and advancement of healthcare" It is one of the professional duty of physicians to realize the benefits of information sharing and to protect other patients by narrating their stories! [1].

Nowadays, high impact factor medical journals demand more accurate statistical analysis by advanced sophisticated statistical software which is complex, time-consuming and hindering instant sharing of knowledge among professional communities [2]. Few examples of day to day used complex statistical formulas are:

Mann-Whitney U

$$U = n_1 n_2 + \frac{n_2(n_2+1)}{2} - \sum_{i=n_1+1}^{n_2} R_i$$

Where:

U = Mann-Whitney U test

N_1 = Sample size one

N_2 = Sample size two

R_i = Rank of the sample size

Correlation

$$\mathbf{(r)} = \frac{\sum (X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum (X-\bar{X})^2 (Y-\bar{Y})^2}}$$

When,

$x = (x - \bar{x})$

x = One variable

$\bar{x}$ = Mean of x variables

$y = (y - \bar{y})$

y = Other variable

$\bar{y}$ = Mean of y variables

Tests for validity

Sensitivity: The sensitivity of the diagnostic test is the probability that a diseased person will have a positive test result. It is the true positive rate (TPR) of the test. In this study, the positive test indicates positive for stricture. It is calculated as follows:

$$Specificity = \frac{True\ Positive}{True\ Positive\ +\ False\ Negative} \times 100$$

True positive: Those with positive results by the test who actually have the disease.

False negative: Those with negative result by the test who actually have the disease.

Specificity: The specificity of the diagnostic test in the probability that a disease free person will have a negative test result. It is the true negative rate (TNR) of the test. In this study, negative test indicates negative for strictures. It is calculated as follows:

$$Specificity = \frac{True\ Negative}{True\ Negative\ +\ False\ Positive} \times 100$$

True negative: Those with negative results by the test who do not actually have the disease.

False positive: Those with positive result by the test who do not actually have the disease.

Accuracy: It is the percent of the total number of positive cases identified correctly by the test. It is calculated as follows:

$$Specificity = \frac{True\ Positive + True\ Negative}{True\ Positive\ +\ False\ Negative + True\ Negative\ +\ False\ Positive} \times 100$$

Physicians owe to their patients to keep them professionally abreast of the latest developments in the field of practice. It is for the best interest of the patients and professional obligation as per Geneva declaration which stated that "I will attend to my own health, wellbeing and abilities in order to provide care of the highest standard". So instant and easy sharing and receiving of clinical observations will promote physicians to achieve highest professional standard, thereby enabling them to respond to the challenges of evolution in medicine [3].

Medical science is a dynamic field of study. Theories and guidelines are constantly changing now and then which are an exhaustive outcome of research work. Demographic data, epidemiological studies, analysis, values, significance, errors, dispersion and correlation all those concerns of vital statistics should be properly looked after by professionals of Bio-statistics not by physicians to minimize errors!

Meanwhile, world medical research communities should find out an acceptable format of publishing professional work or experiences. That will facilitate the clinicians to share and publish more work instantly for the overall benefit of the patients. These can also provide more provocative materials for advanced research works by the bio-statisticians.

Bibliography

1. Ramin Walter and Parsa-Parsi. "The Revised Declaration of Geneva". *Journal of the American Medical Association* 318.20 (2017): 1971-1972.

2. Mozammel Hoque. "Abc of research methodology & biostatistics: Hypothesis testing and variable". Asian publishers; Second edition (Revised) (2016): 257-297.

3. Anshu Tejinder Singh. "Continuing professional development of doctors". *The National Medical Journal of India* 30.2 (2017): 89-92.

Volume 5 Issue 10 October 2019