0.1 Prevalence of the Bland-Altman plot

Bland and Altman (1986), which further develops the Bland-Altman methodology, was found to be the sixth most cited paper of all time by the Ryan and Woodall (2005). Dewitte et al. (2002) describes the rate at which prevalence of the Bland-Altman plot has developed in scientific literature. Dewitte et al. (2002) reviewed the use of Bland-Altman plots by examining all articles in the journal 'Clinical Chemistry' between 1995 and 2001. This study concluded that use of the Bland-Altman plot increased over the years, from 8% in 1995 to 14% in 1996, and 31-36% in 2002.

This technique, now commonly known as the 'Bland-Altman Plot', has proved very successful. Bland and Altman (1986), which further develops the methodology, was found to be the sixth most cited paper of all time by the Ryan and Woodall (2005). Dewitte et al. (2002) also commented on the rate at which prevalence of the Bland-Altman plot has developed in scientific literature.

The Bland-Altman Plot has since become expected, and often obligatory, approach for presenting method comparison studies in many scientific journals (Hollis, 1996). Furthermore O'Brien et al. (1990) recommend its use in papers pertaining to method comparison studies for the journal of the British Hypertension Society.

0.1.1 Prevalence of the Bland-Altman plot

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0.1.2 Success of Bland-Altmans plot

The success of the Bland-Altman approach is perhaps due to the fact that only a visual inspection of the plot is required. Bland and Altmans paper was later reported to be the sixth most widely cited statistical paper ever (Hollis 1996, for example). Hollis, S (1996), Annals of clinical biochemistry (Annals of Biochemistry 33,1-4) Ryan, T and Woodall W (2005). The most cited statistical papers Journal of applied Statistics 32(5), 461-474. Bland and Altman emphasis the clinical importance of the range of between the limits of agreement, and use this range as a basis for evaluating agreement. The question arises as to whether or not it is statistically valid to arrive at a decision about the population probability from an observed coverage range in a sample.

Altman and Bland (1983) show that their graphical approach can be supplemented by a test of significance on the Pearson product correlation coefficient of the plotted quantities. This test is equivalent to the test of the hypothesis that the method variances are equal (Pitman 1939) Bland and Altman recommend a test of significance of Spearmans rank correlation coefficient of the absolute differences and the case-wise means. Hayes et al (2006) examines the pitfalls that arises when an outlier is assesses using an informal criterion based on a fixed number of standard deviations rather than a more formal standard approach.

0.2 The Technology Acceptance Model

Davis (1989) proposes the TAM model, which suggests an hypothesis as to why users may adopt particular technologies, and not others. According to this theory, when users are presented with a new technology, two important factors will influence their decision about how and when they will adopt it.

Perceived usefulness (PU) - This was defined by Fred Davis as "the degree to

which a person believes that using a particular system would enhance his or her job performance".

Perceived ease-of-use (PEOU) - Davis defined this as "the degree to which a person believes that using a particular system would be free from effort"

Davis's explanations of these term can be rephrased for application to statistical analysis. Perceived Use could refer to the degree to which an user would deem a particular statistical method would properly establish the results of an analaysis. In the case of method comparison studies, proper indication of agreement, or lack thereof.

Perceived ease-of-use requires only applying the context of a satistical problem. A very modest statistical skill set is the only prerequistive for constructing a Bland-Altman plot, and computing limits of agreement. The main building blocks are simple descriptive, statistics and a knowledge of the normal distribution. These are topics that feature in almost every undergraduate statistics courses.

A very modest statistical skill set is the only prerequistive for constructing a Bland-Altman plot, and computing limits of agreement. The main building blocks are simple descriptive, statistics and a knowledge of the normal distribution. These are topics that feature in almost every undergraduate statistics courses.

In short, the user perceives the Bland-Altman methodology to be an easy-to-implement technique, that will properly address the question of agreement.

Conversely the Survival plot is a derivative of the Kaplan-Meier Curve, a non-parametric graphical technique that features in Survival Analysis. This subject area is a well known domain of statistics, but would be encountered on curriculums of specialist courses. The Mountain Plot is formally called the empirical folder cumulative distribution plot. Currently there is only one software implementation , medcalc.be toolkot (FIX)

Conversely the Survival plot is a derivative of the Kaplan-Meier Curve, a non-parametric graphical technique that features in Survival Analysis. This subject area is a well known domain of statistics, but would be encountered on curriculums of specialist courses.

The Mountain Plot is formally called the empirical folder cumulative distribution plot. While not particularly hard to render, the procedure is not straight-forward for the casual user. Currently there is only one software implementation , ***medcalc.be*** toolkit.

The ROC curve is a plot that is commonly used in the appraisal of a statistical analytics systems. Interpretation of the plot, the nearer the curve is to the top left corner of the plot, the better the statistical method is at making predicting outcomes.

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