

Introduction: This project provides SAS code to calculate the probabilistic index as proposed by Laura Acion et al. It consists of a SAS program that provides code for calculating the probabilistic index from the Wilcoxon Rank Sum Statistic or from the Somers' D measure of association.

Keyword Categories:

Clinical: Effect Size Measures for Assessing Clinical Significance
Genetics: Not Applicable (NA)
Statistical: Nonparametric Statistics, Wilcoxon Rank Sum, Somers' D, C Statistic
Software: SAS 9.2
Related:

References:

Acion L, Peterson JJ, Temple S, and Arndt, S., Probabilistic index: an intuitive, non-parametric approach to measuring the size of treatment effects. *Statistics in Medicine*. 2006; 25:591-602.

Component Files:

- a. PDF file explaining the entire sample: PIndexSummaryVanNess.pdf
- b. SAS program: PIndexProgramVanNess.sas
- c. SAS data file: PIndexDataVanNess.txt
- d. SAS output file: PIndexOutputVanNess.txt

Optimal Use:

The macro is not fully automated so one must first run the code to calculate the Wilcoxon Rank Sum or Somers' D value, then use this value to calculate the probabilistic index.

Prerequisites:

One only needs the ability to run SAS programs, any recent version will be sufficient.

Potential Applications:

The probabilistic index has general applicability to assessments of effect sizes because it is represented in terms of probabilities that can be intuitively understood by persons with little statistical training. Alternatives like Cohen's d are more difficult for nonstatisticians to understand. Specifically, the probabilistic index is useful in some types of nonparametric equivalence testing as a means for establishing equivalence limits.