

Schild 2019 ASA Paper

Title and Abstract

Title: Statistical Literacy, Confounding & Standardization

Abstract: Standardization involves different ideas in different disciplines. Standardization is divided into two categories: standardization that controls for confounding and standardization that does something else. The terms 'crude' and 'standardized' are used to distinguish statistics before and after standardization. This paper first reviews the meaning of standardization in various disciplines: demography, epidemiology, sociology, psychology, education, social work, mathematics and statistics. It then introduces the formal methods of standardization commonly used in statistics. These include various types of regression such as linear, logistic, etc. This paper finishes by examining the informal methods featured in statistical literacy. These include comparisons, ratios, comparisons of ratios, mix-matching and adjusting weights. Finally, these informal methods are used to adjust the increase in income inequality for structural changes in households and families between 1950 and 1980.