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Using the standardized difference to compare the prevalence of a binary variable between two groups in observational research. (English) | Zbl 1167.62473 |

Summary: Researchers are increasingly using the standardized difference to compare the distribution of baseline covariates between treatment groups in observational studies. Standardized differences were initially developed in the context of comparing the mean of continuous variables between two groups. However, in medical research, many baseline covariates are dichotomous.

We explore the utility and interpretation of the standardized difference for comparing the prevalence of dichotomous variables between two groups. We examined the relationship between the standardized difference, and the maximal difference in the prevalence of the binary variable between two groups, the relative risk relating the prevalence of the binary variable in one group compared to the prevalence in the other group, and the phi coefficient for measuring correlation between the treatment group and the binary variable. We found that a standardized difference of 10% (or 0.1) is equivalent to having a phi coefficient of 0.05 (indicating negligible correlation) for the correlation between treatment group and the binary variable.

MSC:

62P10   Applications of statistics to biology and medical sciences; meta analysis | Cited in **2** Documents |

Keywords:

balance; correlation; matching; observational study; propensity-score matching; standardized difference

Full Text: DOI

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