

MANTEL-HAENSZEL PROJECTION METHOD ESTIMATORS FOR SPARSE $K2 \times J(J > 2)$ TABLES

S.Hattori^{†1}, T.Yanagawa^{†1}

¹*Kurume University, Kurume, Japan*

[†] E-mail: *hattori_satoshi@med.kurume-u.ac.jp*

The Mantel-Haenszel projection method provides simple and reasonable estimators of the common odds ratios in $K2 \times J(J > 2)$ tables (Yanagawa and Fujii 1995 JASA). It provides estimators in an explicit form. In addition to simplicity, the estimator has desirable properties of invariance and dual consistency. The method uses the naive Mantel-Haenszel estimators of the common odds ratios in all 2×2 sub-tables. However, the estimators are often unavailable for some sub-tables, in particular, when the tables are sparse. The purpose of this paper is to show that, even if this is the case, we may modify the naive estimators and may use the projection method estimators. Same as the original method, the modified estimators have explicit forms and are invariant and dually consistent. Also a dual consistent estimator of the variance is also proposed. Theoretical basis and some numerical results will be presented.