

Relative Risk

Verified Python analysis transcript

Test: Relative Risk

Design: MS-versus-GP school exposure and G3 pass probability.

Variables: school, G3 ≥ 10

Null hypothesis: The pass risks are equal across schools ($RR = 1$).

Primary formula: $RR = [a/(a+b)]/[c/(c+d)]$; Katz CI is calculated on $\ln(RR)$

Valid source rows: 649

Verified results:

relative_risk: 0.7563316207591154

ci_low: 0.6913940102056064

ci_high: 0.8273683487509506

ms_pass_risk: 0.6991150442477876

gp_pass_risk: 0.9243498817966903

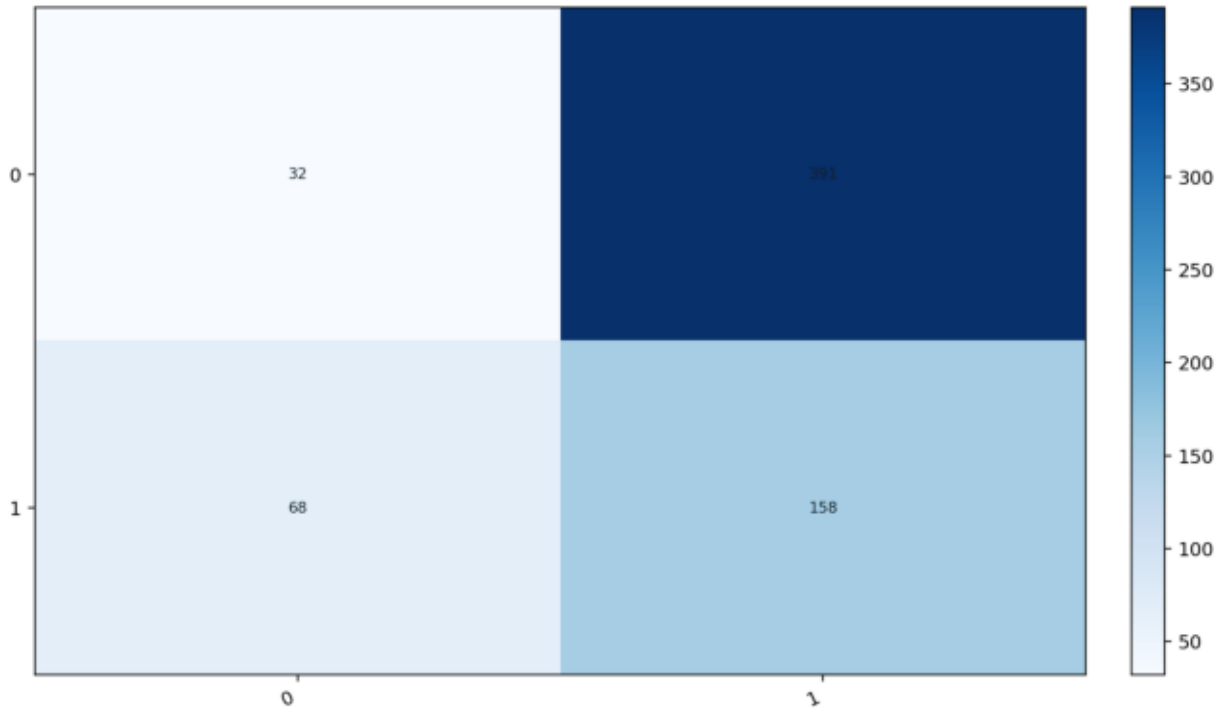
Interpretation:

MS-to-GP relative risk = 0.756332, 95% CI [0.691394, 0.827368].

The pass risks are 0.699115 for MS and 0.924350 for GP.

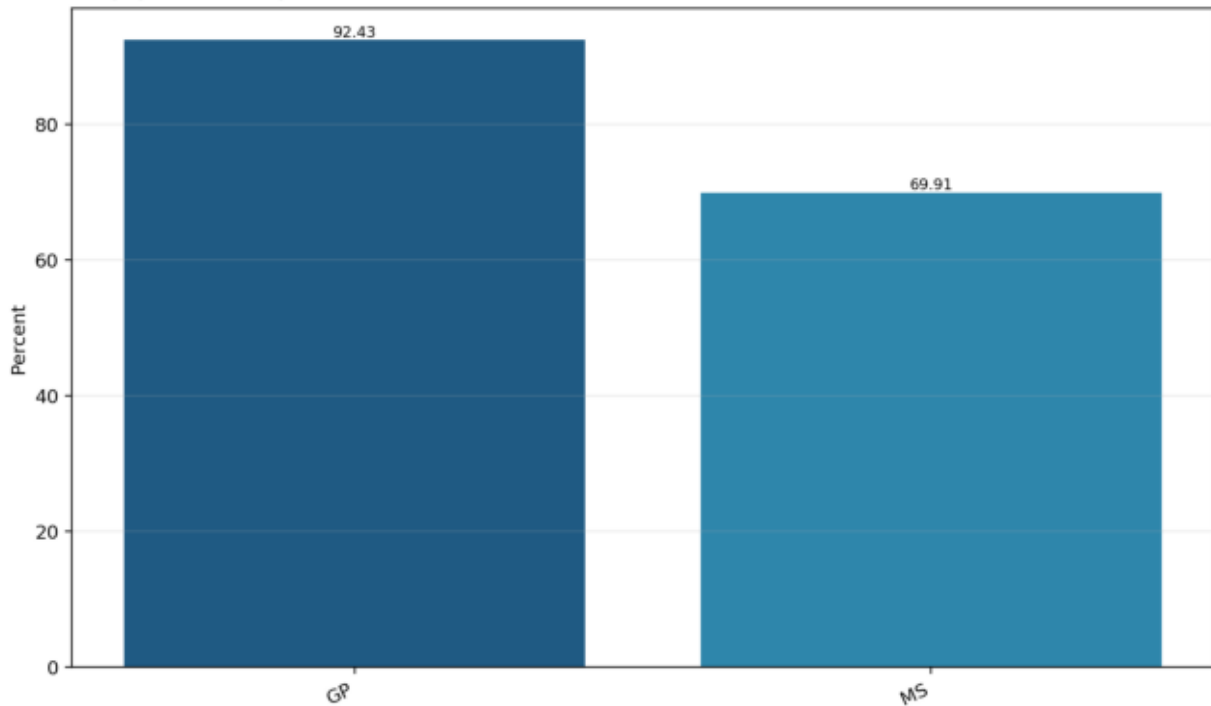
School and G3 pass outcome

Observed 2 x 2 risk table



Pass risk by school

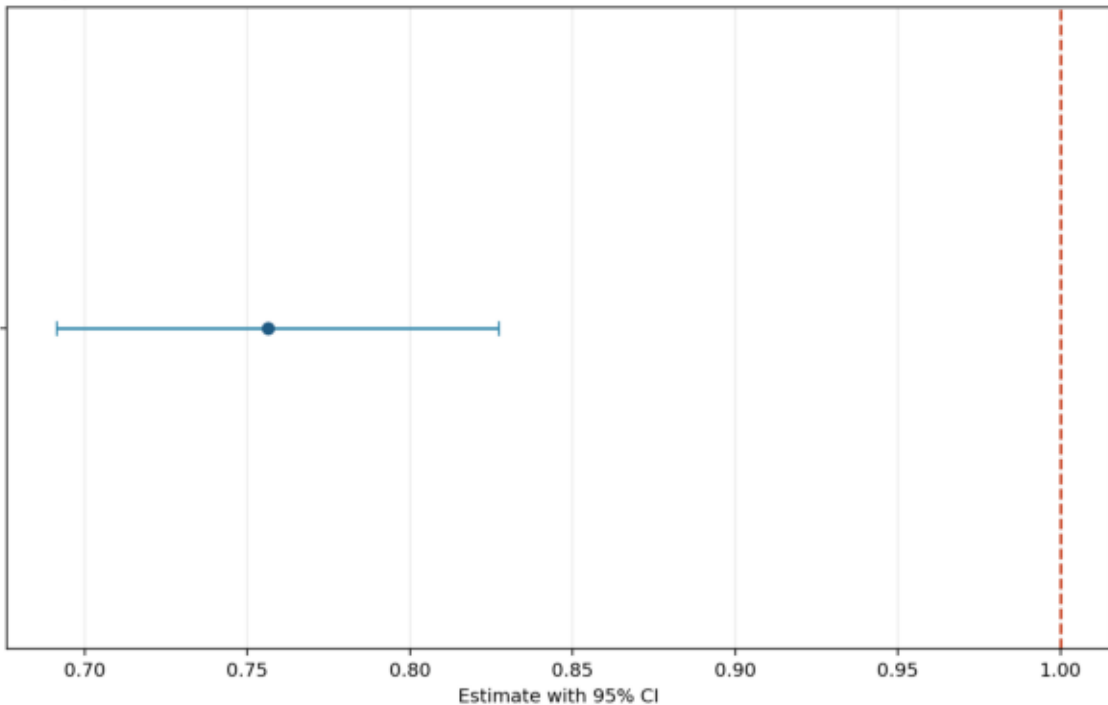
Group-specific outcome probabilities



Relative risk with 95% confidence interval

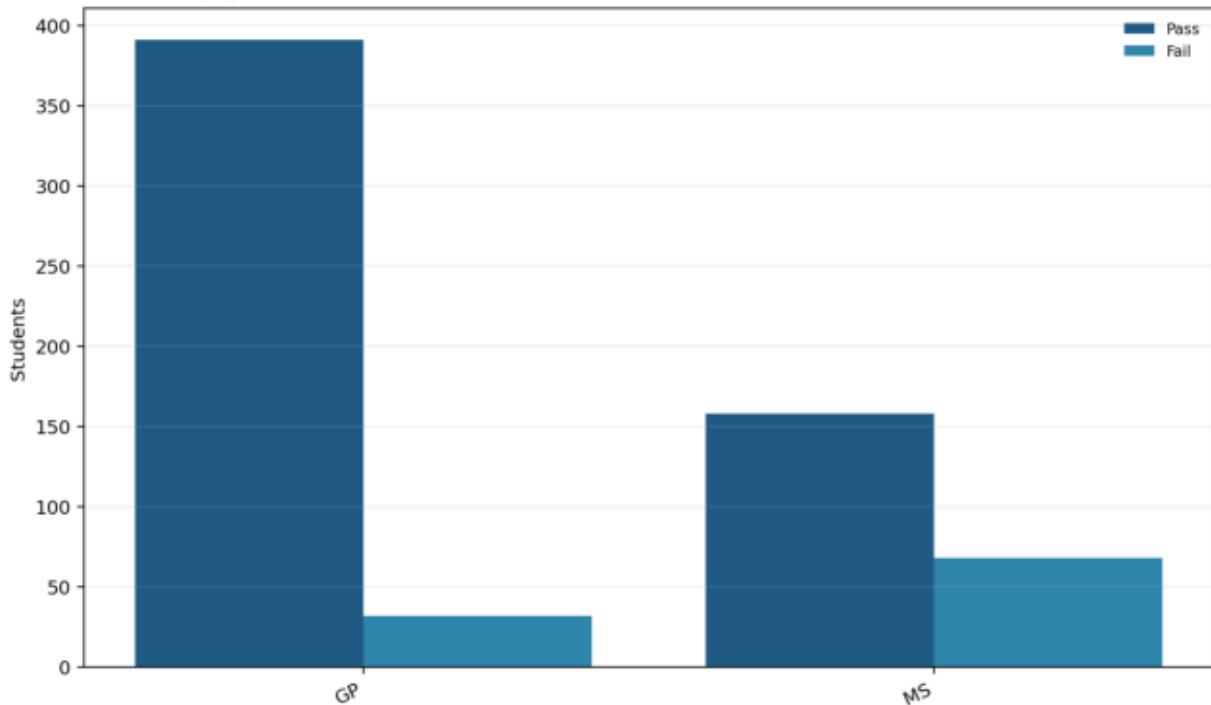
Primary risk-ratio effect

MS vs GP



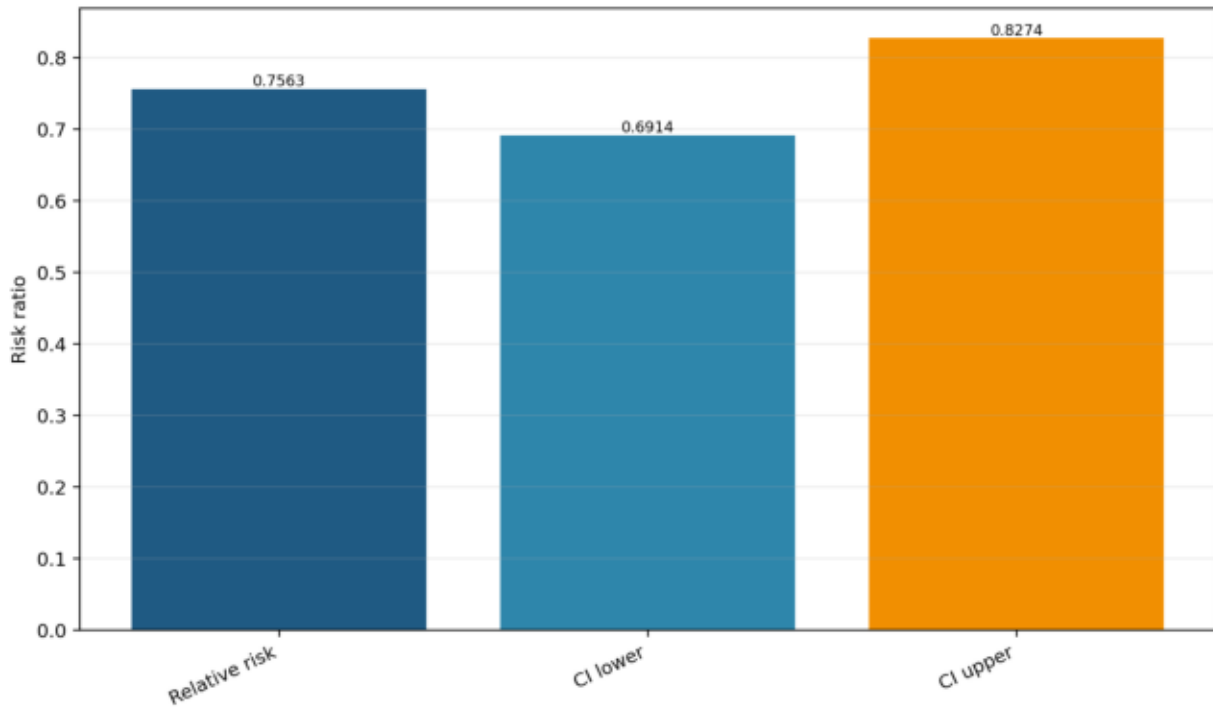
Pass and fail counts by school

Counts underlying the risk denominators



Relative-risk result summary

Null value is one



Observed 2X2

0	1
32	391
68	158

Risk Components

passes	total	risk
391	423	0.92435
158	226	0.699115