

2 x 2 Table Statistics

Single Table Analysis

		Disease		
		(+)	(-)	
Exposure	(+)	60	40	100
	(-)	40	60	100
		100	100	200

Chi Square and Exact Measures of Association

Test	Value	p-value(1-tail)	p-value(2-tail)
Uncorrected chi square	8	0.002339	0.004678
Yates corrected chi square	7.22	0.003605	0.007210
Mantel-Haenszel chi square	7.96	0.002391	0.004782
Fisher exact		0.003530	0.007060
Mid-P exact		0.002486	0.004973

All expected values (row total*column total/grand total) are >=5
OK to use chi square.

Risk-Based* Estimates and 95% Confidence Intervals (Not valid for Case-Control studies)

Type	Value	Confidence Limits		Type
		Lower	Upper	
Risk in Exposed	60%	50.19	69.07	Taylor series
Risk in Unexposed	40%	30.93	49.81	Taylor series
Overall Risk	50%	43.14	56.86	Taylor series
Risk Ratio	1.5	1.124	2.002 ¹	Taylor series
Risk Difference	20%	6.422	33.58 ^o	Taylor series
Etiologic fraction in pop. (EFp)	20%	5.976	34.02	

Etiologic fraction in exposed(EFe) 33.33% 11.04, 50.04

Odds-Based Estimates and Confidence Limits

Point Estimates	Confidence Limits			
	Type	Value	Lower, Upper	Type
CMLE Odds Ratio*		2.241	1.274, 3.974 ¹	Mid-P Exact
			1.23, 4.123 ¹	Fisher Exact
Odds Ratio		2.25	1.278, 3.962 ¹	Taylor series
Etiologic fraction in pop. (EFp OR)		33.33%	14.1, 52.57	
Etiologic fraction in exposed(EFe OR)		55.56%	21.74, 74.76	

*Conditional maximum likelihood estimate of Odds Ratio
 (P)indicates a one-tail P-value for Protective or negative association; otherwise one-tailed exact P-values are for a positive association.

Martin,D; Austin,H (1991) An efficient program for computing conditional maximum likelihood estimates and exact confidence limits for a common odds ratio. Epidemiology 2, 359-362.

^{o 1} 95% confidence limits testing exclusion of 0 or 1, as indicated

P-values < 0.05 and confidence limits excluding null values (0,1, or [n]) are highlighted.

LookFirst items: Editor's choice of items to examine first.

Results from OpenEpi, Version 3, open source calculator--TwobyTwo
 Print from the browser with ctrl-P
 or select text to copy and paste to other programs.