

**Table 15.1** Sample Sizes Needed to Achieve Power of 0.80 and 0.95 Given Small, Medium, and Large Effect Sizes

	<i>Sample Size Needed to Achieve Power = 0.80</i>	<i>Sample Size Needed to Achieve Power = 0.95</i>
Simple correlation/ordinary least squares regression <sup>1</sup>		
$\rho = 0.10$	779	1,289
$\rho = 0.30$	82	134
$\rho = 0.50$	26	42
Independent-groups <i>t</i> test <sup>2</sup>		
$d = 0.20$	788	1,302
$d = 0.50$	128	210
$d = 0.80$	52	84
Simple logistic regression <sup>3</sup>		
Odds ratio = 1.50	308	503
Odds ratio = 3.00	53	80
Odds ratio = 8.00	26	35

NOTE: Effect size conventions taken from Cohen (1988) where available.

<sup>1</sup>Calculated at  $\alpha = 0.05$ , two-tailed test.

<sup>2</sup>Calculated at  $\alpha = 0.05$ , two-tailed test, equal cell sizes, total sample reported.

<sup>3</sup>Odds ratios of 3.00 are considered important in epidemiological literature (Kraemer, 1992); thus, this was selected as a medium effect size. Odds ratios inflate quickly (and not linearly); therefore, 8.00 was selected as a large effect size (Hsieh, Bloch, & Larsen, 1998) and 1.50 was selected as a small effect size. Unfortunately, there is not agreement about what constitutes large, medium, and small effects in odds ratios. Calculations assumed two-tailed tests; no other independent variables were included in the analysis with an independent variable that was assumed to be normal.