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Comparison of proportion (Clinical Trials):

Sample size was calculated using previous study 50% of QOL. It is expected in this study after intervention , atleast 15% improvement. Total sample size required with 5% α-error and 90% of power of the study(1-β error). Required sample size=200 per group. With 10% of drop out rate final sample200+20=220.

Required information's:

Anticipated values of the population proportions	=	**P1 & P2**
Level of Significance	=	**100 (1-α) %**
Power of the Test	=	**100 (1-β) %**
Medically Meaningful Difference	=	**d**

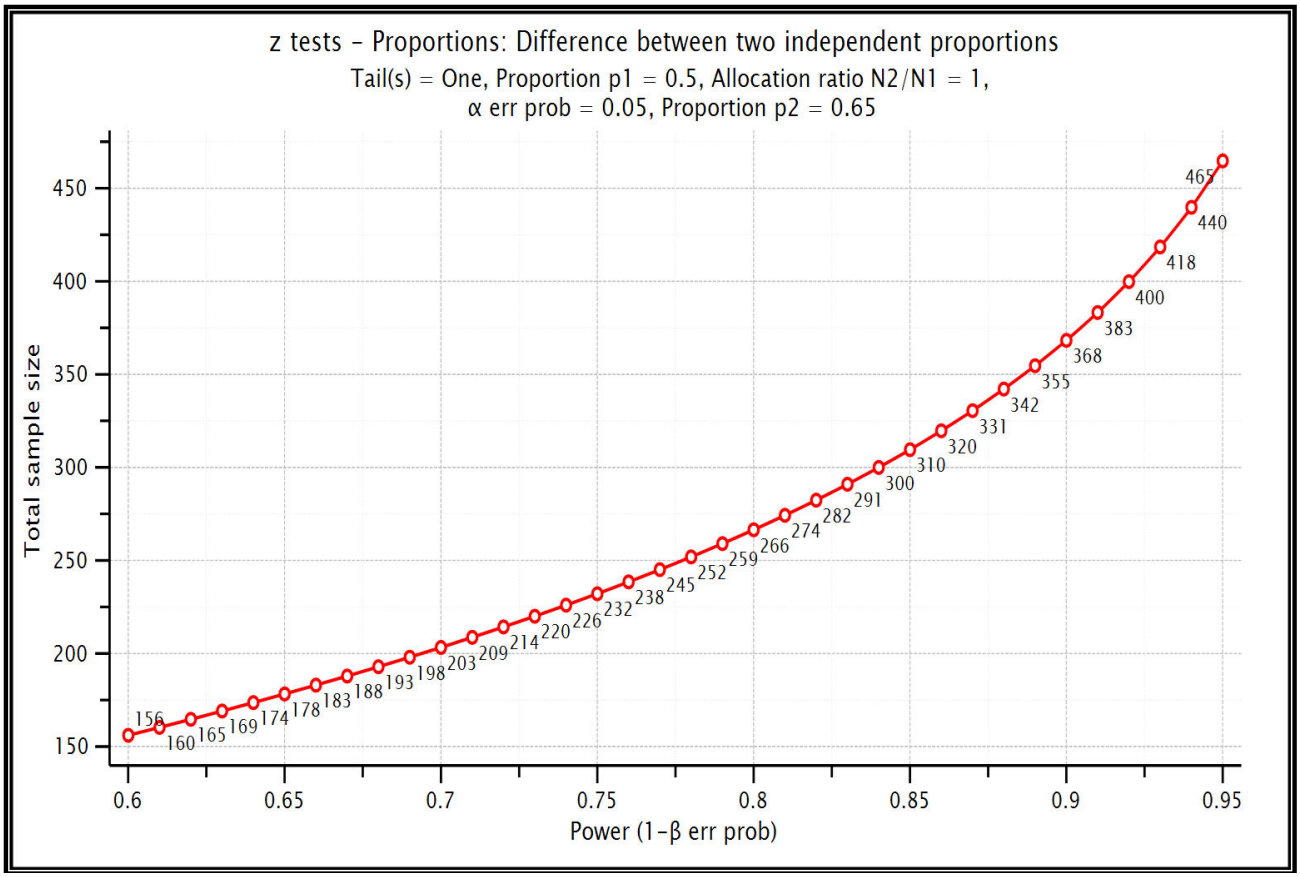
$$n = \frac{[P1\,(100-P1) + P2\,((100 - P2)]\;\;(Z_\alpha + Z_\beta)^2}{(P1-P2)^2}$$

P1 = 50%
P2 = 65 %
α = 1.64(on tail test)
β = 0.84
d = 15

$$n = \frac{[50 \times 50) + (65 \times 35]\;(1.64 + 1.28)^2}{15^2}$$

= 181 per group

With 10% drop out rate total sample size per group =181+36 =217
Experiment =220
Control =220


z tests - Proportions: Difference between two independent proportions
Tail(s) = One, Proportion p1 = 0.5, Allocation ratio N2/N1 = 1,
α err prob = 0.05, Proportion p2 = 0.65
Total sample size
Power (1-β err prob)
150
200
250
300
350
400
450
0.6
0.65
0.7
0.75
0.8
0.85
0.9
0.95
156
160
165
169
174
178
183
188
193
198
203
209
214
220
226
232
238
245
252
259
266
274
282
291
300
310
320
331
342
355
368
383
400
418
440
465