

POWER AND SAMPLE SIZE

Power is probability of detecting a clinically meaningful effect; sample size is the size of the study needed to detect this effect.



Did the authors describe how they determined the sample size needed to find a clinically meaningful effect?

 Yes

- The reader can assess the assumptions made by the investigator.

 No

Under-powered studies lead to type-II error which is common in veterinary literature

- Type-II error occurs when the study is too small to correctly identify clinically meaningful effects

The sample size estimate is calculated from 4 basic components:

- the desired power (1 - beta)
 - the acceptable probability desired confidence that populations that are truly the same will be classified as different (alpha)
 - the expected magnitude of the effect
 - a measure of the consistency of the effect in the population.
-

Under-powered studies do not provide trustworthy truth claims.