

For a multiple logistic regression model, if the value of the k th explanatory variable is increased by c units and everything else remains the same, the odds of $Y=1$ are $e^{(c \cdot B_k)}$ times as great. Show the calculation of the odds ratio.

$e^{(c \cdot B_k)}$

$B_{\text{birdkeeping}} = 0$

Chi-Square = 10.97, $P = 0.009$

The analysis suggests a statistically significant association between birdkeeping and the occurrence of lung cancer in the study's participants when considering the effects of other factors.

Specifically, the data shows that there is enough evidence to link birdkeeping with the presence of lung cancer in the sample provided, more than we would expect by chance alone. This does not mean that birdkeeping causes lung cancer, only that there is a statistical association in the observed data. Further research would be needed to explore this relationship, potentially including studies that could investigate whether there is a causal effect.

Observational

This study, based on the description provided, appears to be observational. In an observational study, researchers simply observe and record the phenomena that occur, without assigning treatments or manipulating variables.

The term "risk factor" does not imply causality; it merely suggests a correlation or association. A risk factor is a characteristic that is associated with an increased probability of a certain outcome, like a disease, but it does not necessarily cause the outcome.

From G² Stat

, there appears to be a meaningful link between keeping birds and the occurrence of lung cancer in the group of individuals studied. The numbers suggest that this is not likely to be due to chance alone.