

Checklist for Making an Inference

Report

- | | | | |
|-----------------------|---|-----|----|
| a) | Is the report laid out following the PPDAC cycle as shown below? | Yes | No |
| 1. Posing a question: | | | |
| b) | Does your question compare two groups? | Yes | No |
| c) | Does it state the medians of one measured variable to compare? | Yes | No |
| d) | Does the question limit itself to only the population the data is from? | Yes | No |
| e) | Is there a reason why someone might be interested in your answer? | Yes | No |
| 2. Plan: | | | |
| f) | Have you discussed how the data was sampled? | Yes | No |
| g) | Have you discussed how valid (correct, accurate) the sampling method is, and/or suggested other improved sampling methods? | Yes | No |
| h) | Have you discussed the sample size ? | Yes | No |
| i) | Have you used words like " representative " and " bias "? | Yes | No |
| 3. Data: | | | |
| j) | Do the plots/graphs you use actually help visualise the data or do they merely repeat it in another way? | Yes | No |
| k) | Do the plots/graphs have titles and labels on axes, including units? | Yes | No |
| l) | Do you give all the summary statistics ? (i.e. 5 points and mean) | Yes | No |
| m) | Have the informal confidence intervals been calculated? | Yes | No |
| n) | Are the informal confidence intervals drawn on the box plots? | Yes | No |
| 4. Analysis: | | | |
| o) | Have you compared other features of the data ?
(e.g. clusters, spread, outliers) | Yes | No |
| p) | Have you compared several features of the graphs/plots ?
(e.g. overlap, middle 50% of data, max/min, distribution) | Yes | No |
| q) | Have you explained sampling variability and the effect of sample size? | Yes | No |
| r) | Have you talked about where the population medians should lie using your informal confidence intervals? | Yes | No |
| s) | Have you made an inference (claim) based on your sample statistics, in terms of a statement of confidence, using CI overlap? | Yes | No |
| t) | Have you given supporting reasons for your inference using other data features (shape of box-and-whisker, IQRs etc)? | Yes | No |
| u) | Have you used calculated numbers in all of the analysis? | Yes | No |
| 5. Conclusion: | | | |
| v) | Have you answered your original question in a way that is consistent with the evidence you have given? | Yes | No |
| w) | Have you linked your sample statistics to the population? | Yes | No |
| x) | Have you suggested any improvements, limitations, further areas of investigation etc? | Yes | No |