

Cooperative Extension

Program Evaluation

Tipsheet #86

What is the difference between N and n?

Challenge

In presenting evaluation data, *always* report to the reader the number of people upon which your calculations are based whether you are using a percent (%) or a mean (\bar{x}) or some other calculation. The need to report the number of people upon which your calculations are based is an easy principle to remember, but how to apply it can be a challenge in the middle of reporting results for an entire program evaluation!

Tips to remember:

#1. N is the whole group; and n is a partial segment of that group. So for every N, there is one or more n's.

In any evaluation, N is the number of respondents who answer a specific question (for example 45) and n is one of the subgroups who answer the question; for example, 9 program participants (20%) may have answered 'very likely' to the question, "How likely are you to use the recommended lined manure pits in the next year?"

When you report a result, it is preferable to use the large N, the number who answer the question: "20% of the farmers said they were 'very likely' to use lined manure pits in the next year (N=45)" because the reader should know the number on which 20% is based.

It is also correct to use n, but not as easy for stakeholders to grasp the base for the %: for example, "20% of the farmers said they were 'very likely' to use lined manure pits in the next year (n=9)." Most readers can't do the math in their heads to calculate what the % is based on and to conclude "Oh, there were 45 respondents in all," information they should know.

#2. Above, the components of reporting results of a question are detailed. However, there are other important aspects to demystifying N and n in a program evaluation and are often the source of confusion. In a program evaluation,

- There is an N (and n's) for each question, as noted above.
- There is also an N (and an n) for the people who *participated in the evaluation*. That number is equal to, or more than, the N of any question because not everyone responds to every question. In the case above, 50 farmers participated in the evaluation (N=50), 60% men (n=30) and 40% women (n=20).
- There is also an N (and an n) for the people who *participated in the program*. In the case above, the number who participated in the program was (N=75), of which 7% (n=5) had disabilities.

In presenting the results of a program evaluation, report the number of people who came to the program, those who participated in an evaluation and the specific results, the number who answered each question. Keep each group separate. The basic principle to remember?

N is the whole group; n is a partial segment of that group

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