

ACTIVITY 2: Worksheet

You are now ready to collect your own simple random sample (SRS)!

Take an SRS of 5 countries, another SRS of 15 countries, and one more SRS of 30 countries and fill in the tables on the next page. Then, find the data from the following websites on life expectancy for 2022.

https://en.wikipedia.org/wiki/List_of_countries_by_life_expectancy

Note: To alphabetize the data, click on the arrow in the 1st column labeled “Countries & Territories” on the website.

<https://www.cia.gov/the-world-factbook/about/archives/2022/field/life-expectancy-at-birth/country-comparison>

Note: Clicking “Control-F” will allow you to search for the countries more quickly.

Record the data you collect on the next page.

When you are done finding your data, answer the following questions:

1. Did both websites give you the same value?
2. Do you think the values from one website are more accurate than the values from the other?
3. For the website that you felt was more accurate, do you think the values given are 100% correct? If not, why?
4. Did the website explain how they found the data and if not, how do you think they found those values?
5. Do you think the list that you received in class contained all countries in the world?
6. Did you get a country with no information available on life expectancy from either of the websites?"

Let's consider three types of bias that can occur during the sampling process. Read the definition of each type of bias and discuss whether you encountered it.

Undercoverage bias:

If the sampling design systematically excludes a portion of the population, undercoverage sampling bias may be introduced into the study.

Note: The list that you were given had 195 countries whereas the two websites listed more countries than 195. According to the United Nations, there are 195 recognized countries in the world, although, if all Independent Nations-States, dependent Nations, Antarctica, and other areas were included, then there would be 253 countries.

Non-response bias:

Non-response bias may occur when information cannot be found on a selected unit/individual either because the information is not available for that unit/individual, the individual cannot be contacted, or the individual refuses to cooperate.

Response bias: When a respondent lies or a recording error occurs for a unit/individual, response bias is present. The behavior of the interviewer or the wording of a question can cause response bias.

Based on what you learned today, what additional questions do you think you should ask yourself when reading statistics online?