

Name: _____

Date: _____

Quiz 7 – A

1. Explain what selective windowing is and why it is a potential source of bias. Give an example.
2. Name two ways in which a pollster might undercount a group unintentionally.
3. Name three distinct sources of non-response bias.
 - 1)
 - 2)
 - 3)
4. Rank the following sampling methods from worst to best. Give a brief justification as to why, touching on degree/type of randomness.

cluster simple random convenience stratified self-selected expert
5. Discuss the difference between all adults, registered voters, and likely voters as sampling frames.

6. When is stratified sampling an appropriate method? Explain.

7. What is the final result ($\bar{x}$) of this survey about the average number of romantic encounters in the last year for high school seniors? Show your work.

Subpopulation	n	$\bar{x}$	demographic weight
Cis male	127	3.2	48%
Cis female	299	4.5	48.5%
Trans male	23	1.3	0.3%
Trans female	37	1.4	0.2%
Non-binary	12	1.9	3%

Quiz 7 – A – answer key

1. Selective windowing occurs when the sampling frame isn't matched to the research question's population of interest. For example, using families that filled out a form to indicate interest in a charter school isn't a good sampling frame for all the families that might be interested; some families might not have known the form was required. Selective windowing is a source of bias if the people excluded from the frame are different than the population.
2. The group might be partially excluded from the sampling frame for some reason (e.g., only some people in the group have a cell phone); people in the group might be reluctant to respond; the method used to pick people at random may actually fail at giving everyone an equal chance of being chosen (e.g., people born at certain times of year are likelier to be picked)
3. Language barriers; apathy or lack of interest; missing the technology or not part of the communication channel used to contact people
4. Self-selected, convenience, expert, cluster, stratified, simple random. Self-selected is arguably the least random, since people have to choose to participate. Convenience isn't good, but the pollster might be at least getting a cross-section of people, even though it's not fully representative. Although expert is not the best option since it introduces bias, we would expect experts will be able to generate a mostly representative sample. Cluster is weak random, and some bias is introduced in picking sampling sites. Stratified is weak random, but there's not much possibility of introducing bias assuming demographic weights are well-known. Simple random is strong random and therefore the best.
5. All adults leans the most Democratic, but many of these folks don't vote regularly. "All adults" is often the sampling frame for polls in between elections, such as polls of presidential approval. This is the sampling frame a pollster might get by dialing random phone numbers. Registered voters have taken another step toward voting, but in many elections, a good slice of them will not vote. Pollsters can generate this sampling frame by getting voter rolls from each state. Likely voters are the people who go through screening questions about whether they've voted in past elections, whether they intend to vote in this election, etc. In midterm elections, "likely voters" tends to be more conservative, although this not true in presidential election years.
6. Stratified sampling is appropriate if the demographic weights of the subpopulation are well-studied and based on (fairly) permanent characteristics. It is not appropriate to do stratified sampling based on partisanship. Stratified sampling might be used if one subpopulation is difficult to reach or if two different communication channels are being combined (e.g., a landline sampling frame being combined with a cell phone sampling frame).

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