As a high-quality graduate statistics student, the correct answer to this question would be:

(A) \*\*Observational studies tend to have better external validity than experiments.\*\*

\*\*Explanation:\*\*

- \*\*External validity\*\* refers to the extent to which the results of a study can be generalized to other settings, populations, or times. Observational studies often take place in natural settings with a broader population, which can enhance their external validity compared to experiments, which are often conducted in controlled environments with more specific and sometimes less representative samples.

- \*\*Internal validity\*\* (Option B) is generally stronger in experiments due to the control over variables and the ability to establish causality through manipulation and randomization. Observational studies are more susceptible to confounding variables, which can weaken internal validity.

- \*\*Fewer subjects\*\* (Option C) is not inherently true. The number of subjects required depends on the study's goals, the effect size being investigated, and the statistical power needed, not on the type of study design.

- \*\*Representative samples\*\* (Option D) are actually more critical in observational studies since there is no control over assignment to groups, making it crucial to ensure the sample is representative to draw valid conclusions. Thus, this option is incorrect as researchers still need to be concerned about representativeness.

Therefore, the most accurate reason to prefer an observational study over an experiment in terms of study design considerations is related to external validity. Hence, the correct answer is \*\*A\*\*.