

25. Binge Drinking

First question: How often do college students do binge drinking?

Second question: How often is binge drinking done by college students?

26. Statistics Courses

First question: What is the proportion of college graduates who have taken a statistics course?

Second question: What is the proportion of statistics courses taken by college students?

Accurate Headlines? Exercises 27 and 28 give a headline and a brief description of the statistical news story that accompanied the headline. In each case, discuss whether the headline accurately represents the story.

27. Headline: “Drugs shown in 98 percent of movies”

Story summary: A “government study” claims that drug use, drinking, or smoking was depicted in 98% of the top movie rentals (Associated Press).

28. Headline: “Sex more important than jobs”

Story summary: A survey found that 82% of 500 people interviewed by phone ranked a satisfying sex life as important or very important, while 79% ranked job satisfaction as important or very important (Associated Press).

Stat-Bytes. Politicians commonly believe that they must make their political statements (often called sound-bytes) very short because the attention span of listeners is so short. A similar effect occurs in reporting statistical news. Major statistical studies are often reduced to one or two sentences. The summaries of statistical reports in Exercises 29–32 are taken from various news sources. Describe what crucial information is missing in the given statement and what more you would want to know before you acted on the report.

29. Confidence in Military. *USA Today* reports on a Harris poll claiming that the percentage of adults with a “great deal of confidence” in military leaders stands at 54%.

30. Top Restaurants. CNN reports on a Zagat Survey of America’s Top Restaurants that found that “only nine restaurants achieved a rare 29 out of a possible 30 rating and none of those restaurants are in the Big Apple.”

31. Forecasting Weather. A *USA Today* headline reported that “More companies try to bet on forecasting weather.” The article gave examples of companies believing that long-range forecasts are reliable, and four companies were cited.

32. Births in China. A *USA Today* headline reported that “China thrown off balance as boys outnumber girls,” and an accompanying graph showed that for every 100 girls born in China, 116.9 boys are born.

**PROJECTS FOR THE INTERNET & BEYOND**

33. Analyzing a Statistical Study. Find a detailed report on some recent statistical study of interest to you. Write a short report applying each of the eight guidelines given in this section. (Some of the guidelines may not apply to the particular study you are analyzing; in that case, explain why the guideline is not applicable.)

34. Twin Studies. Researchers doing statistical studies in biology, psychology, and sociology are grateful for the existence of twins. Twins can be used to study whether certain traits are inherited from parents (nature) or acquired from one’s surroundings during upbringing (nurture). Identical twins are formed from the same egg in the mother and have the same genetic material. Fraternal twins are formed from two separate eggs and share roughly half of the same genetic material. Find a published report of a twin study. Discuss how identical and fraternal twins are used to form case and control groups. Apply Guidelines 1–8 to the study and comment on whether you find the conclusions of the report convincing.

35. Professional Journals. Consult an issue of a professional journal. Select one specific article and use the ideas of this section to summarize and evaluate the study.

IN THE NEWS

36. Applying the Guidelines. Find a recent newspaper article or television report about a statistical study on a topic that you find interesting. Write a short report applying each of the eight guidelines given in this section. (Some of the guidelines may not apply to the particular study you are analyzing; in that case, explain why the guideline is not applicable.)

37. Believable Results. Find a recent news report about a statistical study whose results you believe are meaningful and important. In one page or less, summarize the study and explain why you find it believable.

38. Unbelievable Results. Find a recent news report about a statistical study whose results you *don’t* believe are meaningful and important. In one page or less, summarize the study and explain why you don’t believe its claims.