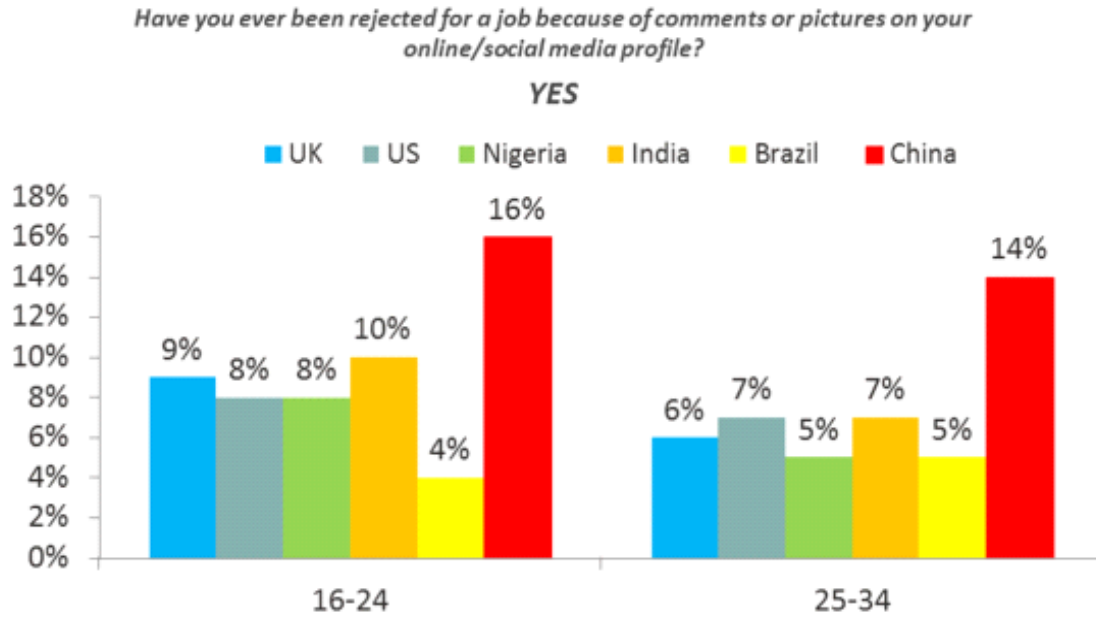## Topic #9
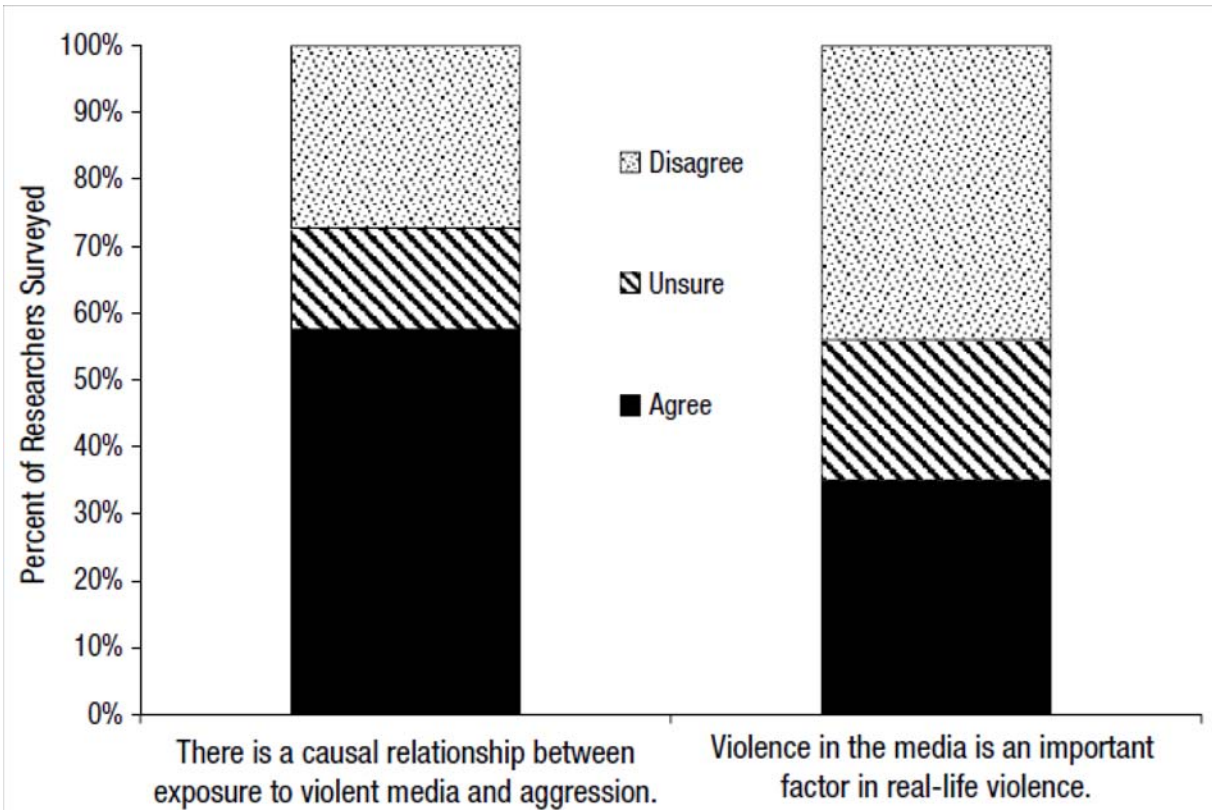
SURVEY RESEARCH

Measurement and assessment of opinions, attitudes, etc. Usually by means of questionnaires and sampling methods.

Have you ever been rejected for a job because of comments or pictures on your online/social media profile?

YES

Source: On Device Research YPCC
Brazil, China, India, Nigeria, US, UK
n = 20225 Age 16-34
May 2013

Fig. 1. Media researchers' opinions about the potential negative effects of violent media. Results from a survey of 379 media researchers reported in Bushman, Gollwitzer, and Cruz (in press). Figure was adapted from descriptive data reported in Table 1 of Bushman et al., indicating the number of scientists who agreed, disagreed, or were unsure in their opinions about these questions.
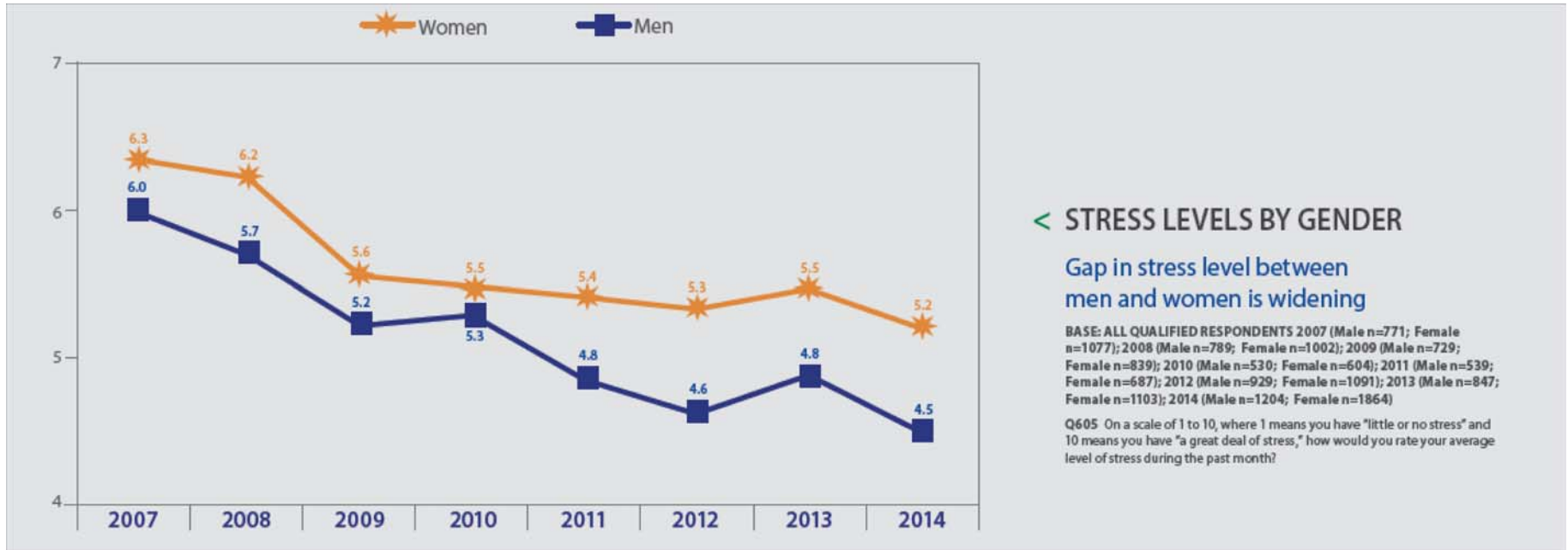
Markey, P. M. (2015). Finding the middle ground in violent video game research: Lessons from Ferguson (2015). *Perspectives on Psychological Science, 10,* 667-670.
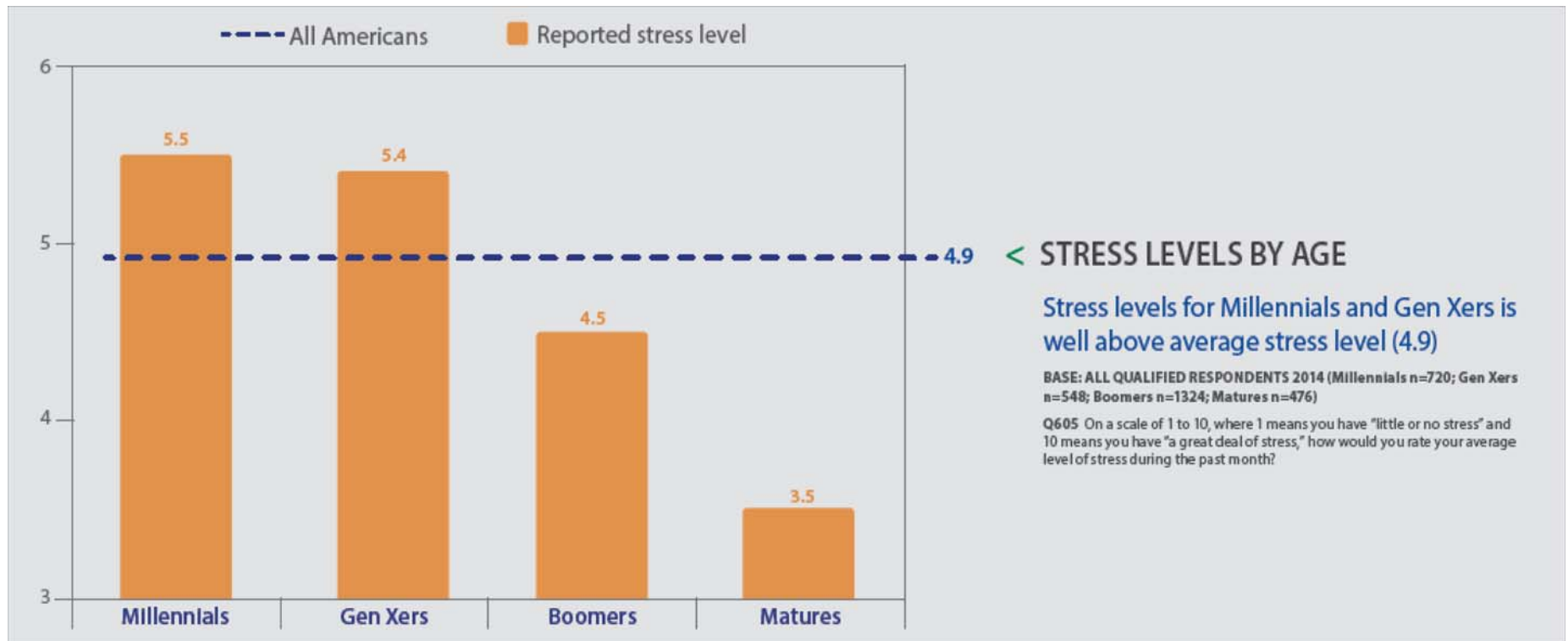
February 4, 2015
American Psychological Association Survey Shows Money Stress Weighing on Americans' Health Nationwide

www.stressinamerica.org

> ### < TOP 4 SOURCES OF STRESS
>
> **Money tops charts of significant sources of stress**
>
> BASE: ALL QUALIFIED RESPONDENTS 2007 (n=1848); 2008 (n=1791); 2009 (n=1568); 2010 (n=1134); 2011 (n=1226); 2012 (n=2020); 2013 (n=1950); 2014 (n=3068)
>
> Q625 Below is a list of things people say cause stress in their lives. For each one, please indicate how significant a source of stress it is in your life.
>
> *In 2007, this option was presented to respondents as "personal health concerns."

< STRESS LEVELS BY GENDER

Gap in stress level between
men and women is widening

BASE: ALL QUALIFIED RESPONDENTS 2007 (Male n=771; Female
n=1077); 2008 (Male n=789; Female n=1002); 2009 (Male n=729;
Female n=839); 2010 (Male n=530; Female n=604); 2011 (Male n=539;
Female n=687); 2012 (Male n=929; Female n=1091); 2013 (Male n=847;
Female n=1103); 2014 (Male n=1204; Female n=1864)

Q605 On a scale of 1 to 10, where 1 means you have "little or no stress" and
10 means you have "a great deal of stress," how would you rate your average
level of stress during the past month?

STRESS LEVELS BY AGE

Stress levels for Millennials and Gen Xers is well above average stress level (4.9)

BASE: ALL QUALIFIED RESPONDENTS 2014 (Millennials n=720; Gen Xers n=548; Boomers n=1324; Matures n=476)

Q605 On a scale of 1 to 10, where 1 means you have "little or no stress" and 10 means you have "a great deal of stress," how would you rate your average level of stress during the past month?

Important Measurement Issues and Potential Problems with Questionnaires and Other Self-Report Measures

1. First determine the purpose of the questionnaire.

    ● Ask the target participants for useful information.
    ● Anticipate questions of interpretation that may arise.

2. Determine the types of questions.

    a. **open-ended/constructed-response**—permits the respondents to answer in their own words

    b. **closed-ended**—limits the respondents to alternatives determined in advance by the designers

3. Item writing

    ● Potentially, the questions and items themselves can have a big and major influence on how people will respond.

    a. Determine the format of the item.

        ■   costruct-response (fill-in or write-in)
        ■   true/false
        ■   multiple-choice
        ■   Likert scales

    b. Address a single issue per item.

    > "Are you in favor of increasing student tuition and reducing Transportation Services' budget and allocating this revenue for faculty and staff raises?"

c. Loaded items generate or produce specified responses.

- e.g., item from a mail survey put out by congressman Joe Barton—summer 1988

> "A site in Ellis county, in your congressional district, is one of seven national finalists for the superconducting super collider (SCC) project. During this time of budget restraint, do you support programs vital to the future growth of our country such as the SCC?"

Yes = 87%
No = 13%

- During the 1992 presidential election, Ross Perot published a questionnaire in *TV Guide*. His objective was to measure the popularity of the positions he had taken on specified issues. One item read as follows:

> Should the president have the Line Item Veto to eliminate waste?

Yes = 97%

Question rewritten and asked of a random sample:

> Should the president have the Line Item Veto or not?

Yes = 57%

d. Topic or issue may be "sensitive" which can also have a major influence on how people respond, so avoid bias. Under these conditions, effects of loading are even more pronounced.

- e.g., two items that measure attitude towards abortion:

> "Do you believe in killing unwanted babies?"
>
> "Should a woman be forced to bear unwanted children?"

e. Make the alternatives clear.

- e.g., two items from the Texas Recycles Day Survey used to find out how much students know about recycling on and off campus at Texas A&M.

> 9.   Have you seen recycling bins on campus?
>
>   Yes   No
>
> 10.   If you answered yes, how often do you see them?
>
>   All the time and everywhere
>   Eventually
>   Once upon a time

- Also, do not use negations or percentages.

f. Questions and specified responses to them are not independent—adjacent question effect.

g. There are a variety of ways in which participants' own characteristics may inadvertently alter the research outcome.

1. **Response Styles**—tendencies to respond to questionnaire items in specific ways regardless of content. Biases that are consistent across time and questionnaires.

   a. **willingness to answer**—some people will not answer items or questions they are unsure about (will leave them blank). Others will go right ahead and guess.

      - *can usually control for this with strong instructions to answer ALL questions*

   b. **position preference**—when in doubt pick (C)

      - *control for this by randomization of alternatives*

   c. **acquiescence or yea- and nay-saying**—tendency to consistently agree or disagree with questionnaire statements or questions regardless of content

      - *controlled for by using method of matched pairs (repeat item and reverse); also controlled by using bi-directional responses*

EXAMPLE (OF ACQUIESCENCE)

> Based on the role play instructions, please respond to each question by circling the appropriate number along the line. Please circle the number along the line corresponding to how you think you would feel if you were **John Smith**.
>
> | Good | 1 2 3 4 5 6 7 | Bad |
> | Tense | 1 2 3 4 5 6 7 | Relaxed |
> | Pleased | 1 2 3 4 5 6 7 | Displeased |
> | Competent | 1 2 3 4 5 6 7 | Incompetent |
> | Happy | 1 2 3 4 5 6 7 | Unhappy |

2. **Response Sets**—tendencies to respond to a questionnaire or test content with a particular goal in mind.

   The primary example of this is **social desirability**—the most common response set.

   - **social desirability**—tendency to present self in a socially desirable manner; tendency to choose specified responses even if they do not represent ones true tendency or opinion.

     a. **self-deception** occurs when an individual unconsciously views him/herself in an inaccurately favorable light; lack of self-awareness.

     b. **impression management** refers to a situation in which an individual consciously presents him/herself falsely to create a favorable impression.

   - social desirability responding is the tendency to over-report socially desirable personal characteristics and to under-report socially undesirable characteristics.

   - also a tendency to present self in test-taking situations in a way that makes self look positive with regard to culturally derived norms and standards.

   - e.g., which of the Big Five factors would you expect to be most susceptible impression management/faking effects and why?

     conscientiousness

EXAMPLE (OF SOCIAL DESIRABILITY)

Sample items from a test used to select/hire firefighters

> 5.   Myfriends think I am slightly absent-minded and impractical.
>
>   A. Yes
>   B. Uncertain
>   C. No
>
> 10.   I prefer a job with _____ opportunity to learn new skills.
>
>   A. a lot of
>   B. some
>   C. little or no

- *control—administer MARLOWE-CROWNE or other SD scale and partial out or drop from sample*

Some tests (e.g., MMPI) have faking scales etc. Anonymous and private collection of data may also help.

   h. **Common method variance** and collection of data from single source.

- potential to inflate and confound observed relationships especially where there is a theoretically justifiable reason to expect this.

  - e.g., investigating relationship between task performance, contextual performance, job satisfaction, and organizational commitment and using self-report measures of all variables from employees.

Major Survey Techniques

1. face-to-face interviews
2. telephone interviews
3. mail
4. magazine
5. internet-based surveys & sample recruiting sources
   – online social science research resources
     – Study Response
     – E-Research Global
     – Zoomerang
     – Survey Monkey

Examination of the Equivalence of Self-Report Survey-Based Paper-and-Pencil and Internet Data Collection Methods

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Self-report survey-based data collection is increasingly carried out using the Internet, as opposed to the traditional paper-and-pencil method. However, previous research on the equivalence of these methods has yielded inconsistent findings. This may be due to methodological and statistical issues present in much of the literature, such as nonequivalent samples in different conditions due to recruitment, participant self-selection to conditions, and data collection procedures, as well as incomplete or inappropriate statistical procedures for examining equivalence. We conducted 2 studies examining the equivalence of paper-and-pencil and Internet data collection that accounted for these issues. In both studies, we used measures of personality, social desirability, and computer self-efficacy, and, in Study 2, we used personal growth initiative to assess quantitative equivalence (i.e., mean equivalence), qualitative equivalence (i.e., internal consistency and intercorrelations), and auxiliary equivalence (i.e., response rates, missing data, completion time, and comfort completing questionnaires using paper-and-pencil and the Internet). Study 1 investigated the effects of completing surveys via paper-and-pencil or the Internet in both traditional (i.e., lab) and natural (i.e., take-home) settings. Results indicated equivalence across conditions, except for auxiliary equivalence aspects of missing data and completion time. Study 2 examined mailed paper-and-pencil and Internet surveys without contact between experimenter and participants. Results indicated equivalence between conditions, except for auxiliary equivalence aspects of response rate for providing an address and completion time. Overall, the findings show that paper-and-pencil and Internet data collection methods are generally equivalent, particularly for quantitative and qualitative equivalence, with nonequivalence only for some aspects of auxiliary equivalence.

Keywords: equivalence testing, quantitative equivalence, qualitative equivalence, auxiliary equivalence, Internet

- Typical overall response rate for survey research is ≈ 30%. However, appears to be higher for targeted sampling of paid internet-based samples.

- The quality of the data is a direct function of the response rate.

SAMPLING

- The key to the meaningfulness of any survey is the soundness of the sampling procedure used to generate respondents.

- Examples of inadequate results from poor sampling

   a. Dewey vs. Truman

Weeks prior to the 1948 election, many leading editorial writers and political columnists relied on early Gallup Polls, which predicted Thomas E. Dewey's win over incumbent Harry S. Truman. Truman's strategy was to bypass the press by taking his case to the people in a "whistlestop" campaign. An issue of the early edition of the Chicago Daily Tribune was handed to Truman after the election. The headline declared "Dewey Defeats Truman." Truman upset Dewey despite having the support of only 15 percent of the nation's daily papers.

   b. Major League Baseball players are selected to the All-Star game by fans at ballparks.

Types of Sampling Procedures

1. **Uncontrolled**—researcher has no control in the selection of respondents

   - e.g., magazines, radio and TV call-ins
   - usually a very small sample—about 2%
   - usually biased in favor of more vocal individuals motivated to respond

2. **Haphazard sampling**—sampling procedure where the researcher may have some control over selection into study but it is still basically a hit-and-miss method for selecting participants

   - e.g., TV station sending crew out to interview people on the street for the evening news with instructions to include at least 2 women, 1 teenagers, and 1 person in a business suit

3. **Probabilistic sampling**—sampling procedures in which the researcher makes an effort to assure that each person in the population has an equal chance of being represented

   a. **Simple random**—sample chosen from an entire population such that every member of the population has an equal and independent chance of being selected

   b. **Stratified random**—sample is chosen to proportionally represent certain segments in the larger population

   c. **Cluster**—sample is selected by using clusters or groupings from the population

      - e.g., sampling every student in 10th class rather than every 10th student (simple random)

Margin of error