

### **Question-Behavior Effect**

**If you hear this:** Asking students questions in a survey about health risk behaviors (e.g., sexual intercourse) increases the likelihood that they will practice that behavior.

#### Say this:

- Asking students about previous experience with health behaviors does not influence those health behaviors.
  - For example, studies conducted among adolescents in school settings found no evidence asking risk behavior questions related to suicide and sexual behavior led to an increase in those risk behaviors. <sup>1-3</sup>
- Trend data from the YRBS indicate that the prevalence of many health risk behaviors (including sexual behaviors, tobacco use, and many violence-related behaviors) has decreased since 1991, even though many students nationwide have taken surveys, including the YRBS, about health risk behaviors.

#### Tip:

 YRBS fact sheets can be helpful in backing up your statements regarding the prevalence of health risk behaviors. You can find national versions of these at <a href="https://www.cdc.gov/healthyyouth/factsheets/index.htm">https://www.cdc.gov/healthyyouth/factsheets/index.htm</a>, but if you have your own, this is an opportunity to use them.

# **References: Question-Behavior Effect**

- 1. Kvalem I, Sundet J, Rivo K, et al. The effect of sex education on adolescents' use of condoms: Applying the Solomon Four-Group Design. *Health Educ Q*. 1996;23(1):34-47.
- 2. Gould M, Marrocco F, Kleinman M, et al. Evaluating iatrogenic risk of youth suicide screening programs. A randomized controlled trial. *JAMA*. 2005;293(13):1635-1643.
- 3. Koletić G, Cohen N, Štulhofer A, et al. Does asking adolescents about pornography make them use it? A test of the Question–Behavior Effect. *J Sex Res*. 2019;56(2):137-141.



#### Students Tell the Truth on the YRBS

**If you hear this:** I do not believe that students will tell the truth if you ask them these questions – so there is no point in doing so.

#### Say this:

- Research shows that students tell the truth on the YRBS. Special studies such as focus groups, test-retest reliability studies,<sup>1-3</sup> and other methods studies<sup>4-6</sup> all provide good evidence that the student responses are truthful.
- The survey environment, questionnaire design, and survey administration procedures help make students comfortable and most likely to tell the truth.
- Anonymous survey administration with no follow up/ identifying questions makes students feel safe to give honest, truthful answers.<sup>4,7-9</sup>
- Edit checks show that nearly all students answer the questions logically and consistently.
- YRBS results are consistent with results from other surveys and health outcome data. This would not happen unless students were telling us the truth.
- I have an easy to read 2-page document that summarizes the research showing that students tell the truth. I would be glad to email it to you. (The document is Exhibit 4-4 in the 2023 Handbook for Conducting Youth Risk Behavior Surveys or on the Survey TA website at <a href="https://surveyta.cdc.gov">https://surveyta.cdc.gov</a>.)

### Tip:

• See below for an updated version (now with citations included) of the document "Do Students Tell the Truth on the Youth Risk Behavior Survey (YRBS)?" found in Chapter 4 of the 2023 Handbook or on the Survey TA website at https://surveyta.cdc.gov.



#### Do Students Tell the Truth on the YRBS?

While a very small number of students do not answer the YRBS honestly, most students tell the truth.<sup>7-11</sup> We have confidence in YRBS data for the following reasons:

- 1. **Survey environment.** Survey administration procedures are designed to protect the confidentiality of schools and the anonymity of students.
  - Students sit as far apart as possible throughout the classroom.
  - For paper surveys, students have a piece of paper to cover their responses; for electronic surveys, only one question appears on the screen at a time.
  - Survey administrators and classroom teachers are instructed to not wander around the classroom while students are taking the survey.
  - Students are told the importance of providing honest answers, that no one will know how they respond, and how the data will be used to improve programs and policies for students.
  - Make-ups are done only when the privacy of students can be protected.
- **2. Questionnaire design and content.** The YRBS questionnaire is designed to protect the anonymity of students.
  - No names or other types of personally identifying information are ever requested.
  - Skip patterns are not used to make sure all students complete the questionnaire in about the same amount of time. If skip patterns were used, some students who engaged in few risk behaviors would complete the questionnaire far faster than those students who engaged in many risk behaviors. All students are expected to answer every question.
  - The YRBS high school questionnaire has about an 8th grade reading level. This helps students
    accurately comprehend questions and response options. The total number of questions is
    kept low to help ensure students have an adequate amount of time to respond to every
    question. Questions are written in a straightforward and direct manner and require only one
    response.
- 3. Edit checks. YRBS data are edited for inconsistent responses.
  - More than 150 edit checks are conducted on each high school YRBS data set to remove inconsistent responses.
    - For example, students who report carrying a weapon on school property also must have reported carrying a weapon anywhere or the responses to these two questions will be deleted. Only a very small percentage of responses to each question are identified as inconsistent and removed from the data sets.
  - Though it rarely occurs, questionnaires with only a few valid responses are removed entirely from the data set.



- 4. Logic within groups of questions. Questions on similar topics produce logical responses.
  - For example, more students have thought about attempting suicide than have made a plan to attempt suicide. Fewer still have actually attempted suicide, and very few have made an injurious suicide attempt. This logical pattern of responses within groups of questions has occurred since the first surveys were conducted.
- 5. Comparison of YRBS data with data from other surveys. When YRBS results are compared to results from other national, state, and district surveys on the same topics, the results are generally quite similar, particularly when differences in survey administration, sample selection, and question wording are taken into consideration.
- 6. Consistency over time. YRBS results have been fairly consistent since 1991. While the prevalence of some behaviors has increased or decreased significantly over time, most changes have been gradual and in one direction, either up or down, and have not bounced around from year to year.
- 7. Health outcome data. YRBS results are consistent with health outcome data.
  - For example, YRBS data from the past decade indicate that the prevalence of sexual experience is decreasing. Decreases in teen pregnancies and teen births among adolescents also were occurring.
- **8. Subgroup differences.** Subgroup differences are logical and have remained generally constant over time.
  - For example, many behaviors like drug use and sexual experience consistently increase by grade, while others like physical fighting consistently decrease by grade. Other behaviors vary consistently by sex. For example, male students are always far more likely than female students to use smokeless tobacco.
- 9. Psychometric studies. CDC has conducted a series of psychometric tests to better understand the quality of the questionnaire and the data collected with it. Based on the data available, the YRBSS data appear to be generally reliable and valid.
  - When the YRBS questionnaire was developed, psychometric tests were conducted in a cognitive laboratory setting, in focus groups, and in regular classrooms among diverse groups of students.
  - In 1992 and 2000, CDC conducted reliability studies to measure the stability of responses during a 2-week interval.<sup>1-3</sup>
  - In 2002, 2004, and 2008, CDC conducted additional methodological studies to examine other factors affecting the reliability and validity of YRBS data.<sup>4,11,12</sup>
  - Researchers not associated with CDC also have conducted psychometric tests using the YRBS questionnaire and similar questionnaires.<sup>7-10</sup>
  - For the past three YRBS cycles, cognitive interviews were conducted to test the performance of ten proposed and current YRBS questions. A copy of this document may be downloaded from the Survey TA Website at <a href="https://surveyta.cdc.gov">https://surveyta.cdc.gov</a>.



#### References: Students Tell the Truth on the YRBS

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- 2. Brener ND, Kann L, McManus TL, et al. Reliability of the 1999 Youth Risk Behavior Survey Questionnaire. *J Adolesc Health*. 2002;31:336-342.
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- 5. Eaton DK, Olsen EO, Brener ND, et al. A comparison of fruit and vegetable intake estimates from three survey question sets to estimates from 24-hour dietary recall interviews. *J Acad Nutr Die*. 2013;113:1165-1174.
- 6. Olsen EO, Eaton DK, Park S, et al. Performance of surveillance questions for assessing beverage intake among U.S. high school students. *Am J Health Beha*. 2014;38(1):114-123.
- **7.** Ong AD, Weiss DJ. The impact of anonymity on responses to sensitive questions. *J Appl Soc Psychol*. 2000;30:1691-1708.
- 8. Andersson C, Bendtsen M, Lindfors P, et al. Does the management of personal integrity information lead to differing participation rates and response patterns in mental health surveys with young adults? A three-armed methodological experiment. *Int J Methods Psychiatr Res*. 2021;30(4):e1891.
- 9. Merino-Soto C, Copez-Lonzoy A, Toledano-Toledano F, et al. Effects of anonymity versus examinee name on a measure of depressive symptoms in adolescents. *Children*. 2022;9(7):972.
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