2023 Youth Tobacco Survey (YTS): AAPOR Transparency Initiative Immediate Disclosure Items

1. Describe the data collection strategies employed (e.g. surveys, focus groups, content analyses).
   The 2023 YTS data were collected using a paper and web-based survey.
2. Name the sponsor of the research and the party(ies) who conducted it. If the original source of funding is different than the sponsor, this source will also be disclosed.
   The YTS is part of the Student Health and Risk Prevention Surveillance System that is sponsored and administered by the Nebraska Department of Health and Human Services and the Nebraska Department of Education through a contract with the Bureau of Sociological Research (BOSR) at the University of Nebraska-Lincoln.
3. The exact wording and presentation of any measurement tool from which results are reported as well as any preceding contextual information that might reasonably be expected to influence responses to the reported results and instructions to respondents or interviewers should be included.
   https://bosr.unl.edu/projects/sharp/yts/questionnaires/
4. A definition of the population under study, including location, age, other social or demographic characteristics (e.g., persons who access the internet), time (e.g., immigrants entering the US between 2015 and 2019).
   The YTS targets public high school students in grades 9-12 in Nebraska.
5. Dates of data collection.
   The 2023 YTS was administered between August 2023 and January 2024.
6. Explicitly state whether the sample comes from a frame selected using a probability-based methodology (meaning selecting potential participants with a known non-zero probability from a known frame) or if the sample was selected using non-probability methods (potential participants from opt-in, volunteer, or other sources).
   The YTS uses a two-stage, cluster sampling design. The data file used to create the sampling frame is obtained through the Nebraska Department of Education (NDE) website. All school districts have to register with NDE, so the list has complete coverage of all public high schools in Nebraska. First, the Centers for Disease Control (CDC) selects a random sample of public high schools using a probability proportionate to size (i.e, school enrollment) method. Schools are then recruited to participate. Each participating school provides BOSR with a list of classrooms for a required period or subject (e.g., second period or English) that includes all students in grades 9-12 at their school. Classrooms are then randomly sampled using this list and all students in these sampled classrooms are targeted for participation. The CDC provides BOSR with this random classroom selection procedure.
7. Probability-based sample specification should include a description of the sampling frame(s), list(s), or method(s). If a frame, list, or panel is used, the description should include the name of the supplier of the sample or list and nature of the list (e.g., registered voters in the state of Texas in 2018, pre-recruited panel or pool). If a frame, list, or panel is used, the description should include the coverage of the population, including describing any segment of the target population that is not covered by the design.

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8. Provide a clear indication of the method(s) by which participants were contacted, selected, recruited, intercepted, or otherwise contacted or encountered, along with any eligibility requirements and/or oversampling. Describe any use of quotas.

   Schools were first informed of their eligibility via emailed letter in April 2023. This letter informed them of the opportunity to participate in one or more of the three surveys (i.e., YRBS, Youth Tobacco Survey (YTS), and/or Nebraska Risk and Protective Factor Student Survey (NRPFSS)) under the Student Health and Risk Prevention (SHARP) surveillance system during fall 2023. Packets including additional information about all three SHARP surveys were mailed to eligible schools in May 2023. BOSR continued recruitment efforts in August 2023 with schools that had not yet responded. This stage of recruitment was conducted by phone and email and continued throughout the remainder of the fall 2023 semester with non-responding schools until an answer was received from the school. Participating schools were also contacted during this timeframe to gather any remaining information BOSR needed (e.g., classroom lists, student enrollment numbers, administration dates, etc.) and to provide all materials schools needed for survey administration. Students eligible for participation and their parents were notified by each school using their district's approved processes. BOSR provided schools with parental consent form templates upon request. These templates can be found at https://bosr.unl.edu/projects/sharp/yts/parent-consent-forms/. For school districts with formal research request procedures, all communication and information related to the SHARP surveys was sent to the appropriate person at that district using the procedures provided by the district.

9. Provide details of any strategies used to help gain cooperation (e.g., advance contact, letters and scripts, compensation or incentives, refusal conversion contacts) whether for participation in a survey, group, panel, or for participation in a particular research project. Describe any compensation/incentives provided to research subjects and the method of delivery (debit card, gift card, cash).

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10. A description of all mode(s) used to contact participants or collect data or information (e.g., CATI, CAPI, ACASI, IVR, mail survey, web survey) and the language(s) offered or included.

   The YTS is a self-administered survey that was available as a paper and web-based Qualtrics survey. This is a school-based survey that is administered with students in classrooms. It was offered in English and Spanish.

11. Sample sizes (by sampling frame if more than one was used) and (if applicable) a discussion of the precision of the results. Provide sample sizes for each mode of data collection (for surveys include sample sizes for each frame, list, or panel used). For probability samples, report estimates of sampling error (often described as "the margin of error"), and discuss whether or not the reported sampling error or statistical analyses have been adjusted for the design effect due to weighting, clustering, or other factors. Reports of non-probability sample surveys will only provide measures of precision if they are defined and accompanied by a detailed description of how the underlying model was specified, its assumptions validated and the measure(s) calculated.

   The design effect due to weighting adjustments is 1.57, which represents the loss in statistical efficiency that results from unequal weights[1]. Because the sample was drawn using probability proportionate to size, no sample weighting was necessary resulting in no design effect due to sampling.

   Table 1 presents margins of sampling error for some of the most likely sample sizes not taking the design effect from the weighting into account. Exact margins of error for alternative specifications of sample size and reported percentages can be easily computed by using the following formula for the 95% confidence level:
   Margin of error = 1.96 * square root (p(1-p)/n)
   p = the expected proportion selecting the answer
   n = number of responses

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[1] The formula used is: $1 + cv^2(w) = \dfrac{n(\sum_1^n w_i^2)}{\left(\sum_1^n w_i\right)^2}$

Table 1. Approximate Margins of Error of Percentages by Selected Sample Size NOT Accounting for Design Effect

Reported Percentage	Full Sample* n=486	75% Sample n=364	50% Sample n=243	33.3% Sample n=162	25% Sample n=121	10% Sample n=48
50	4.45%	5.14%	6.29%	7.70%	8.91%	14.15%
40 or 60	4.36%	5.03%	6.16%	7.54%	8.73%	13.86%
30 or 70	4.07%	4.71%	5.76%	7.06%	8.17%	12.96%
20 or 80	3.56%	4.11%	5.03%	6.16%	7.13%	11.32%
10 or 90	2.67%	3.08%	3.77%	4.62%	5.35%	8.49%
5 or 95	1.94%	2.24%	2.74%	3.36%	3.88%	6.17%

* 95% confidence interval states that in 95 out of 100 samples drawn using the same sample size and design, the interval will contain the population value

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When accounting for design effects due to weighting, the adjusted sampling error will be increased as is shown when comparing Table 1 to Table 2 where the sampling design effect is incorporated:

Margin of error = square root (deff) * 1.96 * square root (p(1-p)/n)

deff = design effects

p = the expected proportion selecting the answer
n = number of responses

Table 2. Approximate Margins of Error of Percentages by Selected Sample Size Accounting for the Design Effect of Weighting

Reported Percentage	Full Sample* n=486	75% Sample n=364	50% Sample n=243	33.3% Sample n=162	25% Sample n=121	10% Sample n=48
50	5.57%	6.43%	7.87%	9.64%	11.15%	17.71%
40 or 60	5.45%	6.30%	7.71%	9.45%	10.93%	17.35%
30 or 70	5.10%	5.89%	7.21%	8.84%	10.22%	16.23%
20 or 80	4.45%	5.15%	6.30%	7.71%	8.92%	14.17%
10 or 90	3.34%	3.86%	4.72%	5.78%	6.69%	10.63%
5 or 95	2.43%	2.80%	3.43%	4.20%	4.86%	7.72%

* 95% confidence interval states that in 95 out of 100 samples drawn using the same sample size and design, the interval will contain the population value

12. A description of how the weights were calculated, including the variables used and the sources of weighting parameters, if weighted estimates are reported.

The data were weighted in two ways to account for nonresponse and population characteristics. Sample weights were not needed given that the sample was drawn using the probability proportionate to size method. First, data were weighted to account for school nonresponse. Schools were grouped into two categories based on their

enrollment size. A weight was then calculated for each category. Next, the data were weighted to account for student nonresponse by calculating weights for each classroom. As much as possible, classrooms with less than 10 completes were merged with other classrooms with a similar dominate grade level. Lastly, poststratification weights were applied based on gender, race, and grade level in order for the data to more closely resemble the population. The final weight in the dataset is called Pwate.

13. Describe validity checks, where applicable, including but not limited to whether the researcher added attention checks, logic checks, or excluded respondents who straight-lined or completed the survey under a certain time constraint, any screening of content for evidence that it originated from bots or fabricated profiles, re-contacts to confirm that the interview occurred or to verify respondent's identity or both, and measures to prevent respondents from completing the survey more than once. Any data imputation or other data exclusions or replacement will also be discussed.

> **Any duplicate or blank responses were removed from the dataset. Validity checks were done by looking for students who provided inconsistent, unlikely, or illogical responses. These responses were then flagged in the final dataset.**

14. Contact for obtaining more information about the study.

> **Any questions regarding the 2023 YTS administration can be directed to BOSR by calling (402) 472-3672 or by sending an email to bosr@unl.edu.**

15. A general statement acknowledging the limitations of the design and data collection.

> **All surveys contain errors that cannot be directly measured. These errors may arise when response rates are less than 100%, when weights do not fully account for potential differences in the representation of the respondents to the target population, or when respondents do not understand or cannot answer all of the questions that are asked in the survey. The YTS is only administered in public high schools, and therefore data collection is limited only to students in public high schools. Students that are in private schools or that are homeschooled are not included in the design.**