

The Committee requests a **written response** from the **Joint Advertising Market Research & Studies (JAMRS) Office** on how JAMRS' surveys on propensity are worded to prevent bias among respondents (i.e. bias for or against joining the military)?

The JAMRS Youth Poll survey uses a nationally representative sample and weighting methodology designed to minimize bias and survey error. The questionnaire was created using the method set forth by Donald Dillman, Jolene Smyth, and Leah Melani Christian in *Internet, phone, mail, and mixed-mode surveys: The tailored design method* (2014), which outlines best practices for designing survey questionnaires. Reducing survey error, which includes both systematic error (i.e., bias) and variable error, goes beyond question wording. To reduce error, Youth Poll methods aim to address the four main types of survey error: 1) coverage error, 2) sampling error, 3) nonresponse error, and 4) measurement error.

1. **Coverage error.** Coverage error occurs when the sampled population does not reflect the population it is meant to represent. In the case of the Youth Poll, the population of interest is youth ages 16–24 residing in the United States who speak English, have never served in the Military, and are not institutionalized. The Youth Poll frame is derived from a robust sample. Coverage is evaluated once a year to ensure estimates obtained from the Youth Poll survey can be used to generalize to the target population. The most recent coverage report, conducted on the Fall 2015 Youth Poll survey, shows that the Youth Poll had a very high coverage rate (95%). This high coverage rate mitigates the risk that samples and results are biased, allowing for inferences to be made about the general youth population.
2. **Sampling error.** Sampling error occurs when an estimate provided by the sample is not the same as would result from sampling the entire population. To avoid sampling bias, the Youth Poll uses a probability-based selection method, in which all members of the sampling frame have a known and positive chance of being randomly selected for the survey, and which is taken into account in the survey weights. With regard to sampling variability, the Youth Poll sample design takes into account precision needs as well as the per-unit cost and per-unit variance when allocating sample across strata.
3. **Nonresponse error.** Nonresponse error occurs when those who do not respond to the survey differ from those who responded with respect to characteristics being measured. In the Youth Poll, weighting adjustments are used to mitigate the risk of nonresponse bias. JAMRS also examines whether nonresponse bias is a concern for each Youth Poll by comparing variables available in the sampling frame as well as geographical variables from those who did not complete the survey to those who did.

4. Measurement error. Measurement error can occur as the result of poor question wording or data collection quality. The Youth Poll propensity question is worded as follows:

In the next few years, how likely is it that you will be serving in the Military?

- 1=Definitely
- 2=Probably
- 3=Probably not
- 4=Definitely not

The wording of this question aims to avoid pitfalls that could result in measurement bias.

- *Willingness to Answer.* Respondents may be less motivated to answer questions that deal with sensitive subjects or behaviors. We know from past Youth Polls that lack of willingness to answer is not a large source of bias in Youth Poll propensity estimates. Very few youth refuse to answer this question. In 2015, less than .05% of respondents refused this question.
- *Comprehension.* The Youth Poll propensity question uses simple language that most youth can understand. The question includes a specific timeline for youth to focus on (i.e., “in the next few years”).
- *Leading Questions.* The propensity question is worded so as not to sway the respondent in either direction. Four response options are provided, allowing respondents to choose from an equal number of positive and negative responses.

Further, this propensity question has been asked in the same manner since the 1980s and studies have shown it to be predictive of actual enlistment behaviors.^{1,2}

¹ Orvis, B. R., Sastry, N., & McDonald, L. L. (1996). Military recruiting outlook: Recent trends in enlistment propensity and conversion of potential enlisted supply (No. MR-677-A/OSD). RAND Corp. Santa Monica, CA.

² Ford, M. T., Gibson, J. L., Griepentrog, B. K., & Marsh, S. M. (2014). Reassessing the association of intent to join the military and subsequent enlistment. *Military Psychology, 26*(1) 1–14.