

Measuring Changes in Sexual and Reproductive Health Knowledge, Attitudes and Behaviors: Common Mistakes and Easy Fixes

Great questions and great answer choices lead to great evaluation success. Here are some tips and examples to build quality questions and questionnaires.

REVIEW YOUR QUESTIONNAIRE

STRUCTURE:

- Group like questions together – knowledge, risk perception, attitude, self-efficacy, behavior...
- Keep questions on one subject grouped together.
- Eliminate redundant questions.
- The shorter the better, especially if there are open-ended questions.

REVIEW AND PILOT TEST FOR LENGTH AND FOR PITFALLS: You need to ensure that your questionnaire is a reliable data collection tool. If your respondents get a question wrong, or fail to respond, it should not be because the test was too long, or poorly worded, or any of the other pitfalls described below. For example, a well-designed question with answer options describes all options clearly, with enough plausible options that a respondent who does not know the answer will not be led to the correct one.

TESTING FOR PITFALLS: The first step is to have the program staff review your questionnaire for all pitfalls, and make corrections. The second step is to convene a group of youth leaders who are in touch with the communities of youth your program serves, and have similar literacy levels. Explain pitfalls to them, so that they know what they are looking for, then ask them to "pilot-test" the questionnaire to spot all pitfalls. Each member of the youth group will then take the test, taking notes, and then the whole group will organize their feedback on the questionnaire, going question by question to see what group members answered, whether they understood, etc. This youth group and the staff can discuss together about possible revisions.

TESTING FOR LENGTH: A second group of young people would take the test after these last revisions to determine how long it takes; eliminating all confusing questions and pitfalls should make the test-taking go much more quickly!

The table on the following pages summarizes:

- General Pitfalls in designing questions (pages 2 to 5) and Specific Pitfalls in designing questions testing knowledge, attitudes and behavior (page 6) as well as examples for pitfalls and remedial actions that can be taken.

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Sources:
 EMpower: Pre and Post test guidance_final
 Susan J. Barkman, A Field Guide to Designing Quantitative Instruments to Measure Program Impact. Purdue University, 2002.
 National Center for Chronic Disease Prevention and Health Promotion, Program Evaluation Tip Sheet: Constructing Survey Questions, October 2011.
 I-TECH, International Training and Education Center for Health, Guidelines for Pre- and Post-Testing, 2010.

Pitfall & Remedial Action	Description	Tip	Example of Pitfall	Revision
GENERAL PITFALLS and Remedial Action				
Questions are not reflecting the objectives/ the content of your program Match content to learning objectives and curriculum		- If your program focuses on knowledge, then match content as nearly as possibly to the learning objectives. - If your program aims to change attitudes, self-efficacy, or behaviors, make sure the questions cover the range of issues that your program addresses.	The most common example is having many questions on sexual or reproductive behavior in questionnaires for younger adolescents, when your curriculum does not have a strong focus on building skills and self-efficacy to change behavior.	If the learning objectives are limited to knowledge and attitudes, restrict the questionnaire to those issues.
Double-barreled questions Ask only one question at a time.	Double-barreled questions contain two or more things that are being asked in a single question. It is a question that touches upon more than one issue, yet allows for only one answer.	- Make sure questions have only one thought. - To make sure you are only asking one question, do not include the word “and” in your questions	How would you rate your knowledge and skills on the prevention of HIV?	Separate into two questions: - How would you rate your knowledge on the prevention of HIV? - How would you rate your skills on the prevention of HIV?

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<p>Leading or biased questions</p> <p>Rephrase words/questions to make no assumptions, and to be neutral.</p>	<p>Leading items introduce bias and may influence the way a respondent answers a question.</p> <ul style="list-style-type: none"> - A leading question may lead the respondent into a pre-determined answer that may not accurately reflect their opinion. - A biased question will lead the participant to give a socially acceptable response. 	<p>Leadings questions:</p> <ul style="list-style-type: none"> - A leading question assumes that something is true, when in fact it is part of the question. <p>Biased questions:</p> <ul style="list-style-type: none"> - Words that suggest moral or negative judgments, such as “too much” in this example, will bias the answer. 	<p>Leading questions:</p> <ol style="list-style-type: none"> 1. How has your life changed as a result of the program? 2. How do you deal with your parents’ pressure on you to get married? <p>Socially biased question:</p> <p>Do you drink too much alcohol at parties?</p>	<p>Leading question revised:</p> <ol style="list-style-type: none"> 1. Has your life changed in any way as a result of the program? (yes, no), followed by multiple choices or open-ended response 2. Are you under any pressure to get married? A lot/some/ a little/none <p>Biased question revised:</p> <p>Do you drink alcohol? and then if yes, then the question should give a range of choices on frequency, amount, and setting.</p>

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<p>Unclear response options</p> <p>Develop responses that are substantively distinct from one another.</p>	<p>Answers in a multiple-choice question or statements in a true-false list that are too similar do not provide a respondent with clear choices.</p> <p>If there is a choice that is too similar to the correct answer, there may be a misleading high number of “wrong” answers, thus under-estimating the knowledge or positive attitudes gained during the program.</p>		<p>Puberty happens to women at the age of...</p> <p>10 - 13 years</p> <p>12 - 16 years</p> <p>10 - 14 years</p> <p>12 - 15 years</p> <p>[Problem is that numbers overlap; other problem is that age at puberty varies a lot]</p>	<p>In my experience, puberty happened to most of my friends at the following ages (check all that apply):</p> <p>a. 10-11</p> <p>b.12-13</p> <p>c. 14-15</p> <p>d. 16-17</p>
<p>Incomplete response options</p> <p>Try to cover all possible answer choices in multiple choice questions, and add “other” as a choice.</p>	<p>Not including an adequate range of response categories may require respondents to choose answers that do not accurately reflect their experiences or may cause respondents to be frustrated and skip the question.</p>	<p>- If more than 10% of respondents (in a pretest or otherwise) select “Other,” you might be missing an answer. Review the “Other” text your test respondents have provided and add any item very frequently mentioned to your choices.</p>	<p>Who do you go to for support when you are having troubles in your friendships?</p> <p>a. mother</p> <p>b. sister</p> <p>c. best friend</p> <p>d. other family member</p> <p>e. teacher</p>	<p>Who do you go to for support when you are having conflicts in your friendships? Check all that apply.</p> <p>a. mother or father</p> <p>b. sister or brother</p> <p>c. other family member</p> <p>d. teacher</p> <p>e another friend</p> <p>f. other _____</p> <p>g. no one</p>

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<p>Negative questions</p> <p>Avoid negatively framed questions.</p>	<p>Questions that have the word “not” in them are negatively framed.</p> <p>Answering negative questions can be confusing to your respondents.</p>	<p>- Switch the wording by eliminating the word “not”.</p>	<p>Do you typically not use a condom when having sexual intercourse?</p>	<p>Do you typically use a condom when having sexual intercourse?</p>
<p>Unbalanced Scales</p> <p>Weight positive and negative responses equally using - equidistant scale items</p>	<p>Scales where the choices are not equally weighted and symmetrical promote bias.</p>	<p>- Researchers have shown the points to be nearly equidistant on the 5-point strongly disagree–disagree–unsure–agree–strongly agree scale.</p> <p>- Set your bottom point as the worst possible situation and top point as the best possible, then evenly spread the labels for your scale points in-between.¹</p>	<p>How would you rate the usefulness of the information in this course?</p> <ol style="list-style-type: none"> 1. A little useful 2. Useful 3. Very useful 	<p>How would you rate the usefulness of the information in this course?</p> <ol style="list-style-type: none"> 1. Not useful 2. A little useful 3. About 50-50 4. Useful 5. Very useful
<p>Unclear and technical wording of questions</p> <p>Make your questions simple, but do not talk down to your audience.</p>	<p>Questions that could be interpreted many ways are ambiguous; their meaning is not clear to the survey-taker.</p> <p>Questions using academic, technical or professional jargon will not be understood by many.</p>	<p>- Construct questions that are simply worded, to the point, and unambiguous</p> <p>- Avoid using technical jargon or acronyms.</p> <p>- Adapt to the (ethnic and cultural) background of your respondents. Some words have different meanings to different groups.</p>	<p>Ambiguous question: There are many ways a person can become infected with HIV. (How many ways counts as “many”?)</p> <p>Technically worded question: What are three types of violence?</p>	<p>Unambiguous question: An individual can become infected with HIV through a needle stick, etc. (Add correct and incorrect options to multiple choice OR a True/False question.)</p> <p>This is also an example of asking a knowledge question</p>

¹ Examples of scales that can be used e.g. with attitudinal questions can be found here: Field Guide to Developing Quantitative Instruments, p. 23.

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		- Adapt to the literacy and vocabulary level of your group.	a. Violence by and to oneself, interpersonal violence, and violence to animals b. Interpersonal violence, violence by and to oneself, collective violence c. Interpersonal violence, violence by and to oneself, sub-collective violence d. Extrapersonal violence, violence by and to oneself, collective violence	that is irrelevant to the main goal, so instead ask about attitudes to violence.
Too many open-ended questions Choose only one or two open-ended questions	Unless you only have 10-20 young people in your program, it is very challenging to analyze results and trends in a large set of questionnaires with mainly open-ended questions.	- Decide on the most important question to ask, to get essential information that you will use to make the program better. For example: "Please suggest how we could make the program work better for young people like you?"	1. "How do you know you have already reached puberty? What specific changes happen?" 2. How do you feel about a husband who helps with household chores - such as cleaning, cooking, and washing the clothes?	1. Please choose which of the following are signs that girls have reached puberty? {multiple choice with at least one incorrect answer, as well as "other"} 2. A husband should help with household chores. Strongly Agree/Agree/ Not sure/ Disagree/Strongly Disagree

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<p>Use of absolutes in questions</p> <p>Include a variety of options</p>	<p>Absolutes in questions force respondents to give an absolute answer.</p>	<p>- These questions usually have the options Yes/No and include wording such as “always,” “all,” “every,” “ever,” etc.</p>	<p>1. Do you always seek advice in a health center in case of SRH problems? Yes/No</p> <p>2. Do you always use a condom when having sex? Yes/No</p>	<p>1. Do you seek advice in a health Center in case of SRH problems? Never, Rarely, Sometimes, Often, Always</p> <p>2. Do you use a condom when having sex? Never, Rarely, Sometimes, Often, Always</p>

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SPECIFIC PITFALLS and Remedial Action	Description	Tip	Example of Pitfall	Revision
Questions testing KNOWLEDGE				
Asking about insignificant details Ask only about important concepts or knowledge in your learning objectives, and not for extraneous details	Questions that demand the memorization of extraneous (i.e., picky) detail.	- Participants should not be tested on whether they remember a particular word or phrase, or statistics, but rather on whether they have learned important concepts and related facts	Which of the following hormones are linked directly to reproductive system? a. Estrogen b. Testosterone c. Progesterone d. Adrenaline	Which family planning methods change the hormones in a woman's body to prevent pregnancy? Check all that apply. a. Oral contraceptives / b. Implant / c. Injectable / d. Copper IUDs / e. Condoms / f. Other (based on what is available locally)
Questions testing ATTITUDES, BEHAVIOR and SELF EFFICACY				
Using polar yes/no questions for measuring attitudes and behavior or self-efficacy Use a scale	Asking a direct question where the respondent can only answer "yes" or "no" is not recommended. It is difficult for a SRH program to change a person's attitude/behavior/self-efficacy from an absolute "no" to an absolute "yes."	- For Attitudes: Use a 5-point-scale: Strongly Disagree - Disagree - Not sure - Agree - Strongly Agree (see Barkman, p. 23 for other options) - For Behavior: Use a 5-point-scale: Always - Often - Sometimes - Rarely - Never (see Barkman, p. 26) - For Self-Efficacy: Use a 4-point-scale: Confident - Somewhat confident - Unsure - Not confident	- Attitudes: Do you think it is mainly the woman's responsibility to ensure that contraception is used regularly? Yes/No. - Behavior: Do you use a condom in sexual encounters? Yes/No. - Self-Efficacy: I am confident that I could refuse sex if I didn't want it. Yes/No.	- Attitudes: It is mainly the woman's responsibility to ensure that... Strongly disagree - Disagree - Not sure - Agree - Strongly agree - Behavior: Do you use a condom...? Always - Often - Sometimes - Rarely - Never - Self-Efficacy: I am confident that... Confident-Somewhat confident-Unsure-Not confident

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<p>Using questions that are solely positive or negative in terms of program goals when measuring attitudes or behavior</p> <p>Mix statements reflecting positive attitudes with negative ones</p>		<p>- Randomly mix statements asking respondents to “agree” or “disagree” that reflect the attitudes and behaviors promoted by the program versus those that are discouraged</p>	<p>For example, if a gender program’s post-test only has statements favoring gender equality, respondents may detect easily the desired response.</p>	