Method
Mini-Toolkit

Collecting Information Using Questionnaires:
An overview
Introduction

What is a questionnaire?

A questionnaire is:

• a set of questions administered consistently to different respondents.

• administered in person, over the telephone, on the web or through the mail. When administered by an interviewer, all questions, should be consistently asked as they are written, and in the order in which they are written.

• primarily made up of closed-ended questions. Closed-ended questions are those where respondents must choose from a set of provided options.

• a common format for many standardized measures. Standardized measures are “measures that are constructed, administered, and scored in a prescribed and consistent manner and interpreted with reference to established norms.” (Waltz, Strickland & Lenz, 2010, p. 221) An example of a standardized measure is The Brief Child and Family Phone Interview (BCFPI).
When would I use a questionnaire?

- When you want to collect data from a group of people (or a “population”) that is too large to observe directly or speak to on an individual basis.
- When there is an existing measure you can use to collect the data you need. The previously mentioned BCFPI is an example of an existing measure.
- When closed-ended questions are the most appropriate means for gathering the information you need.
- When you want to be able to describe a group. For example, you may want to collect demographic data such as gender, education level, income, number of dependents or marital status.
- When you want to investigate the relationship between certain characteristics, or “variables,” within a particular group. For example, you may want to know whether a person’s gender is related to how often they use a service.
Where do I start?

- Review the literature to help you narrow your focus and identify the key questions you would like to explore. Look for evaluation projects that are similar to yours to identify measures that might be useful.

- Select an existing standardized measure to obtain the information you need, or, in the absence of one, develop and validate your own.

- Identify potential respondents. In some cases, the population you are working with may be small enough to administer a survey to each member. For larger populations, you will need to speak to a “sample” to make the project more manageable.

- Choose an approach to administer the questionnaire. The two main methods are:
  - Self-administered questionnaires, which respondents complete on their own, either electronically, by mail, through the web or using paper and pencil; and
  - Interview questionnaires, where an interviewer asks the questions either in person or over the phone and records the respondent’s answers.

- When choosing how to administer the questionnaire, consider:
  - accessibility for respondents. Do they have access to a computer? To a telephone?
  - sensitivity of the topic. Would the respondent appreciate complete anonymity?
  - cost. Administering surveys in-person can be more costly in terms of interviewer time and travel,
  - complexity of the measure. Some measures are not designed to be self-administered and there is training required to administer it.
How do I know if my measures are appropriate?

There are several criteria to keep in mind when selecting or developing your own measures. Questions you should ask are:

- Does it adequately address the evaluation question you wish to answer?
- Is the measure well-suited to the target population?
  - Questions to ask yourself about the suitability include, but are not limited to: Is the measure at an appropriate reading level? Is it culturally appropriate and relevant? Is the measure well-suited for the developmental level of the population? For their educational level? For their physical abilities?
- Are staff members qualified and able to administer the measure properly, or is training required to administer it successfully?
- Has the measure been used before in similar settings?
- Is there existing literature supporting the use of this measure? Does the literature show that the measure's development is based on research and theory? If there is no existing literature, is the measure recommended by experts in the field?
- Are the scores obtained from the measure standardized?
  - Raw scores can be transformed into standardized scores, which are commonly used to compare scores.
- Are there special ethical considerations or questions of a sensitive nature?
• Is there a manual that can be used to learn more about the measure?

• Does the measure have good reliability and validity?
  › Reliability refers to the extent to which a measure produces the same results each time it is used. If your measure were a bathroom scale (used to measure weight), you would want it to give you the same result if you stepped on it twice in a 10-minute period. For questionnaires, if a person completes the same measure on two different days, will s/he receive the same score both times? If two groups of people who are randomly selected complete the same questionnaire, will the average score for each group be the same?
  › Validity refers to whether or not the question is actually measuring what it claims to be measuring. To return to the scale example, if your scale returned a measurement in degrees, then you would know it is not a valid measure of weight.
  › You can have reliability without validity, but cannot have validity without reliability. Therefore, a question must be reliable (consistent) and also measure what it claims to measure in order to be considered valid.
  › To find out if a measure is reliable or valid, it is important to pilot-test it. Pilot-testing means testing a measure on a small number of respondents within the population you wish to reach. Based on the results of the pilot-testing, the measure can be revised to ensure good reliability and validity. While this has often been done with existing measures, it is best to pilot-test a measure with the population you intend to study to ensure that it is appropriate and will provide the information you need. This is especially important if the measure has not been used with a similar population. If you develop your own measure, pilot-testing is must be done to check its reliability and validity. Pilot-testing is also useful for identifying any problems with administering a measure – for example, determining whether or not instructions are clear and easy to follow.
How do I use existing measures?

- Existing measures, like the BCFPI, are often used to assess outcomes related to a program. There are also measures that consider issues related to program delivery such as client satisfaction, like the Client Satisfaction Questionnaire (CSQ-8).

- Your organization may already be collecting data using an existing measure. For example, the BCFPI is used by a number of child and youth mental health organizations in Ontario. If using this measure fits with your evaluation project’s information needs, it can save a lot of time.

- You may come across existing measures when reviewing the literature. In fact, one of the best ways of finding such measures is to look for evaluations of similar programs and see what measures were used.

- Existing measures typically report their reliability and validity. When using these measures, do not edit or change the questions and response options, as this can have an impact on the measure’s reliability and validity. If you add questions (without changing the existing ones), be sure to analyze these separately, as they do not constitute part of the existing measure.

- If you find a measure you would like to use as part of your research, you will need to determine whether or not it is available to the public. If it is not, you will need to contact the measure’s developer to request permission to use it. In some cases, there will be a financial cost.
Benefits of using an existing measure:
- You will save time by not having to develop and validate a measure yourself.
- You will avoid design-related pitfalls that could threaten the validity or reliability of your study. Questionnaire design is a learned skill.
- Using an existing measure allows you to compare your results to similar previously published research. This can help to enrich your own evaluation project.

How do I develop my own questionnaire?

- While using an existing measure saves time and energy, it is sometimes necessary to create your own questionnaire. Some reasons might include:
  - You would like to add extra questions to an existing measure.
  - There does not appear to be a measure that covers the information you need to answer your evaluation questions.
  - Existing measures are not suitable for your respondents because of level of language, cultural considerations, age, or other factors.

- Constructing effective questionnaires can be challenging. Poorly designed questionnaires will result in low-quality data. If you are not familiar with questionnaire development, it can be helpful to consult with someone who has experience. The points outlined below will get you started, but are not exhaustive. For more information, see the resources at the end of this document.

About the Centre

As a leader for child and youth mental health in Ontario, we build connections, share knowledge and draw upon our expertise to enhance the skills of front line service providers. Together, we passionately promote and share the benefits of both organizational learning and evidence-informed practices. And together, we are working to astrengthen Ontario's mental health programs and services for all children, youth, families and caregivers.
When constructing particular questions, use measurable variables to define the concepts you are interested in learning about. This is called operationalizing. The goal is to make a concept measurable. For example, you may want to use the question “How likely are you to recommend this program to others?” as part of measuring program satisfaction. Validity is an important consideration when operationalizing a characteristic – does the question address what it claims to address?

Response categories should be mutually exclusive and exhaustive.

- **Mutually exclusive categories** should not overlap. Using age as an example, these are not mutually exclusive:
  - 0-18 years old
  - 18-65 years old
  - 65 years old or older

  A respondent who is 18 could be placed in two different categories. Mutually exclusive categories would be:
  - 0-18 years old
  - 19-64 years old
  - 65 years old or older

- **Exhaustive response categories** are those where a category is available to all potential respondents. Using age again, the following categories would not be considered exhaustive:
  - 18-24 years old
  - 25-34 years old
  - 35-44 years old
  - 45-54 years old
  - 55-64 years old

About the Centre
As a leader for child and youth mental health in Ontario, we build connections, share knowledge and draw upon our expertise to enhance the skills of front line service providers. Together, we passionately promote and share the benefits of both organizational learning and evidence-informed practices. And together, we are working to strengthen Ontario’s mental health programs and services for all children, youth, families and caregivers.
There is nowhere to place someone who is under 18 or someone who is over 64 years of age. The following are exhaustive categories:

- Under 18 years old
- 18-24 years old
- 25-34 years old
- 35-44 years old
- 45-54 years old
- 55-64 years old
- 65 years old or older

- Begin with general questions like “How would you rate the quality of service you have received?” and move on to more detailed or sensitive ones, like “Have you ever received a diagnosis for a mental health problem?”.
How do I administer a questionnaire?

**BEFORE:**

- If you have a large population but limited resources, you can select a segment, or sample, of the population. There are two main types of sampling: non-probability sampling and probability sampling. Your choice of sampling technique will depend on the goal of your evaluation – if you want to generalize your findings to the population, you will need to rely on probability sampling. Consult the resources at the end of this document for more information about sampling.

- If you are administering the questionnaire as an interview, you will need to provide an overview of the project, including its goals, its intended outcomes and how the data will be used. You will also need to explicitly obtain the consent of all participants. If you plan to have the individual complete the questionnaire on her/his own, issues related to consent should be clearly spelled out, and s/he should indicate consent to participate by providing a signature or a checkmark.

- Familiarize yourself with the questionnaire to ensure that you ask questions as they are intended. If you are not the person administering the questionnaire, ensure that interviewers receive training.

- If you choose a measure that is reliable and valid, make sure you implement it using the protocols outlined by the authors.
DURING:

- Since questionnaires are intended to be structured, it is important to ask the questions and provide the response options as written. If the participant doesn’t understand a particular question, make note of this and consider revising it for future use. However, the likelihood of this happening can be reduced by pilot-testing your measure.

- If you are administering the questionnaire in person, it is important not to influence the respondent. This includes what you communicate through body language (by nodding to show approval or frowning to show disapproval, for example) as well as verbally.

AFTER:

- Explain to the respondent what will happen next (the data will be analyzed, findings will be presented, and so on).

- Thank the participant for sharing her/his time and responses with you.

- Store the completed questionnaires in a secure location. If there is any identifying information associated with a questionnaire, do not include it when entering the data. For identification purposes, you should use numbers or letters instead of names.
Helpful tips for administering questionnaires:

Do:

- Pilot-test your questionnaire to make sure it is appropriate for your target population and that it provides the information you are looking for.
- Make sure that you are adhering to ethical guidelines in your work. Visit the National Council on Ethics in Human Research for more information. As well, you can look at the Joint Committee on Standards for Educational Evaluation
- Consider the use of incentives, like an honorarium, to encourage people to complete the questionnaire.
- Ask questions and provide response options exactly as written. Changing wording can affect reliability and validity. If the question is not clear to the participant, make note of this and consider revising it for future use.
Don’t:

- Ask double-barrelled questions. These require participants to answer two questions at the same time. “What did you like best about this program and your primary worker?” is an example of a double-barrelled question. Instead, ask each question separately.

- Ask leading questions. These are questions that lead respondents to answer in a particular way. For example, a question such as “Most professionals in the field agree that this program is highly effective. What are your thoughts?” would likely yield a lot of responses saying that the program is effective, since respondents would be inclined to agree with expert opinion.

How do I analyze questionnaire data?

- Questionnaires are used mostly to gain quantitative information. Quantitative data take the form of numbers, where responses to questions are converted into a numerical form (for example, “yes” could be assigned a value of 1 and “no” could be assigned a value of 2. An example of something already in numerical form is age.). This allows for statistical analysis of responses which can help you understand the strength or direction of the relationship between the intervention and client outcomes within a particular program.
• Once the questionnaires are complete, the data can be entered into a database. You can use everyday programs such as Microsoft Excel to create datasets and even perform basic analysis. More complex software such as SPSS or SAS can be used for very large datasets and more complicated analyses.

• The kinds of analyses you conduct will depend on a variety of factors, including the number respondents and the nature of your questions. A place to start is to report on descriptive statistics, which help to identify basic trends in responses. For example, you may want to “count” the number of specific responses to a question and then figure out what proportion of the responses they represent. You might also want to calculate the average scores on different items (the mean), the most common response (the mode) or the number that falls in the middle when responses are arranged in either ascending or descending order (the median). Together, the mean, mode and median are called “measures of central tendency.” Some useful resources for statistical analysis are included at the end of this document.

• Even questionnaires can contain qualitative information. Qualitative information can be verbal, pictorial or observational. “Verbal” in this sense refers to the fact that the data are in the form of words, and not necessarily that those words are spoken, although they may be. For example, when open-ended questions are used (questions where the respondent is free to construct their own response and do not choose from a set list of options), the resulting verbal information may be qualitative.

• Using a statistics consultant or someone knowledgeable in data analysis may be helpful during this stage of your project. External consultants can be quite costly, however. Consider partnering with a student or faculty member at a local post-secondary institution.
Strenghts of using questionnaires to collect data

- Questionnaires can be a quick and easy way of gathering and analyzing data, especially from a large group of people.
- It can be a very controlled process, resulting in consistent and reliable results.
- You can compare responses and look for changes over time, because the same questions are asked in the same manner to all respondents.

Limitations of using questionnaires to collect data

- In many cases, response options are closed-ended, which forces respondents to choose between options that might not reflect their specific experiences.
- Questions can have low validity if they are poorly constructed.
- The resulting data provides general findings and does not provide information about context.
- There is a risk of self-report bias. Self-report bias is when respondents answer questions in a way that presents them in a positive light.
Where can I go for more information on surveys/questionnaires?


The Ontario Centre of Excellence for Child and Youth Mental Health’s “Selecting measures and indicators” webinar.

The Ontario Centre of Excellence for Child and Youth Mental Health’s Online Learning Modules.


Statistics Canada’s information on questionnaire design.


Some Strengths

Some Limitations

About the Centre

As a leader for child and youth mental health in Ontario, we build connections, share knowledge and draw upon our expertise to enhance the skills of front line service providers. Together, we passionately promote and share the benefits of both organizational learning and evidence-informed practices. And together, we are working to strengthen Ontario's mental health programs and services for all children, youth, families and caregivers.