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# TRAINING MANUAL

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## Data Collection Methods

### Semi-Structured Interviews and Focus Groups

Margaret C. Harrell, Melissa A. Bradley

Prepared for the U.S. Government

Approved for public release; distribution unlimited



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## Preface

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The authors developed a short course of introductory qualitative research methods to help the lessons learned organizations in the police community improve their data collection techniques. This document provides an annotated version of the course material. It should be of interest to research professionals interested in qualitative research methods.

This research was conducted within the Intelligence Policy Center of the RAND National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Department of the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community. The authors of this work are Margaret Harrell and Melissa Bradley. Comments are welcome and may be addressed to [Margaret\\_Harrell@rand.org](mailto:Margaret_Harrell@rand.org) and [Melissa\\_Bradley@rand.org](mailto:Melissa_Bradley@rand.org).

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***Data Collection Methods:  
Semi-Structured Interviews  
and Focus Groups***

**Margaret C. Harrell  
Melissa A. Bradley**

This course provides an overview of two types of qualitative data collection methodologies: semi-structured interviews and focus groups. These techniques are commonly used in policy research and are applicable to many research questions.

The course does not aim to cover all the aspects of interviewing and focus groups, but rather it is designed to provide an overview of these methods, as well as some practical tools that will allow readers to improve their qualitative data collection.

We acknowledge that different disciplines often speak about these research methods in different terms. For example, while some disciplines and professions may use the term “active data collection,” these materials use the terms more traditionally associated with qualitative research.

## ***Using the Right Techniques***

- **Ensures that data are collected in a scientific and standardized manner**
- **Results in high-quality research and thus, *credible findings***

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Primary data collection is an important piece of many research projects. Using proper techniques ensures that qualitative data are collected in a scientific and consistent manner.<sup>1</sup>

Improving data collection techniques will enhance the accuracy, validity, and reliability of research findings. Ultimately, using these methods will help to achieve the goal of carrying out high-quality research with credible findings.<sup>2</sup>

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<sup>1</sup> Throughout this work, we have noted resources that were especially helpful or were the sources of specific examples. However, much of this information exists in the general research community as methodological wisdom, and thus our material may also have been published in other resources.

<sup>2</sup> Adapted from RAND Survey Research Group (SRG) internal training materials and best practices documentation.

## ***The Research Frame Influences the Results***

- **Data sources can be framed differently**
  - **Informants define and classify themselves and their culture; researcher avoids culture-bound questions**
  - **Subjects used to test hypotheses**
  - **Respondents respond in researcher's language and concepts**
  - **Actors are observed, in researcher's language**
- **Be conscious of disciplinary differences**
- **Substantive expertise will inform your findings, but may limit your queries**

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There are differences between the semantics of traditional academic disciplines involved in qualitative research methods. In some instances, however, the difference in the approach to the source of the data is more than a just a wording difference. For example, consider the differences between informants, subjects, respondents, and actors.<sup>3</sup> Bernard (2000) notes that anthropology generally uses informants, whereas sociology depends upon respondents. That distinction is actually very important to the difference between those disciplines.

Levy and Hollan (1998) distinguish between informants, who describe their culture, and respondents, who discuss characteristics, beliefs, experiences, and behavior. That is a partial distinction, made more useful when one adds Spradley's (1979) distinction between informants with subjects, respondents, and actors.

Under Spradley's terminology, subjects are used to test hypotheses. The researcher believes he knows what he will find, posits a hypothesis, and goes to confirm or deny the hypothesis. In this instance, the researcher is seeking the scientific theory that explains the observed behavior of the subjects. Spradley uses an example of checking the alcoholic status of male identical twins. In this research, the scientists were exploring whether environmental conditioning was a significant factor in the development of alcoholism. The important thing to note here was that the researchers developed their own concepts and meanings (such as alcoholism).

Respondents respond to a researcher's question or complete a questionnaire. They are respondents because they have answered queries built in the researcher's semantics. One easy

<sup>3</sup> We acknowledge that the Intelligence Community and others have a different traditional use of the word *informant*.

example of this is the census survey, which has historically asked respondents to categorize themselves by race categories that have not always fit the self-identity of the respondents. Those census questions used categories of the researchers, not of the respondents.

Actors are observed. They can range from gorillas to Supreme Court justices during a trial. In each of these examples, the researcher is either unable or unwilling to involve himself in the process he is analyzing. Instead, the actors are observed through the lens of the researcher, who uses his or her own expertise, terminology, and defined categories to describe the actors. For example, a researcher with medical expertise would likely make different observations while observing surgical operating room procedures than would a researcher lacking that expertise.

Returning to informants, a researcher using an informant learns from the informant how things are defined and categorized. This is what anthropology prides itself on. This is not to say that anthropologists do not have some hypotheses when they go out into the field, but they are wary of how much they are dictating the content and process of the research and how much they are deriving from the way the informant views his or her own culture.

Thus, a project can have all or some of these data sources. For example, during a RAND study of women in the military, we used both informants, who talked to us of their perspectives on women in the military during focus groups, and respondents, who answered surveys that we constructed prior to analyzing the results of the focus groups. Because the people who participated in the focus groups also completed a survey, these same individuals were both informants and respondents, which enriched the quality and the depth of the data we collected. As respondents, they answered questions in our words, which permitted us to quantify the answers to specific issues that we knew in advance would be important. As informants, they provided rich descriptions of their perceptions and experiences, which were a valuable complement to the quantitative data.

## ***Overview***

- **Introduction to data collection methods**
- Applications from the real world
- Semi-structured interviews
- Focus groups
- Brief introduction to data management and analysis
- Closing remarks

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We begin with a brief overview of data collection methods.

## ***Defining Different Types of Data Collection***

- **Survey**
- **Interviews**
- **Focus groups**
- **Observation**
- **(Data) extraction**
- **Secondary data sources**

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There are many forms of data collection; for the purposes of this course, we define these modes as follows.

*Surveys* are fixed sets of questions that can be administered by paper and pencil, as a Web form, or by an interviewer who follows a strict script.

*Interviews* are discussions, usually one-on-one between an interviewer and an individual, meant to gather information on a specific set of topics. Interviews can be conducted in person or over the phone. Interviews differ from surveys by the level of structure placed on the interaction.

*Focus groups* are dynamic group discussions used to collect information.

*Observation* is data collection in which the researcher does not participate in the interactions. Examples of this include observing operating room procedures or Supreme Court proceedings. However, it should be noted that the researcher's very presence may have some influence on the participants and exchanges. For example, while the researcher is unlikely to influence a surgeon or a Supreme Court justice, it is not difficult to imagine the researcher's presence influencing other participants, such as small children at play.

*Extraction* is the collection of data from documents, records, or other archival sources. This generally includes using an abstraction process to cull the information desired from the source. Examples of this might be collecting information on dates of diagnoses from medical records or decision dates from legal records.

*Secondary data sources* are datasets that are already in existence, such as census data. Researchers may select variables to use in their analysis from one secondary data source or may combine data from across sources to create new datasets.

## ***Strengths/Benefits – How to Select the Method?***

- **Redundancy with other studies**
- **Logistics**
  - **Costs**
  - **Time available**
  - **Staffing**
  - **Access to records**
- **Sampling**
  - **Frame availability**
  - **Sampling size**
- **Institutional Review Board (IRB) and Office of Management and Budget (OMB)**
  - **Human subjects considerations**

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Many considerations go into deciding the appropriate method of data collection to use, or even if data collection is appropriate, for answering the research questions.

The first questions that you should ask are: Has this been done before? Do these data already exist? If so, is there value-added in doing this again?

There also are many logistical considerations that need to be addressed:<sup>4</sup>

- What will the data collection cost? Can the project afford this mode of data collection?
- Is there enough time to complete the data collection? There are many steps involved in a research project—design, approvals, sampling, conducting the fieldwork, analysis, and report writing—and each step can take considerable time. Obtaining a preexisting data file may be markedly quicker than mounting a data collection effort.
- Staffing must be considered. Who is going to do the work, and are they trained to do it properly? How many people are needed to accomplish this data collection in the time available to complete it?
- Are the people, records, or information needed accessible? For instance, think about trying to conduct a survey of physicians. Most physicians are extremely busy and consider their time to be highly valuable. Collecting data from physicians takes a lot of effort and is not always successful.

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<sup>4</sup> Adapted from Arksey and Knight (1999).

If the data collection should be done, and you can resolve the logistical considerations, then you need to consider the sampling issues:

- Is there a sampling frame that exists for the population you are interested in studying? If not, do you have the ability and/or time to create one? How do you decide who is to be included in your population?
- How large of a sample do you need? Here you have to consider what you want to be able to say about the data. How generalizable do you want your results to be?

Finally, there are issues related to approvals. Is approval needed from either an Institutional Review Board (IRB) or the federal Office of Management and Budget (OMB)? IRB review is related to human subjects considerations and is designed to identify both the risk to the individual participant and the likelihood of that risk occurring. OMB review is designed to ensure that the data collection is not extant, to minimize the burden of survey participation on the public, and to minimize the burden of data collection cost to the U.S. government.

Other agencies might require additional approvals. This can add months to your timeline. And usually you need to have your materials finalized when you go in for review.

## ***Why Focus Groups vs. Interviews vs. Surveys?***

- **Depth of information (I, FG)**
  - **Resolve seemingly conflicting information (FG, I with specific questions)**
  - **Determine relative emphasis on issue (S, I with specific questions)**
  - **Generalizability (S, I\*)**
  - **Timeliness (not S)**
  - **Avoid being “another survey” (I, FG)**
  - **Sensitivity of issue (I, S)**
  - **Classification of issue (I, S)**
- \* Large number of interviews**

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Often when selecting the method for primary data collection, researchers query whether focus groups, interviews, or surveys will be most appropriate to the research effort. There are many factors to consider in this decision. This slide presents some of these considerations and indicates the appropriateness of different methods.

In seeking a very complete response, interviews and focus groups are most likely to provide the depth of information that might be useful. Focus groups and interviews are also the best methods to resolve seemingly conflicting information, because the researcher has the direct opportunity to ask about the apparent conflict.

When interested in determining the relative emphasis on an issue, that is, how strongly someone holds an opinion, both surveys and interviews permit the researcher to ask for emphasis. The researcher might directly ask someone how strongly they feel, or might ask them to prioritize issues or assign weights to different issues. Focus groups are less appropriate to determine emphasis, in part because the members may not share the same emphasis, and also because the group dynamics may imply an emphasis that is misleading.

Data are more likely to be generalizable if they are well sampled and collected by surveys or by a large number of interviews. Focus group data are never generalizable beyond the groups conducted.

When the research effort is time-constrained, surveys may be least appropriate because survey efforts often take longer to field correctly.

One benefit of conducting interviews or focus groups, especially with over-sampled populations, is that individuals in those populations have sometimes grown weary of surveys and

appreciate the opportunity to express their opinions and experiences in person, rather than in another pen-and-paper survey.

The sensitivity of an issue could also discourage the use of focus groups, as the group context may not be appropriate to discuss sensitive issues. Likewise, if the issue is classified, focus groups will also likely be inappropriate, as the participants would need to share not only the correct access, but also the need to know the material.

## ***Complementary Methods***

- **Methods used in sequence**
  - Provide explanation
  - Used in instrument development
- **Methods used in concert**
  - Complementary data collection
  - Access issues, especially with senior people

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In actual projects, it is often the case that multiple methods are used together.

Certain methods may be used in sequence—for instance, qualitative analysis provided by focus groups, interviews, or observations might add to the interpretation of results found by analyzing previously collected survey data. Also, focus groups and interviewing are often employed as a part of a questionnaire-design process.

Methods can also be used in concert. This is particularly the case when there are concerns about targeting a data collection method to certain types of individuals, or when you are trying to obtain different kinds of information from various sources. For instance, high-status individuals may be unlikely to respond to a survey, so the researcher may be more successful if he or she attempts to conduct interviews with them, although it may be very difficult to obtain time on a senior person's calendar.<sup>5</sup> Other projects might include interviews with senior-ranking individuals from an organization and, simultaneously, surveys of the more junior personnel. Using multiple methods can enhance the research project, but the important thing to remember is that, regardless of the methods chosen, quality research includes collecting quality data.

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<sup>5</sup> Difficulties in obtaining interview time with senior personnel or convincing them to complete a survey can be addressed with encouraging messages from endorsers even more senior to the respondent, if the research has the luxury of such senior support.

## ***Overview***

- Introduction to data collection methods
- **Applications from the real world**
- Semi-structured interviews
- Focus groups
- Brief introduction to data management and analysis
- Closing remarks

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The next section of this course provides an example of two projects that have used a variety of data collection techniques.



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**New Opportunities for Military Women (1997)  
and  
Assessing the Assignment Policy for  
Army Women (2007)**

It is worthwhile to take a brief sojourn from methodology to provide examples of two projects that used mixed methods for data collection. These example research projects studied similar topics: the effect of gender integration on the military and the extent to which Army operations in Iraq were consistent with the assignment policy for Army women. They are provided as examples of projects that use multiple data collection methods.<sup>6</sup>

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<sup>6</sup> The two studies are Margaret C. Harrell and Laura Miller, *New Opportunities for Military Women: Effects Upon Readiness, Cohesion, and Morale*, Santa Monica, Calif.: RAND Corporation, MR-896-OSD, 1997; and Margaret C. Harrell, Laura Werber Castaneda, Peter Schirmer, Bryan W. Hallmark, Jennifer Kavanagh, Daniel Gershwin, and Paul Steinberg, *Assessing the Assignment Policy for Army Women*, Santa Monica, Calif.: RAND Corporation, MG-590-1-OSD, 2007. Both studies are available free for download on the RAND Web site.

## ***Research Goals and Question Set: New Opportunities for Military Women***

- **Evaluate the progress of integration in newly opened occupations and units**
  - **Determine the effect of gender integration**
- 
- **What occupations include women?**
  - **To which units are women assigned?**
  - **What gender issues have arisen in those units?**
  - **How has leadership dealt with those issues?**
  - **How important are those issues for readiness, cohesion, morale?**

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The first of our two example projects, Harrell and Miller (1997), was a congressionally mandated study. The research was conducted after changes in the law opened new occupations to military women and also permitted women to serve on combatant ships and in combat aircraft. This project addressed two main issues: (1) the progress of integration in the newly opened occupations and units and (2) the effect of gender integration upon those units. This slide provides the research questions indicated by Congress to address these issues.

### ***Mixed Approach: Each Method Addressed a Different Aspect of the Issue***

- **Data analysis** of military personnel files quantified the progress of gender integration in occupations and in units
- **Interviews** obtained the perspectives of unit leadership in 14 units
- **Focus groups** (492 participants) permitted rich discussions of different gender issues in integrated units
- **934 surveys** provided an assessment of the extent to which gender issues were a problem

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Each data collection method addressed a different aspect of the research. The project team analyzed the data from military personnel files in order to quantify the number and proportion of women in newly opened occupations and in newly opened units. Interviews with unit leadership from the 14 selected units permitted discussion about gender issues in units and the approach of leadership to deal with such issues. The questions asked in these interviews were very similar to the questions posed in the focus groups. However, the unit leadership could not have been included in the focus groups at the unit locations, since their participation would have skewed and reduced the free interaction of the focus group discussions.

Focus groups were conducted to discuss the different gender issues that had occurred in the newly integrated units. The focus groups were divided at each unit location by pay grade group and also by gender. Finally, surveys were also administered to all focus group participants, as well as to all additional unit personnel that were available to complete a survey. The surveys asked broader questions about issues affecting readiness, cohesion, and morale.

## ***Each Method Provided a Different Aspect of the Answer***

- **Data analysis**
  - Unit integration proceeds quickly
  - Occupational integration is slower process
- **Interviews**
  - Not a readiness issue
  - Most gender issues can be addressed by leadership
- **Focus groups**
  - Both positive and negative effects of gender integration
- **Surveys**
  - Leadership and training have considerably more effect (than gender) on readiness, cohesion, and morale

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Each research method provided a different aspect of the final research findings.

The data analysis permitted realization that unit integration is a result of assignment. Since women can begin to be assigned to a unit as soon as the decision is made to integrate a unit, unit integration can proceed relatively quickly. Integrating occupations, on the other hand, requires that women complete the respective training pipelines. Since it can take a long time to train a new fighter pilot, occupational integration proceeds at a slower rate than does unit integration.

The interviews suggested that gender integration was not a readiness issue. Additionally, the commanders interviewed felt equipped and informed to handle any gender issues that arose in their units. Further, these interviews provided researchers with examples of how leaders were handling perceived gender issues. For example, when the work was physically demanding, such as unloading supplies, the commanders did not urge women to lift as much as the men did, but the leaders did ensure that women carried additional loads to compensate for their lighter loads.

The focus groups conducted for this research effort provided very detailed explanations of gender issues in integrated units and also rich examples of both the positive and the negative effects of gender integration.

The surveys placed the discussion about gender effects into the broader context of these units. Specifically, the surveys included open-ended questions asking respondents to list the factors that affect readiness, that affect cohesion, and that affect morale. Although the respon-

dents were all aware that the study was focused on gender, very few of the survey answers attributed readiness, cohesion, or morale to gender issues.

This project succeeded because of the complementary mix of data collection methods. The data analysis provided the necessary quantitative results. The interviews provided the researchers with knowledge from the level of the unit commanders. The focus groups provided very rich description and examples, and the surveys permitted the researchers to place those colorful discussions in a broader context. Thus, to the extent that gender integration was an issue for units, the focus groups provided insights about the types of issues confronted. However, the survey findings suggested that gender integration was not having a significant effect on readiness, cohesion, or morale.

## ***Research Goals and Question Set: Assessing the Assignment Policy***

- **Determine whether the Army was complying with the assignment policy for military women**
- 
- **What did the assignment policy mean; was there a shared interpretation?**
  - **How many women have been deployed to Iraq?**
  - **To which units are Army women assigned?**
  - **What are those units, and Army women, doing in Iraq?**

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The second of our example studies (Harrell et al., 2007) was also mandated by Congress and was established to determine whether the Army was complying with the assignment policies for Army women, given the operations in Iraq. The research questions are listed above. This study took an anthropological approach—it began by deconstructing the assignment policy and questioning whether everyone had the same interpretation of the policy. The study also quantified the deployments of women to Iraq, and asked what units Army women were assigned to as well as what those units, and thus Army women, were actually doing in Iraq.

## ***Mixed Approach: Each Method Addressed a Different Aspect of the Issue***

- **Data analysis** of four “snapshots” of deployed personnel in Iraq permitted analysis of numbers and trends of Army women deployed to Iraq
  - Also requested and analyzed numbers and occupations of women who received the Combat Action Badge
- **16 interviews** with OSD, Joint Staff, and Army leadership and members of Congress to establish the intent/objectives and the meaning of the assignment policy
- **8 interviews** with unit leadership to understand where women were assigned and what those units did in Iraq
- **16 focus groups** (80 participants) to discuss where women were assigned and what those units did in Iraq

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This project included the data analysis of four “snapshots” of deployed personnel in Iraq, which permitted the researchers to quantify the numbers and proportions of female personnel deployed to Iraq. The research team also requested and analyzed data regarding the women who had been awarded the Combat Action Badge.

The research team conducted 11 interviews with Army, Office of the Secretary of Defense (OSD), and Joint Staff leadership, as well as 5 additional interviews with some members of Congress. The purpose of these interviews was to discuss the intent or objectives of the assignment policy and to interpret the meaning of the policy.

The project team also traveled to selected units that had recently returned from Iraq. While visiting the units, the project team conducted interviews with the unit leadership and focus groups with unit personnel. The questions asked in the interviews and the focus groups were similar, but the unit commanders were interviewed individually. The interviews and focus groups addressed the units to which women had been assigned and the missions performed by those units while in Iraq.

## ***Each Method Provided a Different Aspect of the Answer***

- **Data analysis**
  - **Women comprised 10% of enlisted and 12% of officers deployed**
  - **Steady level of representation; no trends over time**
  - **1,777 received CAB; included HR, MP, supply, truck drivers, cooks**
- **Interviews with OSD, JS, Army leadership, Congress**
  - **No shared interpretation of the assignment policy**
- **Interviews with unit leadership and focus groups**
  - **Women are assigned to appropriate units for DoD policy**
  - **Army may be violating Army policy**
  - **Women are in combat**
  - **No understanding in theater of meaning of assignment policy**

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The data analysis indicated that women constituted 10 percent of the enlisted personnel and 12 percent of the officers deployed to Iraq, and that women were steadily represented; there were no directional trends over time. Additionally, 1,777 women had received the Combat Action Badge, including women in a variety of occupations, including human resources, military police, supply, truck drivers, and cooks.

The interviews with OSD, Army, and Joint Staff leadership and with members of Congress indicated that there was no shared interpretation of the assignment policy among these leaders. While many respondents were confident that they understood the policy, the individual interpretations varied.

The interviews with unit leadership and the focus groups with unit personnel indicated that Army women had been assigned to appropriate units consistent with the Department of Defense (DoD) policy. However, the Army policy differs from the DoD policy, and includes additional specifications regarding the units to which women can be assigned. Thus, it became evident from our interviews and focus groups that, although the Army was adhering to the DoD assignment policy, it was possible that the Army was in violation of its own assignment policy. The sessions confirmed that women were clearly in combat situations, although that is not itself a violation of the assignment policy. Further, the interviews and focus groups indicated that, like the military leadership, more junior deployed personnel also did not understand the meaning of the assignment policy.

In closing, this second example project also indicates how different research methods addressed different aspects of the research questions. These two projects are examples of real-world applications of qualitative research methods.

## ***Overview***

- Introduction to data collection methods
- Applications from the real world
- **Semi-structured interviews**
- Focus groups
- Brief introduction to data management and analysis
- Closing remarks

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We now proceed to discuss these methods in more detail, beginning with semi-structured interviews.

## ***Interviews Can Obtain Different Kinds of Data***

- **Interviews to gather opinions, perceptions, attitudes**
- **Interviews to gather background information**
  - **Expert knowledge**
  - **Facts, descriptions of processes**
- **Some interviews may include aspects of both**

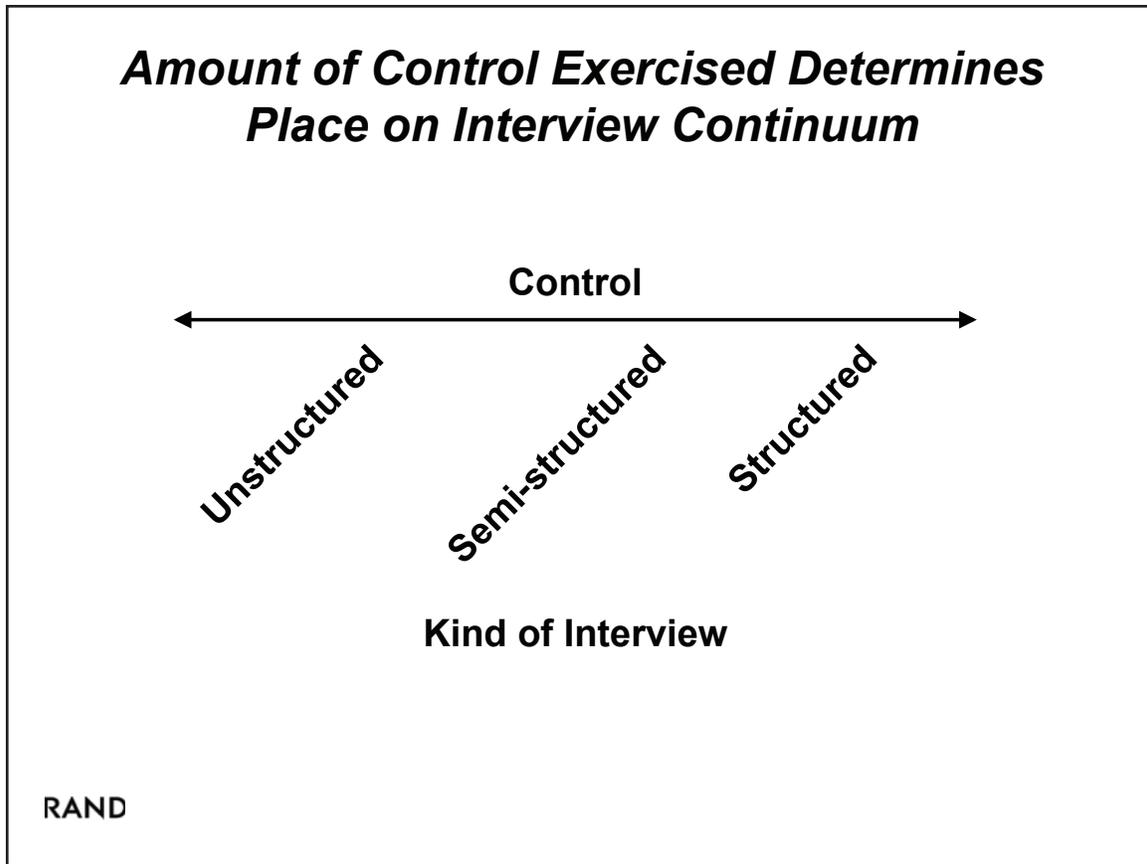
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Researchers use interviews for a variety of purposes. Interviews can be used as a primary data gathering method to collect information from individuals about their own practices, beliefs, or opinions. They can be used to gather information on past or present behaviors or experiences.

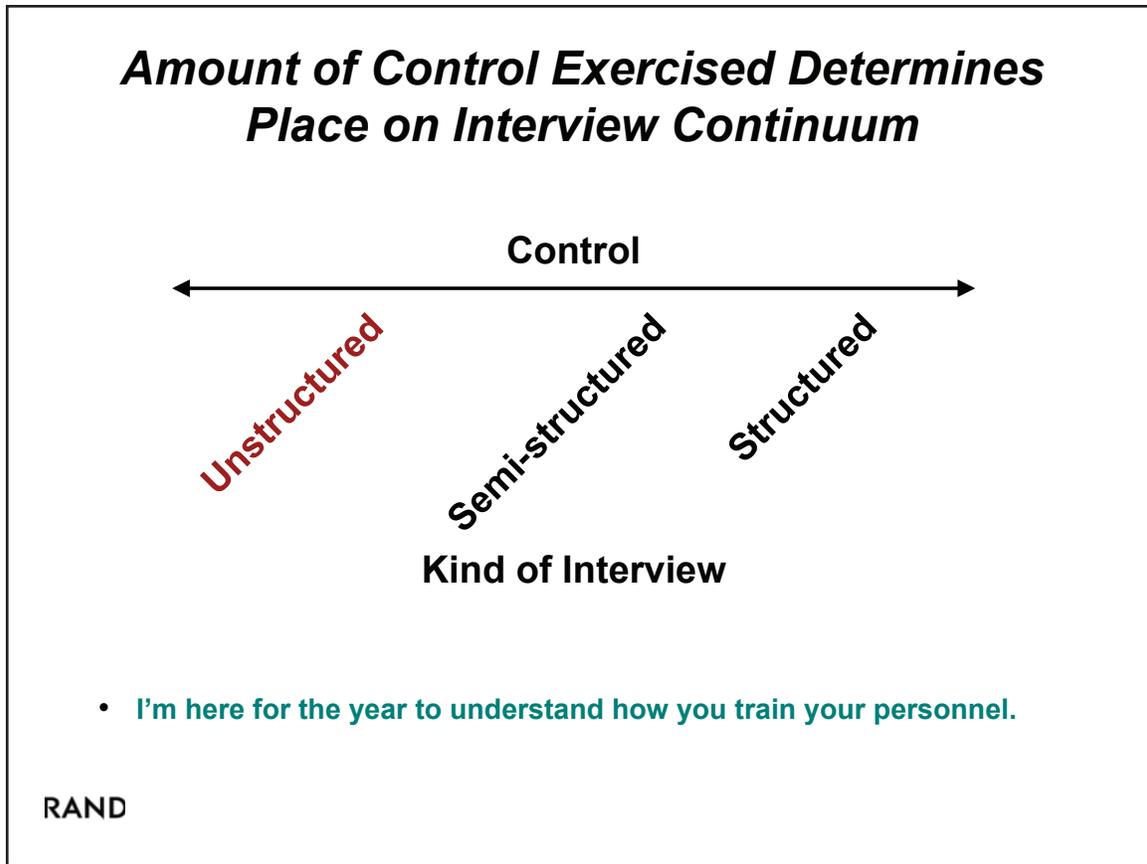
Interviews can further be used to gather background information or to tap into the expert knowledge of an individual. Think here about interviewing a subject-matter expert on a new policy. These interviews will likely gather factual material and data, such as descriptions of processes.

Interviews will often include the collection of both types of information.

The difference between these types of interviews is readily apparent to most. However, some researchers err on the side of not considering the gathering of background information or expert knowledge as an interview, and therefore do not pay close attention to the way questions are asked in such interviews. This can compromise the quality of the data collected.



Interviews can be placed on a continuum of structure, from “unstructured” to highly “structured.” Imbedded in this continuum is the idea of how much “control” the interviewer will have over the interaction. There are benefits to each of these kinds of interviews.

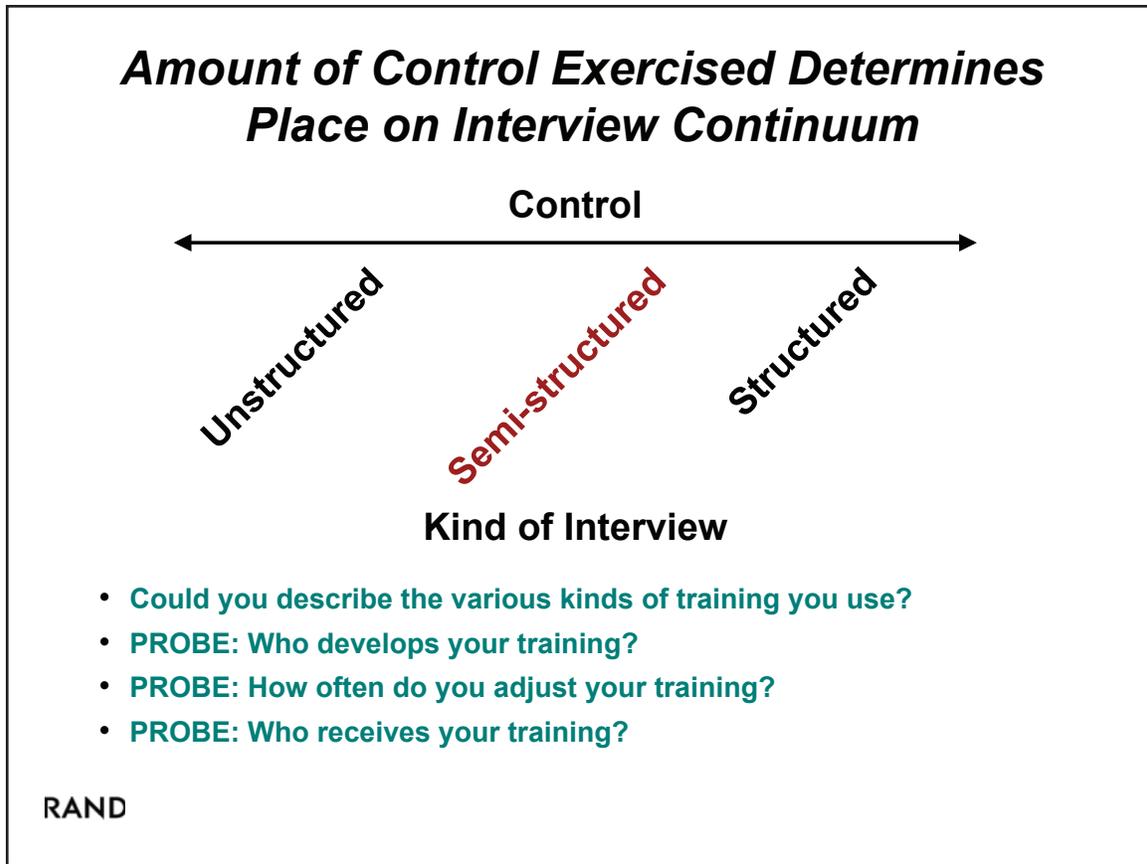


With unstructured interviews, the researcher has a clear plan, but minimum control over how the respondent answers. An example might be a case where a researcher visits an office, sits down with someone who works there, and asks, “What do you do?”

The conversation can go in many directions, and will vary much by the respondent. The interviewer does not exert much control over the course of the discussion. He or she might follow explanations with additional questions based on the topics that the respondent brings up, but the session would be relatively free-flowing.

Not surprisingly, gathering information in this manner, though it might lead to very rich and nuanced data, can take a long time. These types of interviews are really most suitable when researchers have a great deal of time to spend with the community they are studying.

The statement provided on this slide, “I’m here for the year to understand how you train your personnel,” is an example of how one might open an unstructured interview. We will contrast this example with semi-structured and structured examples in subsequent slides.



Semi-structured interviews are used often in policy research. In semi-structured interviewing, a guide is used, with questions and topics that must be covered. The interviewer has some discretion about the order in which questions are asked, but the questions are standardized, and probes may be provided to ensure that the researcher covers the correct material. This kind of interview collects detailed information in a style that is somewhat conversational. Semi-structured interviews are often used when the researcher wants to delve deeply into a topic and to understand thoroughly the answers provided.

The example question on the slide indicates an initial question that would be asked about training, as well as probes that the researcher might use to ensure that complete and consistent information was received across different interviews.



## **Overview**

- Introduction to data collection methods
- Applications from the real world
- **Semi-structured interviews**
  - **Frame the research**
  - **Sampling**
  - Designing questions and probes
  - Developing the protocol
  - Preparing for the interview
  - Conducting the interview
  - Capturing the data
- Focus groups
- Brief introduction to data management and analysis
- Closing remarks

RAND

In the next section, we discuss framing the research and sampling.

## ***Frame the Research***

- **Formalize your research question(s)**
  - What do you hope to learn?
  - Who needs these insights?
- **Identify best source(s) of information for each research question**
  - May be more than one
- **Determine number of people you need to speak with**
  - Subgroups

**RAND**

Before a researcher can decide what types of informants or respondents to include in a research project and what to ask them, the main research questions need to be identified.<sup>7</sup> In other words, what does the researcher hope to learn? The researcher should take into account the audience and what he or she wants to be able to tell them.

Then, the researcher should consider all the possible sources of knowledge or information appropriate to answer the specific questions. It might be appropriate to use multiple methods to gather the data. For example, the military women projects discussed earlier used both focus groups and interviews.

Finally, the researcher needs to consider the different participant types. In the project discussed earlier, military personnel, policymakers, and lawmakers were all included. The researcher should think about the characteristics that differentiate the participants and the resultant subgroups. For example, the researcher may decide to include both junior and senior military personnel. In the case of the military women projects, the military personnel were subdivided into different subgroups; data were collected from military commanders with interviews while data were collected from other military personnel with focus groups. We will discuss this in more detail later in this course.

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<sup>7</sup> Adapted from Stewart and Shamdasani, 1990.

## ***Basic Primer of Sampling***

- **Random**
- **Systematic; stratified**
- **Structured**
- **Cluster**
- **Judgment**
- **Convenience**
- **Opportunity**
- **Snowball**

**Get sampling help!**

RAND

An important part of any research effort is determining the sampling. This material is not intended to provide complete expertise in sampling, but rather to define and explain the different types of sampling.

Ideally, if appropriate to the research question, a research effort would *randomly* sample. However, keep in mind that a so-called random sample rarely is truly random. First, research generally randomly samples from a defined population, such as particular area codes or particular military units, schools, etc. The defined nature of the population itself precludes total randomness. Second, the contact method also removes some randomness. For example, if respondents are to be contacted by telephone landlines, the portion of the population that does not have a landline is inherently excluded. A researcher may not be able to address these issues, but he or she should acknowledge such weaknesses in the study sample's "randomness."

*Systematic* or *stratified* sampling involves first stratifying the sample based on its characteristics and then using a mathematical process to determine the sampling, generally every *n*th name based on the total number desired in the sample. This method is often used in a stratified population, such as the military. In the case of a project sampling the military, the researcher would determine how many participants he or she would like from each pay grade, or from groupings of pay grade, such as junior enlisted personnel, midgrade enlisted personnel, and senior enlisted personnel. The researcher would divide that group by the sample number desired, and include every *n*th name. For example, if the total group included 5,000 names

and the researcher wished to include 100 names from that group, the researcher would include every fiftieth name. When sampling in this manner, it is important to consider how the names are ordered. For example, alphabetizing names will group similar family names and, potentially, similar ethnic groups that might share similar names, together. Likewise, ordering by home telephone number would group similar area codes (and thus residential areas) together. One solution might be, for example, to order the names based on first name or based on the seventh digit of a 10-digit telephone number.

Sampling is *structured* in some research so that the research either does not overrepresent certain groups, or in other cases, to purposively oversample certain minority groups. For example, RAND conducted a study to assess why there was not greater representation of minorities among elite military occupations (Harrell et al., 1999). The structured sampling approach was employed so as to include as many minorities from those occupations as possible, since their perspective was important to the research. Another sampling method would likely have included relatively few minorities.

*Cluster* sampling helps reach a certain population, and also focuses the research in one geographic area. For instance, a school, retirement community, or daycare facility for dementia patients can be selected and then a sample from these populations can be drawn, which might be difficult to do from a larger population.

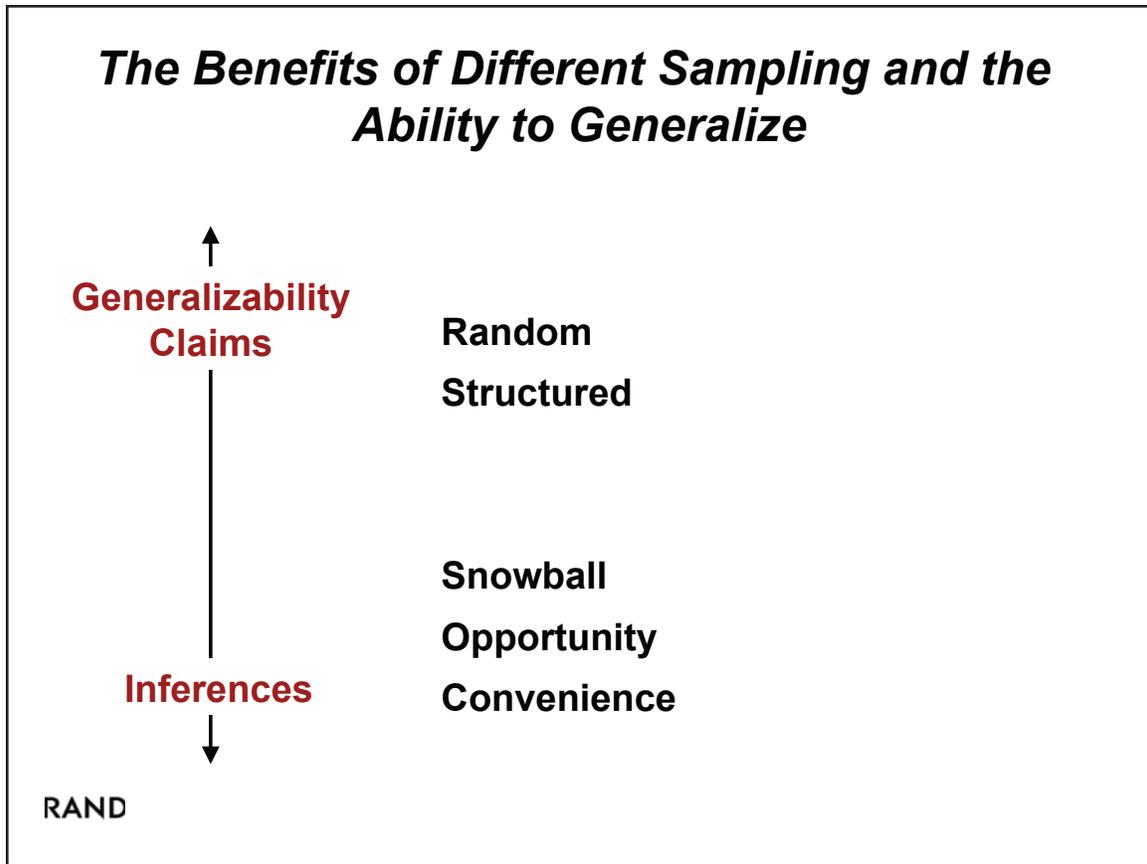
*Judgment* sampling reflects some knowledge of the topic, so that people whose opinion will be important to the research, because of what you already know about them, will be selected. The RAND study that considered the assignment of Army women in Iraq (Harrell et al., 2007) used judgment sampling to interview a female battalion commander who had recently returned from Iraq. Her perspective was judged valuable to the research, but her entire unit had not been selected for inclusion in the study.

Convenience sampling is generally used in the testing phase of research. If, for example, a researcher plans to survey young mothers, the researcher might choose to test the survey with some young mothers in her neighborhood. RAND welcomes a selection of military fellows each year to study at RAND, and some RAND researchers use the military fellows to test interviews or surveys focused on the military.

*Opportunity* sampling is just what its name implies, making use of opportunities as they arise and interviewing or surveying individuals that you had not planned to encounter.

*Snowball* sampling occurs when the research benefits from one participant suggesting or introducing another participant to the researcher. While most research projects benefit from some amount of snowballing, this is a dangerous primary sampling design, as the risk inherent in snowball sampling is the overrepresentation of a single, networked group.

The intended emphasis of this slide is to define and explain different sampling methods. However, this explanation does not obviate the need to consult statisticians or other sampling experts during a research effort, to ascertain the strength of the data obtained and thus the emphasis that can be placed on findings.



This slide illustrates some of the relative strengths of different sampling methods.<sup>8</sup> At the extreme, if researchers only consult participants obtained by a convenience method, the findings will be, at the most, only inferences; for example, if five young mothers provided identical responses, the researcher might infer about the broader population of young mothers, but would be unable to make any stronger assertions. Opportunity and snowball methods provide only slightly stronger results than does a convenience sample. At the other end of the spectrum, a truly random sample will provide the most generalizable findings, dependent upon the size of the sample. Likewise, a sufficiently sized and well-conducted structured sample will also result in more generalizable claims than would a sample (of the same size) obtained by other methods.

<sup>8</sup> Adapted from Arksey and Knight, 1999.

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**RAND**

Our discussion will now turn to designing questions and probes for a semi-structured interview.

## ***Question Design Is Important***

- **Descriptive questions**
- **Structural questions**
- **Contrast questions**

**RAND**

There are different types of questions, with different goals. In the most general sense, *descriptive* questions ask people to describe things and may provide insights or suggest areas for query that the researcher might not have considered. *Structural* questions help the researcher understand relationships between things, and to categorize groups of like things or like processes. *Contrast* questions help the researcher understand what terms mean. The subsequent slides cover these types of questions in more detail.<sup>9</sup>

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<sup>9</sup> For more discussion of question types as discussed on the subsequent slides, see Spradley, 1979.

## ***Descriptive Questions Result in a Narrative***

- **Grand tour questions – repeated phrases**
- **Mini tour questions – more focused**
- **Example questions**
  - Please give me an example of something he does to make you feel that way?
- **Experience questions**
  - Please tell me something you did while you were deployed?
- **Native language questions**
  - How would you refer to new trainees?
  - What do you call people who do that kind of work?

RAND

It is important for the researcher to determine the type of answer that he or she would like. For example, descriptive questions result in a narrative, and they should only be asked if the researcher wants the respondent to take the time to answer with a narrative, which might be lengthy. Five types of descriptive questions are explained here.

The *grand tour* question is a good type of question to use near the beginning of an interview, because it often encourages a respondent to speak. A grand tour question might be relatively simple, and sometimes includes multiple small questions or repeated phrases. An example might be, “I am interested in your life when you were growing up. What was your family like? Where did you live? Where and for how long did you go to school?” This is a grand tour question, because it involves multiple questions and leads to one large explanation. Another example might be asking a young soldier about how he came to be in the military: “I’m interested in how you decided to come into the military, so I’d like to understand how your life was when you were growing up. What was your family like? Where are you from? How did you learn about the military? Why did it sound appealing to you? How did you finally decide to join the military?”

The *mini tour* question asks about a specific element and is often used to follow up after a grand tour question. For example, “You’ve told me a lot about your life when you were growing up, but you haven’t said much about your parents. Please tell me more about your parents. For example, what did they do for a living?”

*Example* questions ask for a particular example. For instance, if the respondent were to comment that his parents were very strict when he was growing up, the researcher might ask,

“Can you give me an example of something they would or wouldn’t do that made you feel they were strict parents?”

*Experience* questions ask such things as “Can you give me an example of something you did while you were deployed?” Bear in mind that, to the extent that certain experiences come readily to mind, they may not be representative. If a soldier has an exciting story about the time he caught a foreign national scaling a fence to break into their encampment and steal ammunition, it may be a true story, but also may not be representative of his broader deployment experience.

*Native language* questions ask someone to use his or her own terminology. If a researcher is trying to learn about a business organization, questions to ask might include, “How would you refer to new trainees in your organization?” or “What do you call people who do that kind of work?” As another example, if interviewing a soldier, one might ask, “What did you call the place where you ate when you were deployed?”

## ***Structural Questions Result in a List***

- **Cover term questions**
  - **What are the different software applications that are authorized to be on computers at this location?**
- **Included term/item questions**
  - **I've heard you say that you're allowed to have word-processing software and spreadsheet software on your computer. What are the database applications that are also approved? What about qualitative coding software?**
- **Card or list sorting questions**
  - **Here are cards labeled with software names. Can you divide them by type (spreadsheet, database, word processing)? Which of these are authorized to be on your machines? Which are easy to operate? Can you divide them by how frequently you use them?**

**RAND**

Structural questions are used to build and verify a domain, or a list or structure of items and relationships. Examples might include different kinds of herbs or flowers, reasons for joining the Army, the different types of students in a typical high school, etc. These types of questions help the researcher understand sets or lists of things and how they relate to one another. When asking these questions, it is important to explain and provide context and even examples so that respondents realize that the researcher is really trying to build a list. In the strict sense, a researcher might use these types of questions when he or she is trying to understand the language or semantics of those studied. However, they are also useful techniques to flush out knowledge when language is less of a problematic issue. We discuss three types of structural questions.

A *cover term* question confirms that there exists a domain, or group of items that the researcher perceives. For example, there are limitations on software applications that can be loaded onto computers at a secure location. Thus, a cover term question might be: "What are the different software applications that are authorized to be on computers at this location?" Additional examples of cover term questions include: "What are the different groups of kids in this high school?" "What are the different reasons someone might join the military?" "What are the different kinds of training people have problems with?" In these cases, the cover terms are "authorized software applications," "groups of high school kids," "different reasons to join the military" and "training people have problems with."

An *included term* or *item* question attempts to put something the researcher has heard in context in order to develop a list further. "You've explained that you can have word-processing

and spreadsheet software on your computers. What other types of software can you have, such as database applications or qualitative coding software?” Another example might be: “I understand that ‘jocks’ are one group of kids at this school. What are other groups?”

*Card sorting* is the traditional way of asking respondents to group like items. The researcher might provide the respondent with actual cards with items written on the cards, or they might do a list sorting based on a written list on paper or a display board. In these instances the researcher might, for example, say, “Here are cards labeled with software names. Can you divide them by similar type, such as all spreadsheet applications together and all word-processing applications together?” That might be followed by “Let’s regroup them now into a pile of approved software and a pile with unapproved software.” And when those piles were complete, the researcher might say, “Please separate the cards into a pile of software applications that would be useful to you, regardless of whether they are approved, and a pile of applications that are not necessarily useful to you, regardless of approval status.”

Another example of a card-sorting exercise might involve job types in an organization. The researcher might say, “Here is a list of all the job types I’ve heard you explain in your organization. Can you make three piles based on the prestige of these job types, so that one pile is the jobs perceived to be the most prestigious, one is the least prestigious, and one is in the middle?” When that sort was complete, the researcher might ask, “Can you sort these based on the amount of education required for each job type?” That might be followed, for example, with “Please sort the job types based on whether the type is predominantly filled by women, by men, or includes a high proportion of both men and women.”

A key difference between descriptive and structural questions is that descriptive questions are process or “how” questions, and structural questions are list questions. A structural question, such as “What experiences influenced your decision to join the military?” or “What are the reasons you joined the military?” will provide a list of items, but probably no sense of prioritization or order of events. “How did you decide to join the military?” will result in a different kind of answer. This is one of the most important distinctions about different question types.

## ***Contrast Questions Manipulate a List***

- **Contrast verifications**
  - So you are permitted to have Microsoft Word and PowerPoint, but not iThink, Inspiration, or NVivo?
- **Directed contrasts**
  - So you have Word, PowerPoint, and Excel on your machine. What other software do you have?
  - So you get extra pay for being a military pilot. What other kinds of occupations have special pays?
- **Dyadic and triadic contrasts**
- **Set sorting**
- **Twenty questions**
- **Rating questions**

RAND

Contrast questions help differentiate between items on a list that the researcher has already obtained.

*Contrast verification* questions are relatively common. These confirm that items are different from one another and provide some confirmation of at least one way in which they are different. Examples might include “So you are permitted to have Microsoft Word and Microsoft PowerPoint on your computer, but you are not authorized to have iThink, Inspiration, or NVivo?” Or, as another example, “So the commander of a unit has to approve voluntary leave, but not convalescent leave?”

*Directed* contrast questions focus on one characteristic of an item and asks what other items share that characteristic. For example, “You’ve told me that you have Microsoft Word, PowerPoint, and Excel on your desktop computer. What other software applications do you have?” Another example might be, “So you get extra pay for being a military pilot. What other kinds of occupations have special pays?”

*Dyadic* and *triadic* contrasts ask the respondent to either suggest the differences between two items or terms, or to pick the one that does not fit with the other two. There are often multiple answers, and the general point is to understand how people think about these things.

One example from a healthcare study of parents might use the three ailments of chicken pox, measles, and croup, and ask parents to say how they are alike or different. Some might say chicken pox and measles are both skin-related. Others might suggest those two are similar because immunizations exist for both of them. Some might say that measles and croup are more serious, requiring a doctor's care. The same study might also provide another triad for contrast: chicken pox, bronchitis, croup. In this case, some respondents might say that bronchitis and croup are both breathing problems. Other respondents might say that bronchitis can occur at any age, while the other two are predominantly childhood sicknesses. A doctor might single out bronchitis as requiring an antibiotic.

*Set sorting* usually involves the use of cards, and asks respondents to group the cards by whatever categories or themes they would like. The researcher then may rescrumble the cards and ask the respondent to group them again using different themes. This is different from the card/list sorting mentioned in the prior slide, because here the respondent sorts cards based on their own scheme or set of domains, and thus might provide different sorts of information in the form of categories that the researcher may not have considered.

*Twenty questions* can involve a relatively long research interaction. It consists of asking the respondent to ask yes and no questions of the researcher regarding a list of items, until the respondent can guess which item on the list the researcher is thinking of. This tests whether the researcher fully understands the topic, and permits the researcher to ask additional questions. For example, if the topic were a list of software, the respondent might ask, "Are you thinking of a software that would permit you to run regressions?" And the researcher could ask what kind of regressions would be run, under what circumstances they would be run, what kind of data might be used for the regressions. This method works especially well with younger respondents, who might be more enthused about the playful or "gaming" nature of this interaction. It obviously works less well with more mature respondents who might be time-constrained or less willing to engage creatively in the interaction.

*Rating questions* establish the order or values of items, themes, activities, etc. They might include asking someone the best and worst Christmas gifts received, what one does first thing in the morning, as the day progresses, and at the close of the day. They might also include asking the best, mediocre, and worst things about a job. These questions can be used in the course of a semi-structured interview when someone places a value or order on something, such as commenting that a particular job assignment is bad. The researcher might ask in that instance, "what would a good job assignment be?"

This material will cover data collection later, but the reader should bear in mind that results of these types of questions can be quantified and entered into various computer programs that provide a numerical answer for an individual interview or that provide an aggregated pattern of observations for a set of interviews.

## ***Problem Questions***

- **Are double-barreled**
- **Are leading**
- **Use double negatives**
- **Use unfamiliar jargon or technical terms**
- **Are vague**
- **Use emotional language**
- **Are beyond the respondent's capability to answer**

RAND

There are several things that the researcher should be cautious of when writing questions.<sup>10</sup>

*Doubled-barreled* questions are questions that are actually made up of two different questions, which may have different answers. An example of this might be “How did you learn about the new leave policy and how will it impact your work life?” Double-barreled questions are difficult for respondents to answer; respondents may answer just one part of the question or may be more likely to provide ambiguous answers. Generally, it is best to ensure that each question is asked independently.<sup>11</sup>

*Leading* questions encourage a respondent to answer in a certain way, and they imply that there is a right or wrong answer. “You don’t support the new policies, do you?” is an example of a leading question.

Double negatives are confusing—and they are poor grammar.

The researcher should make sure that all respondents understand what they are being asked. The question might appear perfectly clear to the researcher, and it may seem to capture exactly what is intended. Nonetheless, respondents may interpret the question differently or, even worse, be unable to answer the question because they do not understand what is being asked of them. Testing questions can help to clear up ambiguities.

<sup>10</sup> Adapted from Neuman (2006), Arksey and Knight (1999), and Fowler (1995).

<sup>11</sup> While grand tour questions are admittedly double- or triple-barreled, the emphasis in a grand tour question is to initiate a respondent narrative. Double-barreled questions are most problematic when they include two key questions that each need to be answered.

Questions should use neutral language in order to prevent biasing the responses. Certain words hold power and can affect how respondents “hear” the question.

Finally, interviews are not tests. Asking a series of questions that are beyond the grasp of the respondent can be embarrassing and frustrating for him or her. It is also a waste of time and effort.

## ***Probing During the Interview***

- **Probes should be used whenever:**
  - **The interviewer doesn't understand the respondent's reply**
  - **The question specifically indicates that you should probe**
  - **Respondents**
    - **Give the interviewer any reason to think that they have not given a complete report of their thinking**
    - **Say "don't know" or "I can't answer that"**
    - **Give an answer that doesn't fit**
    - **Seem to have not understood the question**

**RAND**

Probing is a way to stimulate the interview. Interviewers use probes when they do not understand what the respondent has said and thus need further clarification. Sometimes questions specifically indicate that the interviewer should probe. In semi-structured interviews, the interviewer is sometimes asked to follow up on an issue if the topic does not come up in the respondent's response to the initial question. For instance, on a recent project respondents were asked about physical aspects of having a particular disease. The question was worded as "Tell me about the physical problems you have experienced due to this disease." The researchers suspected that sleep disturbances were a large problem for individuals with the disease and wanted to make sure to capture respondents' experiences with that issue. So if respondents did not offer any indication of sleep disturbances as a problem in response to the question, the interviewers probed with "What about problems with sleeping?"

Interviewers should also probe when they think that the respondent has not told them everything they can; the answer provided is a "non-answer," in that it does not answer the question; if the interviewer thinks the respondent has not understood the question; or if the respondent says "I don't know." Sometimes "I don't know" really means "I need more time to think about this" or "I don't really understand what you are asking."

In deciding whether or not to use probes, interviewers always need to listen very attentively to the respondent's answer in order to determine whether the answer is clear and complete. Interviewers need to be familiar with the purpose of the question to know when the answer is sufficient.<sup>12</sup>

<sup>12</sup> Adapted from RAND SRG internal training materials and best practices documentation.

## ***Some Standard Probes***

### **FOR CLARITY/SPECIFICITY**

- **Can you be more specific?**
- **Can you tell me more about that?**
- **What is your best estimate?**
- **What do you think?**
- **Which would be closer?**
- **Which answer comes closest to how you feel/think?**
- **If you had to pick one answer, what would you choose?**

### **FOR COMPLETENESS:**

- **Anything else?**
- **Tell me more.**

### **OTHER PROBING TECHNIQUES:**

- **Repeat the question**
- **Echo their response**
- **Pause a second**
- **Baiting**

**RAND**

Probes elicit additional information or clarify responses. These standard probes are neutral and elicit further information without biasing the respondent's answer.<sup>13</sup>

Most of the probes listed on this slide are self-explanatory, but there are also other probing techniques.

The "tell me more" probe comes naturally to some interviewers, who frequently ask, "Can you tell me more about that?" "Why do you feel that way?" "Why do you say that?" etc. The correct tonal inflection can make the difference between sounding inquiring and sounding defensive.

One tactic is simply to repeat the question, giving the respondent more time to think about the answer.

An *echo probe* repeats the last thing the respondent said. This is sometimes useful for lack of a better response when the respondent shares something personally painful, such as "My father was an alcoholic." Sometimes repeating, "Your father was an alcoholic," without any tone of judgment, will lead the respondent to further discussion. Or, in a different example, the interviewer might repeat, "So then you have to complete Ranger school" and add, "then what do you have to do?" There is some risk of sounding like a nuisance if this probe is used too frequently.

The interviewer can also *bait* the respondent. This probe method is sometimes used by attributing controversial views to other, unnamed, individuals. One example is "I've heard

<sup>13</sup> Adapted from RAND SRG internal training materials and best practices documentation.

some people assert that the company's new vacation policy is unfair to junior employees." This probe method prevents the researcher from appearing to have a position on a controversial issue, and sometimes promotes heated discussion. This is also useful when there is a "secret" that everyone knows but no one is willing to mention first. In the official world, this might be a policy change that is not yet official. Baiting can also be used to imply that the researcher already knows something that, in fact, they know very little about. This can encourage a respondent to confirm and share information, because he or she is not divulging "secrets" if the researcher already knows (Bernard, 2002).

There are a couple of potential problems with probes for which the researcher needs to be prepared. The first is the very real likelihood that "I don't know" does mean that the person doesn't know. In these cases, probing may compel the respondent to say things that are not true or that he or she does not really feel in order to please the researcher. The second potential problem is an ethical one. If the researcher has probed an individual to speak freely, and the respondent proceeds to share extremely personal and painful information, then the researcher has to consider the ethical issues involved in using that information. Is the researcher free to use the information, given that the respondent may regret his or her comments later? What if the respondent experiences personal pain as a result of sharing with the researcher? Is it appropriate for the researcher to pack up the notes and leave a distraught person behind?

In some instances, interviewers are required to provide the reference numbers for counseling or other support services available to respondents, and some projects will even designate a clinician to respond in situations where a series of questions leaves a respondent very upset. These extreme cases aside, interviewers have, at a minimum, such ethical responsibilities as maintaining confidentiality guidelines, providing respondents with adequate information so that they may make an informed decision regarding whether or not to participate in the research, and allowing respondents the option of declining to answer questions with which they are uncomfortable.

## ***Exercise 1: Interview Probes***

- **Review sample research questions**
- **List all the possible types of participants for each research question**
- **Identify probes for the highlighted research question**

**RAND**

In Exercise 1, you will review sample research questions, consider the appropriate types of participants to answer the research question, and craft appropriate probes. The exercise is provided on pp. 117–118.

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**RAND**

This portion of the course focuses on developing a protocol.

## ***Protocols Are Necessary***

- **Clarify questions and identify probes**
- **Ensure that interviews are consistent**
  - **Across interviewers**
  - **Across respondents**
- **Prioritize research questions**
- **Intended only for interviewer use; not to be shared with interviewee**
  - **Send topics, not protocol**

**RAND**

Protocols allow researchers to structure the interview. The process of developing a protocol includes the formation of questions and probes and thus compels the researcher to clarify and prioritize the information wanted from each interview.

When researchers collect data, they want to minimize the effects of different actors on the data collection (interviewer bias). It is important that interviews are administered consistently both across different interviewers and across different respondents. If a research effort includes multiple interviews, it is important that the first interview covers the same topics as the very last interview conducted. If there are multiple interviewers, it is important that each interviewer asks the same questions in the same way. Otherwise, the data are not comparable.

Additionally, interviews are time-constrained, so the protocol guides the researcher to prioritize the research questions and to understand which questions are “must ask” and which are secondary.

One important note is that the protocol is for the interviewers’ use, not the respondents’. If the respondent wants to see a list of questions before the interview, the interviewer should send a topic list rather than the actual protocol. If the respondent receives the protocol prior to the session, they may provide only “official answers” or answers prepared by a staff of assistants. Also, the interview data will be inconsistent and will not be comparable if one respondent received the protocol in advance while another did not.

## ***Designing Protocol Schemes for Semi-Structured Interviews***

- **Funnel protocols**
  - Broad questions leading to more focused questions
  - Builds rapport (useful when topic is sensitive)
- **Inverted funnels**
  - Narrow questions leading to broad discussion
  - Places interviewees in the context of the topic
  - Let interviewees become comfortable before they talk freely
- **Tunnel method**
  - Avoids broad questions
  - Appropriate when time is limited
- **Quintamensional method**
  - Assesses the intensity of opinions

RAND

Having discussed the type of questions, it is useful to consider the sequencing theme of the protocol in which different questions are posed.<sup>14</sup>

*Funnel protocols* employ broad questions, such as grand tour questions, before asking more pointed questions. This is appropriate for sensitive topics. It would be difficult, for example, for a researcher to introduce oneself and then immediately ask, “How serious is your drinking problem?”

*Inverted funnels* begin with closed questions, often background questions, and gradually build to more open-ended questions. These may gather important background and also permit the respondent time to become comfortable with the interview before being asked more sensitive or broad questions.

The *tunnel method* involves a series of similar questions where the respondent may have to rate things, but where the approximate depth of the questions are similar throughout. Tunnel protocols avoid broad questions and are most appropriate when the researcher has only limited time with a respondent.

A *quintamensional protocol* determines the intensity of a respondent’s opinions and attitudes with five steps that assess (1) the degree of awareness of an issue, (2) uninfluenced attitudes, (3) specific attitudes, (4) reasons for these attitudes, and (5) intensity of these attitudes. This method was developed by Gallup in 1947, but Stewart and Shamdasani (1990) provide a useful example, as follows:

<sup>14</sup> Adapted from Stewart and Shamdasani (1990).

1. "Tell me, what do you know about current methods of disposing of hazardous chemical waste?"
2. "What, if any, are the factors that contribute to the growing stockpile of hazardous chemical waste?"
3. "Do you approve or disapprove of these methods of disposing of hazardous chemical wastes?"
4. "Why do you feel this way?"
5. "How strongly do you feel about this? Strongly, very strongly, something that you would not change your mind on?"

## ***What Protocol Looks Like – Formats***

### **Protocol should contain:**

- **Introduction**
- **Ground rules**
- **Questions and probes**
  - **Questions should be grouped by topic**
  - **Decide ahead of time how many minutes you want to spend on each topic area**
  - **Think carefully about the number of questions**
  - **Think carefully about appropriate probes**
- **Thank you and next steps**

**RAND**

Protocols begin with an introduction. The researcher generally introduces his or herself, their organization, the purpose of the research, and the reason that the respondents have been asked to participate in the interview.<sup>15</sup>

Next, the researcher lays the ground rules. This includes the length of time of the interview, any assurances the researcher has to safeguard information, and information about the types of reporting that will come from the data.

The questions come next. A protocol generally groups questions by topic since it makes sense for the flow of conversation. The actual conversation might not follow the flow specified, but the protocol will help the researcher keep track of what has been answered and what still needs to be covered. Specific probes may also be outlined in the protocol.

The researcher should think carefully about how much time is to be allotted to the interview and how many questions can be covered in that time. If an interview is 30 minutes long, can it really cover 15 questions? After an introduction, there would be less than 2 minutes remaining per question, which would not permit much of a discussion. Again, it is important to decide how much time will be devoted to each topic. If different interviewers spend significantly different amounts of time on each interview topic, then the results may include missing data and substantially different interviews.

<sup>15</sup> The content of the introduction may also be guided by the informed consent requirements of an organization's Institutional Review Board.

Finally, at the end of the interview the researcher should take time to thank the respondent and indicate the next steps in the process. Does the interviewer need to send the respondent a follow-up document? Has the respondent promised to send something to the interviewer? This is the time to have that discussion.

## ***Exercise 2: Interview Protocol***

- **Review sample protocol**
- **Identify the sections**
- **Discuss problems**

**RAND**

In Exercise 2, you will review a sample interview protocol and discuss any problems with it. The exercise is provided on pp. 119–120.

## ***Testing the Protocol***

- **Are questions understandable and appropriate?**
- **Are responses what you expected?**
- **Is the flow correct?**
- **Do other issues arise that you should include?**
- **Review for mis-administered questions**
  - Terminology or pronunciation
  - Correctly used probes

**RAND**

Any protocol instrument designed for data collection should be tested. Sometimes researchers use a detailed approach to testing instruments, such as cognitive interviewing, where there is the opportunity to delve into the meaning of a single question, or even a single word, with a respondent. At a minimum, researchers should test the instrument on a convenience sample of people who will be similar to the respondents who will participate in the study.

When testing questions, researchers should look for question problems, such as vague answers, unclear terminology, or questions that are inappropriate for the audience. Are the answers addressing the questions the researcher thinks they are asking? Does the flow of topics and questions seem sensible and natural?

This testing should ensure that the terminology of the questions will be properly understood by the respondent. If there are multiple interviewers, researchers should consider whether terms or words could be mispronounced and whether the probes will be used correctly.

## **Overview**

- Introduction to data collection methods
- Applications from the real world
- **Semi-structured interviews**
  - Frame the research
  - Sampling
  - Designing questions and probes
  - Developing the protocol
  - **Preparing for the interview**
  - Conducting the interview
  - Capturing the data
- Focus groups
- Brief introduction to data management and analysis
- Closing remarks

**RAND**

This portion of the course discusses the preparation for the interview.<sup>16</sup>

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<sup>16</sup> This section on preparing for the interview is adapted from RAND SRG internal training materials and best practices documentation. Readers who desire more information should see, for example, Arksey and Knight (1999) and Fowler (2002).

## ***The Interview Team***

- **Interviewers must be able to:**
  - **Gain cooperation**
  - **Listen**
  - **Be neutral**
  - **Maintain confidentiality**
- **Note-takers must be able to:**
  - **Record accurately**
  - **Note subtleties, nonverbal behavior**
  - **Understand their role in the session**
  - **Understand when clarification is needed**
  - **Be cost-effective**

**RAND**

An important, and often neglected, aspect of interview-based research is the proper selection, training, and follow-up with the data collection team.

The first part of the team is the interviewer. Not everyone makes a good interviewer. Interviewers need to be able to get a respondent to participate and stay engaged in the interaction. One might think of good interviewers as those able to project “friendly professionalism” in order to build rapport.

Interviewers must be able to listen closely to the respondent in order to determine whether the questions are being answered and determine when follow-up is needed. This is not always easy after an interviewer has conducted many interviews and may think he or she has already heard all the possible answers.

Interviewers must also stay neutral, no matter what he or she thinks or hears. Respondents can offer surprising responses, be controversial, and even try to provoke the interviewers. Good interviewers remain unfazed and do not offer their own opinions.

Interviewers must also be able to maintain the confidentiality of the respondents.

Another key member of the team is the note-taker. It is best practice to have a note-taker as well as an interviewer. Taking detailed notes and conducting an interview at the same time is virtually impossible. That is not to say that an interviewer does not take any notes; each interviewer should be taking some notes during the interaction. However, the interviewer should leave detailed notes to the note-taker, as interviewers cannot capture the detail while simultaneously paying attention to the respondent and making sure that the protocol has been followed. Considerable data can be lost if the interviewer is required to play all roles.

As with interviewers, not everyone is well suited to be a note-taker. A note-taker must be able to take highly detailed and accurate notes during the interview. Note-takers need to be able to write quickly. Note-takers are also responsible for noting any nonverbal behavior (which can be very telling), any subtleties in tone, and also the “background” of the interview, that is, what’s going on around the interview that might have affected the discussion. For instance, are there people coming in and out of the room?

Note-takers need to understand their role; the note-taker is not conducting the interview, but he or she may need to clarify information as necessary to ensure that the notes are correct. Thus, a note-taker needs to understand when interjecting is appropriate. The interviewer can help with this. Good interviewers often turn to the note-taker after a topic is completed or if the respondent has just provided a long or complicated explanation, and ask, for example, “Robert, did you get that, or do you need to clarify anything?”

One last thought is that researchers should want the note-takers to be cost-effective. There is no need to have the most senior person on the research project do the note-taking. Instead, one should think about using a junior colleague as a note-taker, perhaps someone who would benefit from exposure to a particular subject or area of research. Note-taking can also be a good training opportunity for a prospective interviewer.

## ***Training and Follow-Up with Interview Team***

- **Ensure that your team is trained**
  - **Interviewing skills**
  - **Note-taking skills and conventions**
  - **Project specific training**
- **Ongoing interaction**
  - **Interviewer debriefings**
  - **Reports to team**

RAND

Researchers should ensure that the data collection team not only has training on basic interviewing skills, but also training on how to take good notes and on the note-taking conventions that the project team has decided upon. The person who does the analysis is not always the person who has conducted the interview or taken the notes. When someone sits down to analyze 50 sets of interview notes, it is important that all note-takers meant the same thing by those symbols and notations. Notes should be able to stand the test of time and be understandable even if a researcher resumes using them two years later.

The team should also have project-specific training. What is the purpose of the study, what are the procedures for contacting respondents, what is the intention of the questions being asked? This will allow interviewers to know how to address potential questions from the respondents, and know when they have collected the proper data.

General interviewer training should cover the basics of the research process and general interviewing skills, such as how to probe and how to avoid refusals, and other topics. Then, when interviewers are assigned to actual projects, they go through several additional days of project-specific training. Project-specific training includes a complete review of the data collection instruments, overviews of the project purpose, and training on how to address questions from respondents about the research.

Interaction should be ongoing. The lead researcher should not simply train interviewers and note-takers and send them off to conduct hundreds of interviews. Instead, project teams should meet again after the first few interviews and debrief. This is when researchers can determine whether questions are working, whether there are significant and unexpected differences

across the population, or whether there are additional unanticipated issues or topics. If a project team meets early in the interview process, it is possible for the researchers to make critical fixes before it is too late. Also, periodic meetings allow the research team to assess whether there has been divergence among the team in how the interviews have been conducted, to consider whether there are any new issues or problems, and to keep everything on track.

The lead researcher should also request updates on how many interviews are being completed, how long the interviews are taking, and other logistical or administrative considerations. This can be essential in keeping projects on track and on schedule.

## ***Gaining Interview Access***

- **Mode of contact**
- **Consider whether you can contact them directly**
  - **Gatekeepers**
  - **Competing demands for their time**
  - **Authorized use of time**

**RAND**

There are many factors to consider when deciding how to contact the interview respondents. For research done within the workplace, such as for official lessons-learned activities, many of these access issues are much easier.

If the researchers do not have a professional relationship with the respondents, then there are more decisions and more difficult challenges. Will the initial contact be by phone, by email, or by letter? In some instances, the interviewer might be able to contact the respondent directly. In other cases, the interviewer will need to send information in advance or have someone else make the initial contact.

Gatekeepers are individuals who control access to the respondent. Researchers almost always run into gatekeepers when trying to interview those who might be considered high-status people, such as doctors or senior government officials, but gatekeepers can also be individuals such as spouses. It is helpful if the interviewer can develop a rapport with the gatekeeper, as the gatekeeper can help the interviewer access the respondent.

When contacting the respondents, researchers need to consider the respondents' schedules and demands on their time. Sometimes interviewers need to be creative about how and when they contact people. For instance, sending FedEx packages rather than letters can be helpful, as FedEx packages receive more attention. In addition, calling before or after standard office hours, when receptionists or secretaries are likely to have gone home, but respondents may still be in the office, can also be profitable.

For some projects, it makes sense to have the project sponsor send the potential respondents some advance notice—either a letter or an email—that explains the context of the

research and why it is important that the individual participate. This is especially important when individuals may not feel authorized to use official time to participate in an interview unless they have received official approval or tasking. Such an introduction may also be very important to access more senior people, if someone senior to the respondent, or even parallel to the respondent, in the organization has introduced the research. Almost without exception, people are more likely to be willing to participate if the researcher mentions who suggested that he or she talk to the respondent, and gatekeepers may not permit one access unless the researcher has formal entrée.

## ***Gaining the Respondent's Cooperation***

- **Introduction**
  - **Explain who you are, what you are doing**
  - **Have interviews have been approved/ authorized?**
  - **Why are their opinions important?**
  - **Is anonymity and confidentiality offered?**
- **Be prepared for questions**
- **Take the initiative**

RAND

Depending on whom the interviewer is contacting, it may be beneficial to send an advance email or letter with a brief project description. Regardless of how the respondent is initially contacted, the researcher should inform him or her of the researcher's organizational affiliation and the purpose and intent of the project.<sup>17</sup>

Potential respondents often will have other questions that need to be addressed before they are willing to participate. Interviewers need to sound knowledgeable about the study and able to address these questions without stumbling and without "pregnant pauses." Researchers should provide interviewers with a list of questions that might be asked, and the best answers to provide to respondents. By doing so, every respondent will receive the same description about the study and the same explanation about why and how he or she was selected as a respondent. This is another way to ensure consistency across interviews.

Interviewers should listen to the respondent's concerns and address those concerns specifically. Interviewers should also be proactive: If an interviewer hears hesitancy on the part of the respondent, the interviewer should anticipate and try to address his or her concerns. Interviewers might also offer to call at another time, offer to meet late in the day or early in the morning, or consider whether the interview can be completed by telephone (if this is an option approved for the research project).

<sup>17</sup> The content of the introduction may be guided by the informed consent requirements of the organization's Institutional Review Board. In the case of internal organization research (such as lessons-learned activities), the respondent may be aware of the researcher's organizational affiliation. Nonetheless, a clearly written statement about the purpose and intent of the study will still be beneficial.

## ***Overcoming Common Barriers***

- **“I’m not interested”**
  - **Explain purpose of research and remind them it’s an opportunity for their opinions to be heard**
- **“I’m too busy. How long will this take?”**
  - **Be honest about time and suggest you can schedule for a more convenient time**
- **Fear of being inadequate**
  - **Provide reassurance that we want their opinion, that there are no right or wrong answers**
- **Have a negative reaction to research**
  - **Reiterate why the research is important, provide information on legitimacy of the research**
- **Confidentiality concerns, questions too personal**
  - **Explain that answers will be combined with answers from others and presented in aggregate form; no names will be reported**

**RAND**

Barriers to the interview existing in the respondent’s mind need to be overcome. The interviewer should take the initiative to address those concerns.

Knowing how to address concerns will help to avert refusals. Having brief, prepared answers provides enough information to gain cooperation without sacrificing considerable time with lengthy conversations. Here is a list of some common concerns expressed by potential respondents.

When someone says they are not interested, the interviewer might try letting the respondent know what is interesting about the research and why the research is potentially important to the respondent. They can also remind the respondent that the interview affords him or her an opportunity to state individual opinions on the topic.

If a potential respondent is too busy, the interviewer should try a work-around. The interviewer might let the respondent know how much time is really necessary for the interview (if a concise version can be conducted), offer alternative days or times, or consider whether it is permissible to break the interview into smaller pieces.

In some instances, the respondent may lack sufficient experience or the expertise to participate. Sometimes this is actually the case, but sometimes the research is designed to include less-experienced people. In these instances, a response might offer, “It’s important for us to speak with people with a range of experience to get a true picture of what is happening.”

Some people are very skeptical of the research process. The respondent needs to see the survey as being important and worthwhile. In these instances, the respondent may appreciate information on the legitimacy of the research or on how the findings will be used.

If a respondent has confidentiality concerns, then it is helpful for the interviewer to reiterate any protections the project can offer and to inform him or her about how the data will be presented.

## **Overview**

- Introduction to data collection methods
- Applications from the real world
- **Semi-structured interviews**
  - Frame the research
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  - Developing the protocol
  - Preparing for the interview
  - **Conducting the interview**
  - Capturing the data
- Focus groups
- Brief introduction to data management and analysis
- Closing remarks

**RAND**

The next portion of this course focuses on how to conduct an interview.<sup>18</sup>

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<sup>18</sup> This section on conducting the interview is adapted from RAND SRG internal training materials and best practices documentation. Readers who desire more information should see, for example, Arksey and Knight (1999) and Fowler (2002).

## ***Initial Considerations for the Interview***

- **Selecting the location**
- **Choosing situation-specific dress**
- **Opening the interview**
  - **Refer to earlier contacts with same person**
  - **Review history of your organization**
  - **Indicate significance and potential benefits of study**
  - **Explain interview process**
  - **Explain publishing process**
  - **Discuss confidentiality/anonymity/consent form**
  - **Acknowledge any recording**
  - **Provide opportunity to ask questions**

**RAND**

The location selected for the interview is very important. Ideally, interviews should be conducted in a private, quiet space with no distractions. Other people coming in and out of the area are both disruptive to the interview process and also likely to reduce the candor of the respondent.

How an interviewer dresses for the session depends on the respondents and the context of the interview. The most appropriate dress is situation-specific.

When the interviewer opens the interview, there are a few “pieces of business” that need to be covered. First, the interviewer should provide some information about the research organization. The interviewer should also explain the interview process, including the likely length of the session, the topic of the questions, and whether the respondent can refuse to answer any questions. The beginning of the interview is also the appropriate time to explain the final publication process, including any public clearance or release process, and whether the respondent will have an opportunity to review the report. Issues of confidentiality, anonymity, and consent should be addressed at the beginning of the session.<sup>19</sup> This is important even if these issues were discussed when the interview was scheduled. If the interviewer is audio- or video-recording the session, the recording needs to be acknowledged and approved by the respondent. The interviewer should not assume that recording is acceptable and permitted. All interviews should begin only after the interviewer has asked whether the respondent has any questions.

<sup>19</sup> The statements regarding confidentiality, anonymity, and consent will likely be guided by the informed consent requirements of the organization’s Institutional Review Board.

## ***Asking Questions***

- **Be very familiar with the questions in the interview protocol**
  - Understand the intent of a question – what are you asking?
- **Make sure that you cover all the material in the interview protocol**
- **Listen carefully to the response**
  - Evaluate whether the question has really been answered
  - Probe for additional information as needed
- **Maintain a neutral attitude**

RAND

As discussed previously, the interviewer must understand the question in order to respond to any inquiries from the respondent about the question.

Sometimes questions will be asked out of order because of the natural flow of conversation, but the interviewer needs to make sure that every question in a topic section is addressed, ideally before moving on to the next topic. Sometimes it is helpful to check off questions as they are addressed. Before closing the interview, the interviewer should review the protocol and return to questions that were not covered.

When the respondent is answering, the interviewer should practice “active listening,” listening carefully to the respondent and evaluating whether the question has been fully answered (Morgan, 2006). Interviewers should dig deeper for more information if necessary. Finally, interviewers need to stay neutral; this includes being neutral in probes, and also in verbal and nonverbal cues.

## ***Remaining Neutral***

- **Ideally, each respondent will interpret the question in the same way**
- **It is important to maintain neutrality so as not to influence how the respondent answers the question**
  - Do not suggest an answer
  - Do not assume answers ahead of time
  - Do not give your own opinions
  - Do not agree or disagree with the person's comments
  - Avoid making gestures that could indicate that you approve or disapprove of a respondent's answer or comment
- **Remember, there are no "right" or "wrong" answers and you are not judging the respondents' answers**

**RAND**

In order for two answers to be comparable, the question should mean the same thing to each respondent.

When an interviewer does not maintain a neutral manner, he or she may influence or bias the data by affecting how respondents interpret a question.

Most respondents want to be helpful and provide information that they think will be helpful to the research. If a respondent is given the impression that certain kinds of answers are preferable, they may provide more of the "preferred" answers in an effort to please the interviewer. Using probes that contain phrases like "this is good information" is biasing because it implies that some responses provide good information and other responses provide bad information. Likewise, an interviewer should never give his or her own opinion to a respondent, or suggest an answer to the respondent, because the respondent will make judgments based on those interviewer comments and edit his or her responses accordingly.

Interviewers should also never assume how someone will answer. Instead, the interviewer should ask each question and be open to whatever response is provided. The interviewer should not neglect to probe because of an interpretation of what the respondent is "really trying to say."

Verbal and nonverbal behaviors, even unconscious ones, can bias an interview. For instance, excessive nodding of the head or using phrases such as "you are right" might unintentionally "steer" the respondent to answer in a certain way. An interviewer should not limit his or her demeanor and facial expressions to the extent that the interviewer appears robotic, but the interviewer should try to be aware of the social cues being projected.

A slight caveat: Some nonverbal behaviors can be used as probes or to help direct the interview. If an interviewer uses a quizzical look it might “probe” the respondent to provide more detail or give more explanation. Likewise, if the interviewer suddenly stops taking notes, it can be a clue to the respondent that the information he or she is providing does not answer the question.

The bottom line is, an interviewer should be aware of his or her own verbal and nonverbal behavior and should never lead the respondent to believe there are right or wrong answers.

## ***Aspects of a Successful Interview***

- **Giving and obtaining explanations**
  - Project explanations
  - “Native language” explanations
- **Asking questions**
- **Asymmetrical turn-taking**
- **Expressing interest**
- **Expressing cultural ignorance**
- **Repeating**
- **Restating respondent’s terms**
- **Incorporating respondent’s terms**
- **Creating hypothetical situations**

**Understand the answers!**

**RAND**

Having discussed the aspects of successful interviewing, here is a quick summary that makes clear the difference between an interview and a typical conversation.<sup>20</sup>

By the end of a successful interview, the interviewer has accomplished many things. First and foremost, the interviewer has obtained information or explanations from the respondent, hopefully, some in the form of the respondent’s own terminology or “native language.” All different kinds of questions have been asked. An interview differs from a basic conversation in that there is not equal turn-taking. It is acknowledged and accepted that the interviewer is there to hear the respondent talk. The interviewer has continued to express interest while professing ignorance, and thus the importance of the respondent’s comments. The interviewer has repeated many of the respondent’s comments and restated them to confirm understanding. The interviewer has tried to incorporate the respondent’s semantics into subsequent probe questions. The interviewer may have also created hypothetical situations to test their understanding. Most importantly, the interviewer has not left without understanding the answers provided.

<sup>20</sup> Adapted from Spradley, 1979.

## ***Closing the Interview***

- **Express appreciation**
  - Indicate how useful and productive the session has been
- **Confirm next steps**
- **Leave professional contact information**
- **Snowball sample**
- **Follow-up**
  - Send notes back to participant for comment
  - Thank you note

**RAND**

The interviewer should always close on a positive note. Let the respondent know how useful the interview has been and how much his or her participation is appreciated.

Now is also the time to confirm any next steps to the research process. Any plans for follow-up contact should be discussed. It may be most constructive to leave that door open, for example, with “Would you mind if I called you back if I thought of other questions?” If appropriate, let the respondent know when the data will be published or available for review and how they might receive a copy if interested.

It is also often important to leave contact information with respondents, in the event that they think of more information they want to share. If the project employs snowball sampling, and the respondent has suggested someone else to speak with, the conclusion of the interview is the appropriate time to obtain that contact information. The interviewer might also want to ask whether the respondent is willing to open the door with a phone call to the person.

A frequent question is whether notes should be sent back to a respondent to review. The circumstances and the potential for bias should be considered. When interviewing someone for his or her professional expertise, it might be important to have the notes reviewed for accuracy. This serves a couple purposes. It provides the interviewer the opportunity to write questions into the notes where additional information is needed. It also gives the respondent a greater sense of involvement (and hopefully of comfort) in the research. Additionally, this review allows the respondent to buy into (or correct) what is understood from the interview, and it reduces problems later that might be caused from disagreement over the findings. It also compels the interviewer to write up the notes quickly.

Alternatively, when an interview addressed personal experiences, attitudes, and opinions, notes are less frequently provided to the respondent for review.

Lastly, decide whether a thank you note is appropriate, given the researcher's relationship with the respondent and the status of the respondent. If notes are being sent back, the thank you can take the form of the first paragraph of the email or letter.

## **Overview**

- Introduction to data collection methods
- Applications from the real world
- **Semi-structured interviews**
  - Frame the research
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  - Designing questions and probes
  - Developing the protocol
  - Preparing for the interview
  - Conducting the interview
  - **Capturing the data**
- Focus groups
- Brief introduction to data management and analysis
- Closing remarks

**RAND**

This portion of the course reviews methods of capturing data from interviews.

## ***Capturing the Data***

- **Sample file**
- **Recording**
  - **Whether to use audio recording**
  - **Does not capture everything**
  - **Logistical Issues**
- **Note-taking**

**RAND**

There should be several sources of data from the research interviews.

One source will be a file that includes information on the sample of people selected for the study. These files also often contain basic information about the sampling criteria, and perhaps basic demographic information. This file is often used to report such things as response rates (of the people selected, how many completed the interview) and to describe the characteristics of the population and respondents. This kind of data is very important in bounding the assertions that can be made with the data.

Whether or not to record an interview often comes up as a question. Some things to think about here include the time, cost, and effort to transcribe the tapes and the way tapes must be protected (audio tapes are considered identifiable data). Researchers also need to be aware that tapes and the resulting transcripts do not capture all the data. Notes are still necessary to capture nonverbal, background, and situational data.

Finally, there are the notes that were taken during the interview. These include both the interviewer's general notes and the more detailed notes taken by the note-taker.

## ***Drafting Interview Notes***

- **Begin interview notes with date, location, participants, and participants' organization**
  - **If participant name cannot be included in notes, use a code identifier for the interviewee**
- **Interview notes should have an overview and background introduction**
  - **Background, to include why interviewing this individual**
  - **Attitude (e.g., enthusiasm, resistance) of interviewee**
  - **Additional information not apparent from interview content**
    - **Location**
    - **Distractions**

**RAND**

Interview notes should begin with descriptive information: the date and location of the interview; the participants, including the interview team; and information about the participant's organization. For some projects, confidentiality or other concerns prevent the use of participant identifiers, such as name or organization. In these cases, code identifiers should be created and included in the notes.

Interview notes should also include information on why the respondent was included in the research; for example, perhaps the individual is a subject-matter expert. It may also be important to note any issues with the respondent that might have influenced the data collected. Was the respondent particularly resistant to the interview or a subset of questions? Finally, be sure that notes include any additional information that will be important to the analysis that will not be included in the actual content of the discussion. Where was the interview conducted—in a private office or a public space? What distractions, if any, were there during the interview?

## ***Writing Final Interview Notes***

- **Write the notes with polished language and accurate spelling**
  - “You” and “are” both spelled with three letters
  - Complete sentences
- **Indicate editorial comments differently (e.g., in brackets)**
  - Interpretations, explanation of comments
  - Perceptions of attitude when saying something
- **Do additional work to confirm factual information such as names, locations**
  - Google to confirm spelling of prominent names
- **Indicate when notes include exact quotes**
  - Avoid quotes that are not meaningful, or place them in useful context
- **Use actual names (individual, office, location) whenever possible; avoid relative words like “they” and “here”**

RAND

Final interviewer notes should be written with polished language, with words and terms fully spelled out. Consider that notes may be reviewed sometime after the interview and may be used by a researcher who was not in attendance for the actual interview. Notes should be understandable if reviewed by someone years after the research is complete.

It is important to indicate the difference between actual answers gathered from the respondent and information added by either the interviewer or note-taker. Therefore, any editorial comments should be noted in way that makes these differences clear to the reader.

If appropriate, the note-taker should check and edit all factual information. Also important is to specify exact quotes, but only those that are meaningful. Quotes should also be put in context of the discussion, so that the research team can use them appropriately in the analysis and reporting.

Finally, whenever possible, notes should include actual names and avoid vague references such as “they” and “here.”

### ***Exercise 3: Interview Notes***

- **Review sample notes**
- **Discuss conventions**

**RAND**

In Exercise 3, you will review a sample of interview notes. The exercise materials and the accompanying discussion identify some conventions used in note-taking and highlight examples. The exercise is provided on pp. 121–122.

## Overview

- Introduction to data collection methods
- Applications from the real world
- Semi-structured interviews
- **Focus Groups**
  - What are focus groups?
  - When and why to conduct focus groups?
  - Sampling and composition
  - Recruiting for focus groups
  - Designing questions and probes
  - Conducting the focus groups
  - Capturing the data
- Brief introduction to data management and analysis
- Closing remarks

RAND

We now proceed to discuss focus groups. This focus group section of this course is shorter than the preceding interview section. That is due, in large part, to the core methodological issues that are appropriate to both interviews and focus groups, such as question construction and remaining neutral, which have already been addressed in the context of semi-structured interviews.

## ***Definition of Focus Groups***

- **Definitions vary**
- **Defining factors include**
  - **Whether sessions include research**
  - **Whether there is a moderator**
  - **Number of participants**
  - **Whether participants know one another**
  - **Whether participants are present**
  - **Whether there is dynamic verbal and nonverbal discussion**
  - **Type of venue**

**RAND**

As mentioned previously, focus groups are dynamic group discussions used to collect information. But what does this actually mean, and how does this compare with an interview when multiple participants are present?

One useful analogy employs the notion of a soccer coach and team, where the coach represents the interviewer, the players are the respondents, and the ball represents the questions to be asked. During practice, the coach may kick the ball to one player, who kicks it back to the coach. The coach may then kick it back to the same player, or to another, who also then returns it to the coach. In this instance, the coach is controlling the ball. This is an interview.

A focus group shares more characteristics with a soccer game. During a game, the coach is on the sideline, and the ball is in play among the players. The players move the ball around among themselves, and the coach encourages the action from the sideline. The coach may call different players into the game, or pull players out, but he is directing and not playing. This is consistent with a focus group in that the coach is moderating the game, and the players are dynamically interacting among themselves, with the ball.

Among the published research, definitions of what is actually a focus group vary (see, for example, Morgan and Krueger, 1998; Bernard, 2002; Krueger and Casey, 2000), but some of the defining characteristics include that the interaction must include research. This differs from a session used to promote a product, to brainstorm, or used when the leader has no intention of using findings but is trying to make participants believe they have input.

Focus groups include a moderator, who directs the conversation, encourages participation, and makes sure that data are collected on the research topic.

The number of participants is also an important consideration. If there are too few, then the conversation is not dynamic and generally proceeds more like an interview. If there are too many, then participants may not have the opportunity to fully engage with one another around the topic. Though there are no precise prescriptions, focus groups generally include 6 to 11 participants.

Some researchers contend that focus group participants cannot be friends or acquaintances with one another. In reality, there are situations where it would be very difficult to ensure that participants do not know one another. For instance, if research is conducted within a corporation or at a military facility, then chances are at least some of the participants will know one another. In these situations, the moderator needs to take care to mitigate any effects caused by participants who know one another, and the researchers need to be aware of any acquaintanceship in order to take it into account in their analysis.

Modern communications technologies allow multiple people to interact with one another from a distance. Data collection firms may talk about “virtual” focus groups, or focus groups that are conducted by conference call or video conference. However, focus groups require dynamic interaction, both verbal and nonverbal; Internet or telephone sessions do not include nonverbal participation and thus do not satisfy a basic definitional requirement for focus groups. While such sessions may be useful, they are not focus groups.<sup>21</sup>

Finally, the type of venue for the focus group has to be considered, and some researchers claim that sessions can only be considered focus groups when convened in a focus group facility. These specially designed focus group suites, which have one-way mirrors and high-quality recording equipment, are the gold standard, but they are not a requirement, and many focus groups are conducted on-site with the resources available.

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<sup>21</sup> The requirement for in-person, dynamic interaction is often debated, and other researchers may not agree with this requirement.

## ***Purpose of Focus Groups***

- **Use in different phases of project**
- **Test survey questions or develop semantics**
- **Explain survey results**
- **Provide insights into seemingly conflicting opinions**
- **Explore WHY people feel that way**
- **Never provide statistical “counts”**

**RAND**

Focus groups can serve multiple purposes. Focus groups are sometimes used as part of questionnaire development, for testing or developing questions, or for examining the meaning of words or phrases.

Focus groups can also be used to help explain results found through other data collection methods, such as surveys. Focus groups are especially helpful in explaining findings that appear counterintuitive or conflicting. Groups can also be asked to explore how things happen, or why people feel a certain way. One can also ask participants to discuss differences of opinions.

Focus group data can be very rich, but an important thing to understand is that focus groups can never provide statistical counts. Researchers can never say that 67 percent of the people who participated in our focus groups felt a certain way. The researchers do not know how everyone in the group felt. Researchers know what was said by one or more respondents during the group, but they are unable to know the attitudes of all the participants. In addition, due to the dynamic aspects of the discussion, the researchers can never know the extent to which one respondent might influence the answers of another.

## ***Group Sampling and Composition***

- **Consider your research question: Who should be included in the study?**
- **What characteristics do you want to analyze by?**
  - **Common characteristics of groups**
    - Will be basis for analysis
    - Promotes conversation
  - **Differing characteristics within groups should also be considered**
    - Demographic characteristics
    - Power structure placement
    - Level of acquaintance
    - Physical and cognitive ability

**RAND**

Stewart and Shamdasani (1990) provide an in-depth discussion of considerations that should be taken into account when determining the sampling and composition of focus groups. Here are some considerations.

In deciding whom to include in the focus groups, researchers need to look back to their research questions. They need to consider who can best address the research questions. They also need to consider whether a group discussion makes sense in terms of the topics and the individuals. Are the topics too sensitive, and will this population be comfortable discussing these issues in a group? Generally speaking, very sensitive topics, such as sexual behavior, are not good topics to explore in focus groups.

Can the researchers convene a group of participants? Researchers might be able to get a group of enlisted soldiers in the same room at the same time, but could they really gather a group of generals?

When deciding on the group composition, researchers need to determine the characteristics by which they want to analyze. If the study will compare the opinion of men and women regarding a policy, then separate groups of men and women are needed. Likewise, if analysis will consider the different perspectives of individuals based on other demographic characteristics, such as race/ethnicity, occupation, or age, then the focus groups will need to sample based on those characteristics. Researchers cannot, for example, mix men and women in the same group and subsequently compare them in the analysis. Nor can researchers compare the comments of particular individuals (e.g., women) from one group with the same type of individuals from another group in order to assert what that type of individual said throughout focus

groups. For instance, in a recent study, a series of focus groups was conducted with patients that had the same disease. Patients with early- and regular-onset of the disease participated in separate groups. This was done because the researchers thought that there might be substantial differences in quality of life between these two different types of patients and wanted to compare them.

Within a group, researchers may need to consider whether a mix of demographic characteristics, such as age, race, or gender, is desirable. It is important to consider what characteristics might affect the discussion, and how. Consideration should be given to what promotes conversation within a group. There may be issues related to the power structure of the group. For instance, researchers often segment military groups by junior and senior ranks and by enlisted personnel and officers. As one can imagine, a junior enlisted soldier may feel less comfortable speaking out against military policies with his commander in the room.

Researchers should also consider the level of acquaintance among participants. If people know each other, then there is a risk of side conversations, unspoken language, and shared background to contend with. Ideally, the participants would not know each other, but this is not always possible.

Finally, issues such as physical and cognitive abilities should be considered. For a recent health study, focus groups with caregivers were conducted because a subset of patients had decreased cognitive abilities. The researchers thought it was important to address the experiences of these patients in the study, but the patients were themselves unable to participate in focus groups. In this instance, caregivers provided information on behalf of this group of patients.

## ***Number of Focus Groups Necessary?***

- **No good answer to this question**
- **Depends on purpose of focus groups**
- **Look for convergence**
- **Be wary of drawing conclusions – suggestive, insightful, but never generalized**
- **Sometimes (especially in DoD) it is easier to schedule more than you might need than to return**

**RAND**

Perhaps the single most frequently asked question about focus groups is, How many focus groups are necessary? Unfortunately, there is no simple answer to this question.

The answer lies partly in the purpose of the groups—for instance, are they being conducted to develop items for a survey or for primary data collection? How many subgroups need to be included in order to address the key common characteristics?

Once these factors are decided, logistics and budget are also inputs to this decision.

Ideally, researchers will conduct focus groups and assess whether they have obtained convergence across the groups, to determine whether they have conducted enough focus groups. In other words, if the researchers begin to hear similar themes, with no new issues being raised, then they have probably conducted a sufficient number of focus groups.

Please note that focus group data can be very insightful, but they only indicate the views of the entire group. Focus group data can be quantified across the types of groups that were conducted, based on the common characteristics. However, researchers can never generalize focus group data to the broader population.

In some circumstances, such as when preauthorization to schedule groups is required or it takes a long time to recruit participants, it is best to plan for more, rather than fewer, groups.

## ***Formulating Focus Group Protocols***

- **Develop a precise protocol**
  - Especially important with numerous moderators
- **Prioritize research questions**
- **Allocate group discussion time to each topic area**
- **Consider structural or descriptive questions**
  - Avoid “yes-no” and simple answers
- **Emphasize proving knowledge rather than acknowledging ignorance**
- **Avoid threatening or embarrassing questions**

**RAND**

As with interviews, focus group protocols are extremely important, to ensure consistency across multiple moderators, in prioritizing research questions, and in allocating group discussion time across topic area.

Careful consideration needs to be given to the types of questions asked during focus groups. Structural questions will provide lists of things, which may be useful if the researchers are designing a survey and need to know all the different possible answers. Descriptive questions will provide a greater understanding than researchers could likely derive from surveys, so these types of questions are appropriate if the focus groups are being used to add depth to quantitative analysis.

Simple and yes-no questions are likely to be extremely boring and can make the moderator look silly if they are repetitive. There are additional problems with yes-no questions, as many participants may either be reluctant to differ from the group (be the only yes) or admit lack of knowledge. For example, it is better to ask participants to create a list of items than to ask whether they are familiar with each item on a prepared list. The latter approach is likely to produce false positive acknowledgement of items on the list.

Finally, focus group protocols should avoid questions that might make participants overly uncomfortable. Remember that the purpose of the focus group is to engage all participants in the topic under discussion. Questions should not be threatening or embarrassing, and should not “test” the participants. Questions should emphasize the participants’ knowledge about a topic rather than make them feel unknowledgeable.

## ***Typology of Focus Group Questions***

- **Background or “icebreaker”**
- **Main research questions**
- **Factual questions**
- **Anonymous questions**
- **Kitchen sink question**
- **Big picture question**

RAND

There are some questions that are unique to focus groups.<sup>22</sup> The *background* or *icebreaker* question starts off the discussion and is meant to get all participants comfortable talking. Often this question is also used to obtain important information about the characteristics of the participants, such as their occupation.

Next are the *main research* questions, what the moderator is there to collect.

If the focus group conversation mentions something the moderator is not aware of, such as a program or policy, the moderator might ask a *factual* question to understand the discussion better.

*Anonymous* questions may be used when a subject matter is sensitive or controversial. Here the moderator asks participants to write their answers on index cards and collects them, either for later analysis or to fuel the conversation without attributed responses to individual participants.

The *kitchen sink* question generally comes toward the end. It permits respondents to talk about issues of importance to them that have not come during the discussion. It might be posed as such, “Are there any other issues that we haven’t touched upon that you would like to discuss?” The promise of a later opportunity to discuss additional topics is also helpful to the moderator in controlling the group: “That’s very interesting, let’s talk about that at the end of our discussion.”

<sup>22</sup> Adapted from Stewart and Shamdasani, 1990.

The *big picture* question usually comes at or near the end of the interview and can be helpful in uncovering themes and issues not previously considered. For example, “This research effort about your university library has been funded by the Board of Trustees of this university. If you had an opportunity to take your own message on this topic to the Board of Trustees, what would you say?”

## ***Focus Group Probes***

- **Most interview probes are effective in groups**
- **Probe during focus groups to**
  - **Steer conversation to topics**
  - **Control participants**
  - **Encourage dynamic conversation**
    - **Does anyone have an example of that?**
    - **Has anyone else experienced this?**
    - **You look puzzled by her comment. Why?**
    - **Does anyone have a different experience/perspective?**  
(*Rather than Does anyone disagree?*)
- **Be aware of the sensitivity of probing when there are other people present**

RAND

Many of the probes used for interviewing are also appropriate to use during a focus group. However, there are also probes that are specific to focus groups; such probes can be used to keep the conversation moving on topic, take control away from a dominant person, or draw out some of the more quiet participants.

One of the goals of the focus group is to include all participants in the discussion, not just the most talkative or the most opinionated. Probes such as “I hear what you are saying, Ken, now, I’d like to hear from some other folks about that issue” or “What do others think about this issue? Mary, how about you?” can provide an opening for others to speak.

Another caveat is important in this context, because participation is voluntary and no one should be forced to speak when they are not comfortable. A moderator, when trying to draw out a quiet person, should not make reluctant participants uncomfortable. Thus, it is important that the moderator look for nonverbal language to help determine when it is appropriate to pursue input.

## ***Exercise 4***

- **Review focus group protocol**
- **Identify problems and offer improvements**

**RAND**

In Exercise 4, you will review a sample focus group protocol, identify some problems with the protocol, and offer potential improvements for the protocol. The exercise is provided on pp. 123–126.

## ***Conducting the Group***

- **Possible locations**
- **Research team**
  - **Role of moderator**
  - **Role of note-taker**
- **Logistical support**
- **Issue of observers**

**RAND**

There are some additional considerations that researchers should take into account when planning focus groups.

The ideal space to conduct a focus group is in a facility specifically designed for these types of discussions. In reality, moderators often find themselves conducting these groups in a wide variety of settings. Many times, a conference room is more than adequate. As with interviews, what is really important is that the space be quiet and private. It is also helpful to conduct the focus group in a room where the chairs can be moved around a table or to form a circle, as opposed to an auditorium or training facility, where the chairs are often secured to the floor and facing forward.

Two people that must be in the room are the moderator and the note-taker. The moderator should be able to focus on the discussion; his or her job is to get the data. He or she should be able to manage the interaction in the room, steering participants as needed, and determine when topics have been sufficiently discussed and it is time to advance to another topic. Ideally, the moderator should not have to focus on logistics, note-taking, or anything else once the group begins.

The note-taker should be focused on capturing the details of the conversation and non-verbal behavior. He or she should have a sense of when it is appropriate to interject. For this reason, it is helpful have a third person to provide logistical support, check participants in, deal with administrative issues, and handle latecomers, but often research efforts are unable to support a third person.

The question of whether to allow observers often arises. The goal of the focus group is to have a free-flowing discussion. Too many nonparticipating people in a room can inhibit conversation. In general, there should be a minimal number of individuals in the room other than participants. Consideration needs also to be given to the position of the observer. For example, a corporate executive observing a focus group of workers would likely compromise the value of the discussion. However, there are valid reasons to involve an observer, such as for training purposes within the research effort.<sup>23</sup>

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<sup>23</sup> One benefit of a professional focus group facility is that observers are hidden from the group participants.

## ***Common Problems with Participants***

- **Experts – legitimate or self-appointed**
- **Rank or hierarchy**
- **Friends**
- **Hostile group members**
- **Unclear whether they meet the sampling**

**RAND**

During the course of the focus group, a moderator is often called upon to mitigate the influence of certain individuals who might have undue influence over the group interaction. The importance of a skilled, experienced moderator cannot be overestimated in these instances.<sup>24</sup>

For example, a participant may be a real or self-proclaimed expert on the topic under discussion. If other participants feel intimidated or unknowledgeable relative to such an individual, dynamic conversation may cease. The moderator needs to allow the expert to be heard, but know when and how to “turn them off” and allow or encourage others to speak. A similar need may arise if individuals perceive one another to be of different social rank or different places within a social or corporate hierarchy, although ideally the researchers would have anticipated these relationships and designed the groups to avoid them.

A moderator may also need to separate friends prior to the start of the group in order to avoid side conversations or so that other participants do not feel excluded or outnumbered.

Some participants have no real desire to participate productively in the group interaction. They may appear hostile or threatening and can damage a group’s interaction. Sometimes a skilled moderator can convert this person with humor or understanding; however, if this is not possible, the moderator may need to ask the person to leave. Often a moderator will use a five-minute break to privately dismiss a problem individual from the group (Morgan and Krueger, 1998). To defuse the dismissal, a strategy might be to ask the individual to contact the moderator at a future time when the moderator can “fully consider their opinions.”

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<sup>24</sup> Adapted from Stewart and Shamdasani (1990) and Morgan and Krueger (1998).

On occasion, someone may attend who appears not to meet the sampling criteria for the group. If the researchers have conducted their own sampling, and if they check the participants against the list of expected participants, this issue will be immediately addressed. However, there are many instances, especially when conducting focus groups in defense organizations, when a local individual, such as someone from the installation, has provided personnel according to the researchers' guidance—e.g., Hispanic female personnel, age 20 to 30—but perhaps a person does not appear to be the correct ethnicity or age. In these awkward situations, the moderator can announce, without focusing on the suspect participant, the presumed content of the group: "This is the 11:00 group, which consists of Hispanic women between the ages of 20 and 30." Given such an announcement, any participant that does not meet the sampling will usually identify herself so that the moderator can excuse them. In some instances, individuals who were unable to attend their scheduled time have been known to appear at a different time, presuming that all focus groups are the same. This approach would permit those potentially inappropriate individuals to identify themselves.

## ***Capturing the Results***

- **Recording**
- **Transcript**
- **Moderator's notes and written impressions**
- **Note-taker's formal notes**
  - **Participants noted by number**
  - **Nonverbal aspect to notes**
    - **Consensus**
    - **Body language**
- **Any additional data**
  - **Recruitment data**
  - **Pre-focus group background questionnaire**

**RAND**

Some researchers believe that all focus group sessions should always be audio- or video-recorded, while others are comfortable working from notes. Regardless of the approach, it is important to remember that no video or audio reproduction captures every element of the session. Nonverbal behaviors cannot be captured by voice recording, and they may not be captured in a video recording (for example, if the subject is off-camera). Also consider that recordings must be transcribed, and thus researchers need to have adequate resources available for transcription.

During the focus group session, the moderator will take general notes. Sometimes a moderator takes responsibility for noting exact quotes during the discussion. Often the moderator is responsible for drafting an overall assessment of the group interactions immediately following a focus group session. The moderator's notes and impressions should be cleaned and included in a data file for analysis.

As with interviews, focus group notes should begin with descriptive information. In addition to the date and location of the focus group and critical background information, the note-taker should assign a number to each participant so the conversation can be tracked at the participant level. Note-takers should record information on nonverbal behaviors and body language of participants. Instances where consensus was reached among participants or where disagreement existed among the group should also be noted.

In addition to transcripts and notes, such data as recruitment information should be assembled and included in the analysis. Sometimes researchers ask participants to complete a pre-focus group questionnaire that collects demographic or background information from participants prior to the group. This data may also be coded and used in the analysis.

## ***Exercise 5***

- **Review focus group transcript and notes**
- **Discuss exemplars**
- **Identify problems**

**RAND**

In Exercise 5, you will review excerpts from a transcript and detailed notes created from a sample focus group, discuss exemplars, and identify some problems with the notes provided. The exercise is provided on pp. 127–134.

## ***Overview***

- Introduction to data collection methods
- Applications from the real world
- Semi-structured interviews
- Focus groups
- **Brief introduction to data management and analysis**
- Closing remarks

RAND

This section discusses how researchers can organize and manage data and conduct basic analysis of qualitative research data.

## ***Data Organization***

- **Interview or focus group list with file names**
- **Final session notes**
  - Includes notes as well as background and impressions
- **Data status**
  - Date occurred
  - Whether transcription is complete
  - Who is reviewing transcription – date completed
  - Who is primary coder – date completed
  - Who/whether there is secondary coder – date completed

**RAND**

Interviews and focus groups result in a variety of electronic files. There should be a list of the sessions conducted with the file names for each session. There will also be the final notes from each of the sessions. Each of these files will include the session notes as well as the background and impressions information. Finally, the research project should have a file that includes information about the status of the research data. For a complex project involving transcription, this file might, for example, be a spreadsheet that includes columns recording the date the session occurred, whether the transcription is complete, who is reviewing the transcription and whether the review is complete, the name of the primary and secondary coders and whether the coding has been completed, etc. For a more simple effort, this file might include information regarding the interviewer and note-taker and the status of the notes.

## ***File Management***

- **Use a file-naming scheme that is useful and that indicates most relevant information**
  - **75 11 OS5 H**
    - Unique identifier
    - Unit and location
    - Paygrade and spouse/member
    - Race
  - **9204SVO5C2M**
    - Unique identifier
    - Location
    - Unit or volunteer
    - Paygrade
    - Education
    - Work status
- RAND** – Interviewer

Often, data-safeguarding rules preclude interviews from being labeled using the respondent's name. In these cases and in the case of focus groups, it is useful to use a file-naming scheme that indicates the most relevant information about each session. This slide shows two examples from prior research projects. Both examples begin with a unique identifier, which is always best practice given the possibility (however unlikely) that the characteristics reflected in the name would otherwise be alike. In the first example, the other characteristics reflected in the naming convention include the unit and location of the respondent, his or her pay grade, whether the respondent was a service member or a spouse, and the respondent's race. There exists a master sheet to indicate, in this example, the meaning of location 1 and unit 1, that OS5 means the spouse of a service member with a pay grade of O-5, and that H indicates Hispanic.

The second example involves a more detailed master sheet for this study of military spouses. In this example, the naming convention begins with the unique identifier (9204), which is followed by symbols that indicate the location, that the respondent self-presented and volunteered to participate in the study (rather than volunteering after being invited), that she was the spouse of an O-5, that she had a college degree, that she was employed, and which researcher conducted the interview.

Such naming conventions provide basic information about the respondent. This is especially helpful when extracting statements from different interviews in a study that contains hundreds of interviews. For example, if the researcher has quotes or excerpts from six different interviews and knows the file name (usually part of the software output), the researcher has some basic information about each interview.

## ***Basic Qualitative Data Analysis***

- **Deductive analysis confirms**
  - Gather answers to same questions
  - Confirm or refute hypotheses
- **Inductive analysis explores**
  - Use word find to see common topics
  - Identify and code new themes

**RAND**

When conducting qualitative data analysis, there are two basic approaches to analyzing data, and many projects will include both of these approaches.

*Deductive* analysis confirms information for the researcher. Many projects use deductive analysis to gather together answers to a particular question. This enables the researcher to look at what all respondents said to the same question. Another use of deductive analysis is to confirm or refute research hypotheses, or interactions within the data that the researcher presumed.

*Inductive* analysis explores the data, to assess what unexpected relationships or issues emerge from the data. This analysis might include a word find to determine the most common topics mentioned in each interview. It might also include a line-by-line reading to identify themes in the interviews that the researcher had not anticipated.

## ***Text Analysis Process***

- **Select text to examine**
- **Identify themes**
- **Build codebook**
- **Tag text for themes**
- **Search for subthemes**
- **Search for patterns among themes**
  - **Examine distribution of themes across types of people/ cases**
  - **Examine relationships among themes (potential hypotheses)**

**RAND**

When analyzing text, the first step is to select the text to be examined and to identify themes that will be sought in the data.<sup>25</sup> These themes might be identified deductively, such as in the case where themes are associated with each question asked, or they might also be identified inductively as the analysis proceeds. For example, in one recent research effort addressing the deployment experiences of military families, the researchers found that the effect of the deployment on children emerged in many of the interviews, although there was not a question specifically asking about the effect on children.

The terminology for identifying codes in the text is *coding* or *tagging*. In many software applications, this means literally selecting text and associating it with a particular theme or code. In a simpler approach, researchers might only mark text with colored pencils with colors representing different themes or codes. For the purpose of this discussion, the method of coding is not important, although the use of a software package designed to code text will facilitate some of the data manipulation discussed in later slides.

After the researcher identifies basic themes in the data, the next step is to search for subthemes. For example, if one theme is the positive aspects of deployment for military families, subthemes might include the different kinds of positive aspects.

Once data are tagged or coded by theme, the researcher is able to search for patterns among the themes. This might mean understanding what kinds of people or situations led to certain themes. For example, perhaps only people in one community mentioned one theme, or

<sup>25</sup> Discussions of text analysis process are adapted from Ryan and Bernard, 2000; and Bernard and Ryan, 2009.

only young people made a certain assertion. The researcher is also able to consider relationships between the themes. For example, perhaps people who held a certain opinion were most likely to agree about another issue.

## ***Basics of a Coding Tree***

### **1 Attribute Codes**

### **2 Substantive Codes**

RAND

Coding trees are the list of themes, or codes, that will be applied to research data. Trees are often divided into two different types of codes. *Attribute* codes reflect the respondent or focus group participants and often convey demographic information about that individual or group. *Substantive* codes reflect the content of the session.



## ***Basics of a Coding Tree: Substantive Codes***

### **1 Attribute Codes**

### **2 Substantive Codes**

- 2.1 Definition of readiness
- 2.2 How ready was the family?
- 2.3 Positive aspects of deployment
- 2.4 Negative aspects of deployment
- 2.5 Resources used during deployment

**RAND**

The second part of the coding tree consists of substantive codes. These pertain to the actual content of the interview. This slide indicates substantive codes from that same mock project. At the two-digit level of the coding tree, the themes included how the respondents defined readiness for their family, their discussion of how ready the family was, the positive and negative aspects of deployment, and the resources their family used during the deployment.

Unlike the attributed codes that are applied to the entire session of notes, substantive codes are applied only to that portion of the session pertaining to the theme. The reason for this can be explained by example queries. Consider, for example, the difference between saying, "Give me all the statements made by respondents who were parents," which would be the entire set of notes for each of those people, and saying "Give me all the notes discussing the positive aspects of deployment." The latter would include only the relevant part of the notes from each interview.

## ***Basics of a Coding Tree: Substantive Codes***

### **1 Attribute Codes**

### **2 Substantive Codes**

- 2.1 How ready was the family?
  - 2.2 Resources used during deployment
  - 2.3 Positive aspects of deployment
    - 2.3.1 Financial
    - 2.3.2 Patriotism, pride, civic responsibility
    - 2.3.3 Spouse independence, confidence
    - 2.3.4 Family closeness
    - 2.3.5 No positives
    - 2.3.6 Other
  - 2.4 Negative aspects of deployment
- 

**RAND**

This slide demonstrates how a theme in the example project was further divided into sub-themes. In this instance, all the text coded as positive aspects of deployment was examined by the researchers, who inductively determined these five codes, along with “other,” to represent the subthemes heard.

The other substantive codes were also broken into subthemes that are not shown on this slide.

## ***Developing and Using a Coding Tree***

- **Initial tree is codes based on questions and expected themes**
- **Test against data**
- **Test understanding of codes within research team**
- **Revisit coding tree as necessary**
- **Test reliability of coding across coders**
  - Roundtable
  - Statistically ( $\kappa$ )
- **Adjust amount of double-coding as necessary**

**RAND**

Coding trees evolve during a project. When the coding tree is initially designed, the codes are often deductive—based on the questions asked and the expected themes. The researchers test the initial codes against the data to see whether the codes can be applied well, and whether the codes reflect the data. It is important to ensure that the research team members doing the coding all understand the codes, and the application of the codes, the same way. For example, if coding both “positive examples” and “negative examples” of an issue, how positive do they have to be for that code to apply? What if they are not either enthusiastically positive or negative? The coding tree should be revisited as necessary to clarify codes, to add additional codes as themes emerge inductively, to combine codes that do not offer a useful distinction from one another, and to eliminate codes that are not useful.

While coding is most efficient when only a single researcher codes a particular passage, most projects begin with multiple researchers coding the same passages from the same interviews. This permits an assessment of whether different researchers are interpreting and applying the codes the same. There are two different ways to assess the reliability of coding across coders. One includes tabletop meetings or roundtables to discuss how different codes are being interpreted and applied. The project team might review a single session coded by different members of the project team and discuss why different researchers did (or did not) code the session identically. Most coding software also offers the opportunity to statistically compare the coding of different coders. This is a complicated process that produces a quantitative value ( $\kappa$ ). The  $\kappa$  value may not provide a clear understanding of those situations where two

coders agree that a statement reflects a theme, but coder A includes more context for the comment than does coder B.

Project leaders should repeatedly assess the reliability of the coding by having every  $n$ th session double-coded throughout the coding effort. When coding reliability is high, they can increase  $n$ . When coding reliability is of concern,  $n$  needs to decrease and some sessions may need to be recoded.

## ***Common Data Analysis Queries***

<b>Intersect</b>	<b>All units tagged by all of codes given</b> <b>How did spouses with children define readiness?</b>
<b>Union</b>	<b>All units tagged by any of codes given</b> <b>Did the same types of spouses tend to have both negative and positive comments? Show me the negative and the positive aspects together.</b>
<b>Less</b>	<b>All coded by first but not any of others given</b> <b>Show me all the positive aspects (coded at 2.3) that have not been coded at a positive subtheme.</b>
<b>Just One</b>	<b>All coded by only one of those given</b> <b>Show me any comment that is only about financial benefit and not about spouse independence or the other positives.</b>

**RAND**

Data are coded so that they can be manipulated with queries that will provide the researcher with insights about the data. This slide represents some basic analysis queries of qualitative data, using coding and analysis software.

The first is an *intersection*. Intersections permit the researcher to inquire about any text coded by more than one code, including attribute codes. For example, an intersection query might be “How did all the spouses who are parents (attribute code) define readiness for their family (substantive code)?”

A *union* query permits the researcher to see whether a single session included discussion of two different types. For example, did the same interview session include conversation about positive aspects and about negative aspects? A union of all positive and all negative comments, in output format by session, would show the researcher whether sessions with robust positive comments also had robust negative comments.

A *less* query provides the researcher with the opportunity to see all text coded by one code that is not coded by another. For example, if a researcher wanted to ensure that all the comments that had been coded as positive aspects (2.3) had been assigned to a subtheme, a less query would highlight those that had not been assigned to a subtheme.

Sometimes a researcher may be concerned that two themes are intertwined, and in these cases a *just one* query can be useful. For example, if the study found that spouses mentioned that they felt more independent and self-confident, might that be related to the financial benefit of deployment? If that were so, then many of the passages that mention increased independence and self-confidence as a positive aspect of deployment (2.3.3) would also mention

financial benefit (2.3.1). This type of query could permit the researcher to examine those comments that are only about one or the other of these subthemes, to ensure that they are distinct issues.

### ***Creating an Analysis Matrix: Intersection of Parental Status and Positive Aspects***

	<b>With Children (N=100)</b>	<b>No Children (N=100)</b>
<b>Financial</b>	<b>44</b>	<b>69</b>
<b>Patriotism/pride</b>	<b>60</b>	<b>20</b>
<b>Independence/ self-confidence</b>	<b>21</b>	<b>62</b>
<b>Family closeness</b>	<b>40</b>	<b>37</b>
<b>No positives</b>	<b>11</b>	<b>20</b>

*Not actual data*

**RAND**

When the researcher wants to determine the number of intersections across themes and sub-themes, an analysis matrix provides a count. The example shown above determines the intersections between the subthemes of positive aspects of deployment and the attribute of being a parent or not having children. There were 100 parents and 100 spouses without children included in this mock study, and this matrix indicates that 44 parents and 69 spouses without children mentioned financial benefit as a positive aspect of deployment, that patriotism and pride in the service member was more of an issue for families with children than spouses without children, and that spouses without children were more likely to note independence and increased self-confidence as a positive aspect. Spouses without children were also almost twice as likely (20 versus 11) to note that they had experienced no positive aspects of deployment.

Note that the matrix indicates the number of respondents that have some text coded at this theme, and that the researcher must know the total number of interviews with that attribute (in this case, N=100 for both attributes) to comprehend the share of the total represented by the matrix entries. Some software permits the researcher to select any of these numbers to see the actual text represented by the number.

### ***Creating an Analysis Matrix: Intersection of Gender and Positive Aspects***

	<b>Male (N=25)</b>	<b>Female (N=175)</b>
<b>Financial</b>	<b>15</b>	<b>98</b>
<b>Patriotism/pride</b>	<b>5</b>	<b>75</b>
<b>Independence/ self-confidence</b>	<b>0</b>	<b>83</b>
<b>Family closeness</b>	<b>2</b>	<b>75</b>
<b>No positives</b>	<b>10</b>	<b>21</b>

*Not actual data*

**RAND**

Here is another example of an output matrix assessing the same substantive subthemes (positive aspects) against a different attribute (gender). With the knowledge that there were 25 male interviewees and 175 female interviewees, this matrix output permits the researcher to assess the positive aspects that were salient to the respondents with different attributes. In this instance, the researcher might, for example, conclude that financial benefits were noted by a similar proportion of men and women (15 of 25 and 98 of 175), and that patriotism and pride, increased independence and self-confidence, and family closeness were more likely to be mentioned by female spouses than by male spouses. Also, male spouses were more likely to note that they had not experienced any positive aspects from deployment.

## ***Exercise 6***

- **Review text coding**
- **Identify subthemes**

**RAND**

In Exercise 6, the final exercise, you will review text coding and identify subthemes for sample focus group notes. The exercise is provided on pp. 135–138.

## ***Overview***

- Introduction to data collection methods
- Applications from the real world
- Semi-structured interviews
- Focus groups
- Brief introduction to data management and analysis
- **Closing remarks**

RAND

This course concludes with the following points.

## ***Reporting Qualitative Findings***

- **Summarize patterns, themes, perspectives, and perceptions**
- **Provide rich descriptions and quotations**
- **Unit of analysis different**
  - Interview – individual
  - Focus group – group
- **Extent to which data can be quantified or generalized varies**
  - Interviews – rigor of approach and sample size determine whether you can quantify or generalize data
  - Focus groups – can quantify across common characteristics of groups
  - Focus groups – can never generalize to the rest of the population

**RAND**

The merit of qualitative research is tremendous. One can summarize patterns, themes, perspectives, and perceptions. Qualitative data permits researchers to provide rich descriptions and quotations unique to qualitative research. However, it is important that researchers remember that the unit of analysis differs for interviews and focus groups; interview data represent the comments of an individual, but focus group data can only indicate the views of the entire group. The extent to which the data can be either quantified or generalized to the broader population also varies. With interviews, it is possible to generalize the data if the research incorporated sufficient rigor and sample size. Focus group data can be quantified across the types of groups that were conducted, based on the common characteristics. However, researchers can never generalize focus group data to the broader population.

## ***Course Summary***

- **Rigorous research methods result in high-quality research with credible results**
- **Methods can be combined to complement one another**
- **Interview and focus group approaches should consider:**
  - **Sampling**
  - **Question design**
  - **Protocol development**
  - **Staffing and training**
  - **Moderating techniques**
  - **Data capture**
- **Qualitative data should be systematically analyzed**
- **Qualitative data can provide a unique depth of understanding**
- **Important not to overextend implications of qualitative findings**

RAND

High-quality and rigorous research methods produce high-quality research with credible results. There are a variety of data collection methods, and many of them complement one another well.

This course has provided researchers with steps for thinking about the process of qualitative data collection and some tools that can aid them in collecting data. The slide reviews some of the methodology issues we have covered that are important to both interviews and focus groups.

Finally, this course has emphasized that qualitative data should be systematically analyzed to make full use of the data collected. If done correctly, the analysis provides a unique depth of understanding of the topic material. However, researchers must always take care not to overextend the implications of qualitative findings, and they must always state clearly the caveats and limitations of the research.

## Exercise 1: Interview Probes

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### Discussion

Exercise 1 appears on the following page. The intent of this exercise is to consider the types of participants that are appropriate to address a research question, and to identify probes that might be used to elicit further information on the question of interest. In the example case, researchers are conducting a study on quality-of-life issues for Alzheimer's Disease patients and hope to address the question, How does Alzheimer's Disease affect day-to-day life?

First, you should consider all possible types of participants who might address these research questions. You should consider the characteristics that might influence how people think about, feel about, or experience the issues you want to discuss. You might include the following possible candidates in the interviews:

- Alzheimer's patients
- Spouses
- Other family members
- Caretakers (both informal and formal)
- Doctors or other medical professionals

Next, you need to determine whether there are any important subgroups that should be included in the research. For example, is it important to create subgroups of patients based on length of time with the disease, age, or extent of disease? Might there be important differences to investigate across these different subgroups?

The second part of the exercise considers the probes that might be appropriate for the research question. These probes are necessary to develop the interview protocol. Here it is important to keep in mind the different participants. Not all probes will be appropriate for each respondent. In addition, there might be small changes to probes based on to whom the researchers are addressing the question. Some examples of probes for patients might include

- How is your job affected?
- How is your social life affected?
- What kinds of activities are harder for you since you developed Alzheimer's Disease?

### Interview Probes for Study of Alzheimer's Disease

For a study on quality-of-life issues for Alzheimer's Disease patients, the following research questions are posed:

- What are the physical effects of Alzheimer's Disease?
  - What are the emotional effects of Alzheimer's Disease?
  - **How does Alzheimer's Disease affect day-to-day life?**
  - How do patients cope with Alzheimer's Disease and the problems they have as a result of Alzheimer's Disease?
1. First, list all the possible types of participants who might address these research questions. Consider what characteristics might influence how people think about, feel about, or experience the issues you want to discuss.
  2. Identify probes for the question in boldface type, keeping in mind the different participants. How might the probes differ based on who you are asking to address the question?

## Exercise 2: Interview Protocol

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### Discussion

On the following page is a sample interview protocol. The protocol includes an introduction and closing section and separates the questions by topic.

In the introduction, the interviewers will introduce themselves and their organization to the respondent. They will provide an overview of the study, information on data use, and any assurances about confidentiality. They will also offer the respondent an opportunity to ask questions about the study.

Next are the research questions. Note that time estimates are provided for each section. As mentioned previously, it is important to consider the amount of time during the interview that should be devoted to each topic.

The sample protocol is highlighted where improvements can be suggested.

Question 1 asks the respondent about two different topics—thus it is a double-barreled item, which should be avoided. Here it would be best to reframe this item into two separate items:

- To begin, please describe the various users of the library.
- Tell me about the kinds of activities for which people use the library.

Question 2 is framed as a “yes/no” question and as such is not helpful for encouraging conversation. It might be rephrased along the lines of “What are the user needs that are not being met?”

As with Question 2, Question 6d is a “yes/no” question and should be rephrased. In addition, the term “user friendly” could cover a wide variety of issues, and asked as such, it might be unclear to the researchers what the respondent is considering in his answer. A better question might read, “How is the library layout helpful to users?”

Question 8 poses a question about the use of library services. While the question itself is straightforward, it also includes a series of examples in parentheses. The structure of this question may lead to it being administered differently by interviewers. For instance, one interviewer might read the items, while another might not. Thus, the interviewers should be provided with more explicit guidance about how to ask this question.

There are two possible problems with Question 10. As with Question 2, Question 10 is a “yes/no” question and should be rephrased if it is administered. For instance, “What services are underutilized?” However, the more important substantive issue with Question 10 is whether it is appropriate to the respondent. Is the researcher interviewing someone that is likely to have factual information about this issue? For example, this question might be appropriate to library administrative staff, but it would not be appropriate to students.

## State University Library Interview Protocol

<p>Introduction (5 minutes)</p>	<p>Thank you for agreeing to meet with us. I'm _____ from the RAND Corporation, a private, non-profit research organization in Santa Monica, CA. I also have my colleague _____ present to take notes for us.</p> <p>We are speaking with students and library staff members to get various impressions of the University's library. The study is being funded by State University's Alumni Committee. As a librarian, we would like to talk with you about users' needs, the facility, and the type of services offered to patrons. What we learn from today's discussion will help us improve the library's facilities and services.</p> <p>We will treat your answers as confidential. We will not include your names or any other information that could identify you in any reports we write. We will destroy the notes and audiotapes after we complete our study and publish the results.</p> <p><b>Do you have any questions about the study?</b></p>
<p>Topic 1 (10 minutes)</p>	<p><b>Topic #1: Needs</b></p> <p>1. To begin, please describe the various users of the library and tell me about the kinds of activities for which the library is used.</p> <p>a. PROBE: Tell me about the kinds of people who use the library. b. PROBE: Why do these people come to the library?</p> <p>2. Are there user needs that are not being met?</p>
<p>Topic 2 (20 minutes)</p>	<p><b>Topic #2: Facility</b></p> <p>Now, we'd like to discuss your impressions of the library's facilities.</p> <p>3. What words would you use to describe the library facilities? 4. How do the facilities meet the needs of the community? 5. How do the facilities meet staff needs? 6. How could the library improve its facilities? a. PROBE: How accessible are books, journals and other materials? b. PROBE: Tell me about spaces to sit and do work. c. PROBE: Tell me about access to computers and other technology. d. PROBE: Is the layout user friendly? 7. If you could design the perfect library, what would it look like?</p>
<p>Topic 3 (15 minutes)</p>	<p><b>Topic #3: Services</b></p> <p>The last thing that I'd like to discuss with you are the services that the library offers.</p> <p>8. What library services are used the most often? (borrowing books, reserving books online, interlibrary loan, research classes) 9. What could the library do to improve these services? 10. Are there services that are underutilized? 11. What additional services should the library provide?</p>
<p>Final thoughts (5 minutes)</p>	<p>Those were all of the questions that we wanted to ask.</p> <p>12. Do you have any final thoughts about the library that you would like to share?</p> <p>Thank you for your time.</p>

## Exercise 3: Interview Notes

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### Discussion

On the following page is a brief subset of an interview. The lefthand section indicates the text that would result if the interview were taped and transcribed. Thus, this is the most accurate representation of the verbal response of the interviewee. The middle section indicates the notes taken during the interview. The righthand section indicates a subset of the final notes, those that would correspond with this portion of the interview.

There are several worthwhile observations regarding what the note-taker has written. First, the note-taker is writing short passages representing the comments, using abbreviations. Also, the note-taker is capturing nonverbal aspects of the interview, such as where the speaker takes a long pause or laughs, and also where the speaker seems uncomfortable answering the question. The note-taker also indicates where the notes reflect an exact quote.

The final notes on the right side are not the same as the transcribed version. They provide a less detailed account of the verbal interaction, but they also include nonverbal observations that are not present in the transcript. The final notes are considerably more detailed than the original notations. They are written in complete sentences, without abbreviations. The completeness of this passage underscores the importance of writing the final notes as soon as possible after the interview. The final notes also indicate who is speaking, which would not necessarily be present in the transcript text, unless the speaker identity was added.

## Examples of Notes

Participant Says	Note-Taker Writes	Types in Report
<p>“Oh, I heard about that new exercise facility and it’s supposed to be really nice. But I’d have to get on two different buses to get there, which is such a hassle. Especially taking that red Line bus . . . that one’s never on time. Last week I was late for work twice because of that bus. Anyway . . . I know I should exercise, but . . . I guess . . . exercising at a gym just isn’t for me. I’m overweight and I feel like all the people who go to exercise at a gym are already in shape and I’d feel like such a blimp surrounded by all those buff young kids, you know? Maybe if they had exercise classes for people like me—people who haven’t really exercised before and are just getting started. Then I might do that. Because I don’t know how to use the equipment and it would be good if there was an instructor who could show me.”</p>	<ul style="list-style-type: none"> <li>• knows facility, heard it’s nice</li> <li>• problem—needs two buses (Red Line bad)</li> <li>• [long pause] doesn’t like exercising @ gym</li> <li>• people at gyms already in shape</li> <li>• would “feel like such a blimp surrounded by all those buff young kids” [laughs]</li> <li>• might go CC if ex. Class or instructor to demo eqpmt</li> <li>• [UNCOMFORTABLE]</li> </ul>	<p>R knows about the exercise facility and the community center and says that she’s heard it’s nice. R doesn’t use the facility for several reasons. First, R reports that transportation is a problem—she needs to take two buses to get to the community center, and one of these buses is especially unreliable. [Long pause.] R also reports that she doesn’t like exercising at a gym. R thinks that the people who go to gyms are already in shape and she would “feel like such a blimp surrounded by all those buff young kids” [laughs]. R said that she might go to the community center to exercise if they offered exercise classes for beginners and had instructors to demonstrate how to use the equipment. [R SEEMED UNCOMFORTABLE ANSWERING THIS QUESTION.]</p>

## Exercise 4: Focus Group Protocol

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### Discussion

This exercise is structured similarly to Exercise 2, but provides an example of a focus group protocol (on the following two pages). Like the interview protocol, the focus group protocol includes an introduction and closing section and separates the questions by topic. Here you also see a large section of “ground rules.” The ground rules are read by the moderator to the entire group. The ground rules cover various issues related to informed consent, and they provide more detail to participants on the expectations for the group interaction. This can be especially helpful for participants who are unfamiliar with the focus group process.

This focus group protocol would benefit from some improvements.

One consideration is the amount of time dedicated to each topic area. In the example, Topic 1 receives 25 minutes of discussion time, Topic 3 receives 30 minutes, and Topic 2 receives only 10 minutes. Given the number of questions posed for Topic 2, it seems unlikely that the 10 minutes allocated would be adequate time to discuss this issue.

Looking at the individual questions, we see that Question 2 is problematic. It includes multiple questions, the first of which is a yes/no question and the second of which is double-barreled. This question should be rephrased as several individual questions, with some rewording to prevent the questions from being too vague. Resulting questions might include:

- What club meetings or study groups have you held in the library?
- Where did you hold these meetings?
- Tell me how this space worked out for this purpose.

Question 4 is a yes/no question, and it is also vague. The researcher needs to specify the needs of interest.

Question 6 improves on the similar question asked in the interview protocol presented in Exercise 2. No longer are the examples shown in parenthesis, but instead are presented here as specific probes.

Finally, note that Question 10 is an example of a “big-picture” question.

## State University Library Focus Group Protocol

1. Welcome	<p>Welcome. I want to thank you for coming today. My name is _____ and I will be the facilitator for today's group discussion. I am a researcher and I work for the RAND Corporation, a private, non-profit research organization in Santa Monica, CA. We also have _____ present to take notes for us.</p> <p>We invited you to take part in this group discussion today because you are all students at State University. We would like to talk with you today about your impressions of the University's library.</p> <p>The study is funded by the State University's Alumni Committee. What we learn from today's discussion will help us improve the library's facilities and services.</p>
2. Ground Rules	<p>Before we begin, I would like to review a few ground rules for the discussion.</p> <ol style="list-style-type: none"> <li>a. I am going to ask you several questions; we do not have to go in any particular order but we do want everyone to take part in the discussion. We ask that only one person speak at a time.</li> <li>b. Feel free to treat this as a discussion and respond to what others are saying, whether you agree or disagree. We're interested in your opinions and whatever you have to say is fine with us. There are no right or wrong answers. We are just asking for your opinions based on your own personal experience. We are here to learn from you.</li> <li>c. Don't worry about having a different opinion than someone else. But please do respect each other's answers or opinions.</li> <li>d. If there is a particular question you don't want to answer, you don't have to.</li> <li>e. We will treat your answers as confidential. We are not going to ask for anything that could identify you and we are only going to use first names during the discussion. We also ask that each of you respect the privacy of everyone in the room and not share or repeat what is said here in any way that could identify anyone in this room.</li> <li>f. We are tape recording the discussion today and also taking notes because we don't want to miss any of your comments. However, once we start the tape recorder we will not use anyone's full name and we ask that you do the same. Is everyone OK with this session being tape recorded? [GET VERBAL CONSENT TO TAPE RECORD DISCUSSION. IF A PARTICIPANT DECIDES THAT S/HE DOES NOT WANT TO BE TAPED AND WANTS TO LEAVE, S/HE SHOULD STILL BE PAID THE FULL AMOUNT]</li> <li>g. We will not include your names or any other information that could identify you in any reports we write. We will destroy the notes and audiotapes after we complete our study and publish the results.</li> <li>h. Finally, this discussion is going to take about two hours and we ask that you stay for the entire meeting. At the end of the discussion we will give you \$50 to thank you for participating.</li> </ol> <p><b>Does anyone have any questions before we start?</b></p>
3. Introductions (5 minutes)	<p>[START TAPE RECORDER NOW.]</p> <p>I'd like to go around the table starting on my right and have each person introduce him or herself. Please tell us your first name only and tell us what year you are in and your major.</p>

*(continued on next page)*

<p>4. Group Discussion - Topic 1 (25 minutes)</p>	<p><i>Topic #1: Needs</i></p> <p>The first thing that we'd like for you to discuss is the main activities that you use the library for.</p> <ol style="list-style-type: none"> <li>1. To start off, tell us about your average trip to the library. <ol style="list-style-type: none"> <li>a. PROBE: What activities do you use the library for?</li> <li>b. PROBE: How long does your visit usually last?</li> <li>c. PROBE: What sections of the library do you study in?</li> </ol> </li> <li>2. Have you ever held a club meeting or a study group in the library? Where did you hold it and did it work out well?</li> </ol>
<p>5. Group Discussion - Topic 2 (10 minutes)</p>	<p><i>Topic #2: Facility</i></p> <p>Now, we'd like to discuss your impressions of the library's facilities.</p> <ol style="list-style-type: none"> <li>3. What words would you use to describe the library facilities?</li> <li>4. Are the facilities meeting your needs?</li> <li>5. How could the library improve its facilities? <ol style="list-style-type: none"> <li>a. PROBE: How accessible are books, journals, and other materials?</li> <li>b. PROBE: Tell me about the spaces to sit and do work.</li> <li>c. PROBE: Tell me about access to computers and other technology</li> <li>d. PROBE: How could the organization of the library be improved?</li> </ol> </li> </ol>
<p>6. Group Discussion - Topic 3 (30 minutes)</p>	<p><i>Topic #3: Services</i></p> <p>The last thing that I'd like to discuss with you today is your impressions of the services that the library offers.</p> <ol style="list-style-type: none"> <li>6. What library services do you use the most often? <ol style="list-style-type: none"> <li>a. PROBE: How often do you borrow books?</li> <li>b. PROBE: How often do you reserve books online?</li> <li>c. PROBE: How often do you use interlibrary loan?</li> <li>d. PROBE: What other service have you used often?</li> </ol> </li> <li>7. What could the library do to improve these services?</li> <li>8. Why haven't you used some of the other services that the library provides?</li> <li>9. What additional services would you like for the library to provide?</li> <li>10. If you had a chance to speak with the president of the university, what is the one thing you would want to tell her about the library?</li> </ol>
<p>7. Final thoughts (5 minutes)</p>	<p>Those were all of the questions that I wanted to ask.</p> <ol style="list-style-type: none"> <li>11. Does anyone have any final thoughts about the library that they haven't gotten to share yet?</li> </ol>
<p>8. Review and Wrap-up (5 minutes)</p>	<p>Thank you for coming today and for sharing your opinions with us. We hope you enjoyed the discussion today. I'm going to be handing out the payments. [HAND OUT PAYMENTS.]</p>



## Exercise 5: Focus Group Notes

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### Discussion

This exercise is structured similarly to Exercise 3, but this exercise addresses focus group notes. The text on the left side of the page is a mock transcript of a focus group. The right side of the page represents the handwritten notes taken during the session. The final written notes are included after the transcript.

The focus group begins with the moderator asking a background question. Note that the note-taker captures the data, with the exception of individual names, which are not included in the notes. On one occasion, when recording the major of participant 3, the note-taker's notes are insufficient. The participant indicates that she is a double major in psychology and political science. While the note-taker includes both of those disciplines in the notes, it is not clear from the notes whether the student is a double major, is majoring in one and pursuing a minor in the other, or is undecided between the two fields of study.

The next page of notes begins with a substantive question, and the first response is insufficiently complete. The transcript indicates how the moderator probed for clarification. The notes on this page indicate how the note-taker associates each comment with an individual and abbreviates the responses. The notes also indicate a mistake made by the note-taker with the use of "it." Pronouns such as "it" are problematic because it is often difficult to later interpret the meaning. In this instance, "it" referred to books, and "book" should have been used in the notes.

At the bottom of this page of transcription, the moderator makes an error. Two participants (P1 and P2) have indicated that they use the library just for checking out books. The moderator is interested in a handcount of others who have a similar experience, which is an acceptable tool during a focus group. However, the moderator errs with her introduction to the handcount, when she states that "It sounds as though lots of you use the library just for getting books." In fact, only two participants had stated that theme, and the moderator has potentially biased this portion of the discussion by stating this theme more strongly than the data permit. The moderator should have said, "I understand that two of you use the library only for checking out books..." By using "two" or "a couple," the moderator would avoid biasing other participants.

The beginning of the third page of the transcript begins with a double-barreled question. If the moderator is interested in asking a grand tour question and initiating a broad description of the participants' library experiences, this might be appropriate. However, if the research wants clear answers to each part of that question, the question is misstated.

Soon after the double-barreled question, the participants begin to speak at the same time. This is reflected in the notes on the right side of the page. The moderator responds to this confusion with a probe to obtain control of the discussion and prompt a single individual to speak.

Another item highlighted in the notes for the purpose of this exercise is three asterisks, used in this case as a convention to indicate that “campus” is an incomplete reflection of the comment made. Projects should predetermine conventions that will be understandable to the entire research team. An easily found convention to indicate missed discussion permits the note-taker to follow-up with the participants to fill those gaps when the moderator provides that opportunity.

Later in this page of transcript, there is a negative interaction between two of the participants (P4 and P7). The notes indicate that there is also a physical interaction, and that P7 has held up a handout in a mocking way as she has spoken. Note that the nonverbal action is not captured with a transcript alone. The moderator interjects herself into this interaction to remind the participants of the ground rule of being respectful to one another and to redirect the discussion.

This interaction is followed by a vague response from P2 that requires the moderator to probe for clarification.

The second portion of this exercise provides the final written notes that would reflect this same focus group session. They begin with the session information and the impressions comments that were noted by the moderator after the conclusion of the session. The remainder of the notes reflect the conversation that occurred during the focus group, represented with complete sentences, associated with each speaker, in the order in which the comments were made. Nonverbal aspects of the focus group, such as indication of other participants, laughter, volume of voice, and descriptions of the interactions, are included in brackets to clearly indicate that they are contextual and editorial comments.

## Excerpts of State University Library Focus Group Transcript and Handwritten Notes

Transcript	Handwritten Notes
M: I'd like to go around the table and have each person introduce himself. Please tell us your first name, what year you are, and your major.	8 parts: 1 female, jun, biol 2 male, soph, undec.
P1: My name is Becky. I'm a junior and I'm majoring in biology.	3 female, sen, <b>psych./poly sci</b> 4 female, lib. sci - jun
P2: And I'm Mark. I'm a sophomore and I actually haven't decided on a major just yet.	5 male, sen - fin 6 male, sen - chem
P3: Hi, I'm Ashley. I'm a senior. And I'm double majoring in psychology and political science.	7 female, jun - art hist 8 male, acctng - soph
P2: So you try to figure out how politicians think, huh? Good luck with that!	
M: And who's this next to Ashley?	
P4: I'm Carrie. I'm a library science major.	
M: And what year are you in school Carrie?	
P4: Oh, I'm a junior.	
P5: Uh, my name is Dan. I'm a senior and I'm majoring in finance.	
P6: Robert. Also a senior. Chemistry.	
P7: Hi, I'm Hannah. And I'm a junior and an art history major.	
M: And last but not least....	
P8: I'm Eric. And I'm majoring in accounting. Oh and a sophomore.	
M: Great. Thanks for those introductions everyone. Well we're here to talk about the library. So to start off our discussion, could you tell me about what an average trip to the library is like for you?	M - What is avg. library trip?
P1: Short.	1 - Short,
M: <b>What do you mean by that?</b> <span style="border: 1px solid black; padding: 2px;">Clarification</span>	M- mean?
P1: I don't stay very long.	1 - don't stay long.
M: Why is that? What are you going to the library to do?	M - What are u going there to do?

*(continued on next page)*

<p>P1: I don't really go to the library very often. Usually I only go if I need to take out a book. But then I'm just in and out really fast. I get the book and go. I don't hang out there or do work there.</p> <p>M: And so overall, how long does one of these trips usually last?</p> <p>P1: Just a few minutes. It depends on if the book that I need is buried in a far corner of the library or if it's easy to find. But as soon as I find the book and check out, I leave.</p> <p>M: And what about everyone else? What are your trips to the library like?</p> <p>P2: I'm the same as Becky. I don't go very often or stay very long. Just go to get books. Or sometimes if I'm passing by and need to use the bathroom. [LAUGHS]</p>	<p>1- Don't go often. Go to take out bk. In + out fast. Don't hang out/wrk there.</p> <p>M - How long trip last?</p> <p>1 – Just few mins. Depends if it's buried. When I find it - check out + leave.</p> <p>M - Evry1? What are trips like?</p> <p>2- Same as P1. Not often/stay long. Just get bks. Or use bthrm. [lghs]</p>
<p>M: It sounds as though lots of you use the library just for getting books. But just to make sure raise your hands for me. How many people are like Becky and Mark and just use the library to take out books? Ok, Robert has his hand up. How about the rest of you? What are your visits to the library like?</p> <p>P5: I usually study in the library. I can't study in my dorm room because my roommate is always playing video games or playing guitar. It's really distracting. So I go to the library a lot to get some quiet.</p>	<p>Assumption made—biasing—should note that it's 2 who make that comment, not "a lot"</p> <p>M - Handcnt - # just take out bks? =4 (P6, P1, P2, P8)</p> <p>M - Othrs - visits like?</p> <p>5 - Study. Can't in dorm rm - rmmate playing vid. games/ guitar. Distracting. Go 4 quiet.</p>
<p>M: So when you go to the library, what's a usual trip like? How long do you usually stay?</p> <p>P8: It depends. I usually stay somewhere between 10 minutes and 10 days. Cause getting books can be fast but during finals week...I mean, I live in there during finals week so...</p>	<p>M - Usu. trip/length stay? <span style="border: 1px solid black; padding: 2px;">Double Barrel</span></p> <p>8 - Depends. stay betw 10 mins - 10 dys. Getting books=fast, but live there @ fins wk</p>

*(continued on next page)*

<p>P7: Yeah, during exam week it's crazy in there. It's like the whole campus is...</p> <p>P4: Everyone is there during finals week and it gets to be....</p> <p>P2: That's why I just don't [INAUDIBLE]...</p> <p>P7: ...trying to study and write papers.</p> <p>P2: ...too much of a hassle</p> <p>P6: Yeah, that's so true!</p> <p>P4: ...even in the quiet room.</p> <p>M: Ok, so I'm having trouble hearing everyone because there's a lot of talking going on here. So it sounds like during finals week, the library is very crowded. I'd like to hear about the problems that you've encountered in the library during finals week, but we need to speak one at a time so I can get everything you're saying. Hannah, I think you were saying...</p> <p>P7: Just that everyone on campus is in the library during finals week.</p> <p>M: And is that a problem? Do you have trouble...</p> <p>P4: It's annoying that it gets so loud. It's more of a party than a library.</p> <p>P7: But it can be kind of fun too. I like the atmosphere during finals week. Everyone's sort of...you know, kids are just struggling together and helping each other with final reports and....</p> <p>P4: That's so ridiculous. You're probably one of the people that I just want to scream at during finals week because....</p> <p>P7: Wow, way to get worked up over the library...</p> <p>P4: ...it's so frustrating. That's not what the library is for. If you want to hang out with your friends then do it in the student center.</p>	<p>7 – exm wk crazy – campus ***?</p> <p>4 – Evry1 @ fins wk studying</p> <p>[ALL SPEAKING AT SAME TIME.</p> <p>SEEMS TO BE ABOUT EXM WK-</p> <p>SEEMS TO BE CONSENSUS</p> <p>THAT PROBLEMS AT LIBRARY</p> <p>THAT WEEK]</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 10px 0;">Get control</div> <p>M – lib crowded @ fins (SPK 1 @ TIME)</p> <p>7 - Evry1 in lib during fin. wk.</p> <p>M - Problem?</p> <p>4 - Annoying - too loud. More party than lib.</p> <p>7- It's fun, 2. Like atmosph. – struggling together/helping ea. othr</p> <p>4- Ridiculous. UR 1 of people I want to scream at - so frustrating – not what lib for, should hang out in stud. cntr. (ANGRY)</p> <p>7 – “Way to get wrked up ovr the lib...”</p> <p>[HOLD HANDOUT LIKE STOP – MOCKING]</p>
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*(continued on next page)*

<p>M: I want to stop for a second and remind everyone that it's OK to have different opinions and we do want to hear what everyone has to say. But you need to be respectful of one another. Mark, you had mentioned something earlier when we were talking about finals week. What were your thoughts?</p> <p>P2: Just that it's too much of a hassle to even go to the library during finals week.</p> <p>M: What do you mean by a hassle? <span style="border: 1px solid black; padding: 2px;">Clarification</span></p> <p>P2: You know...it's impossible to find anywhere to sit. And it can be really noisy.</p>	<p>M – Diff opins=OK, respect ea. other - P2 your thghts?</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="color: blue;">Redirect and reminder of ground rules</p> </div> <p>2- 2 much hassle to go @ fins wk.</p> <p>M- mean by hassle?</p> <p>2- imposs. 2 find seat. Really noisy.</p>
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## Excerpt of State University Library Final Written Notes

Session 47

October 23, 2007

Sheila Wilson, moderator

Robert Smith, note-taker

Session conducted in room in student center. 8 participants. 1 did not show and 1 arrived 25 minutes late and was not permitted to enter. In general, the discussion proceeded well and everyone participated, although they did have times when they all spoke at once and there was one participant that was not always respectful of others, and so the others became very irritated with her. One of the main themes appears to be the degree to which the library is crowded and thus unable to handle demand during finals week.

1 female, junior, biology

2 male, sophomore, undecided major

3 female, senior, double major in psychology and political science

4 female, junior, library science

5 male, senior, finance

6 male, senior, chemistry

7 female, junior, art history

8 male, accounting, sophomore

M What is average trip to the library like?

1 Short.

M What do you mean by that?

1 I don't stay long.

M What are you going there to do?

1 I don't go often. I go to take out books so I'm in and out of the library fast. Don't hang out or work there.

M How long does your trip usually last?

1 Just a few minutes. It depends if my book is buried [difficult to find]. When I find the book, I check it out and leave.

*(continued on next page)*

- M What about everyone else? What are your trips to the library like?
- 2 Same as [P1]. I don't go very often and I don't stay long. I just go to get books, or to use the bathroom. [laughs]
- M I'd like to take a handcount. Please raise your hands for me. How many people are like [P1 and P2] and use the library just to take out books? [4 answered affirmatively: P6, P1, P2, P8]
- M What about you others; what are your visits to the library like?
- 5 I go to the library to study. I can't study in my dorm room because my roommate is always playing video games or his guitar, so it's too distracting there. So I go to the library because it's quiet there.
- M So what is a usual trip to the library like for you? How long do you usually stay?
- 8 It depends. I can stay at the library anywhere from 10 minutes to 10 days. Because it can be fast to just get a book, but during finals week I live at the library
- 7 During exam week it gets crazy at the library.  
[EVERYONE STARTED TALKED AT ONCE, BUT THE CONVERSATION WAS GENERALLY CONSENSUS AGREEMENT THAT THE LIBRARY IS "CRAZY" DURING EXAM WEEK]
- M [SPEAKS LOUDLY] OK, so I'm hearing that the library is crowded during exam week. I'd like everyone to please speak one at a time so we can hear everyone.
- 7 It seems like everyone is in the library during finals week.
- M Is that a problem?
- 4 It's annoying because it's too loud. It's more like a party than a library.
- 7 But it's fun, too. I like the atmosphere at the library during finals week. People are struggling together and helping each other.
- 4 [SEEMED ANGRY] That's ridiculous. You're probably one of those people I want to scream at. It's so frustrating because that's not what the library is for. If you want to do that you should hang out in the student center.
- 7 [MADE FUN OF HER FOR GETTING ANGRY ABOUT THE LIBRARY]
- M OK, remember that it's ok to have different opinions. Please remember to be respectful of each other. [P2] did you have other thoughts about the library during finals week?
- 2 It's just too much of a hassle to go to the library during finals week.
- M What do you mean by it being a hassle?
- 2 Just that it's impossible to find a seat, and it's really noisy.

## Exercise 6: Coding Notes

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### Discussion

On the following three pages are a brief portion of focus group notes. The portion provided here is a mock excerpt of a focus group session with spouses of reservists who are currently deployed. The moderator has just asked, “What are the negative aspects of having your service member deployed?”; the participants’ responses follow.

The second version of the excerpt uses color to indicate how the responses would be coded at a simple level—into either negative aspects or positive aspects, which were two of the substantive codes shown in the slides. Although the question was about negative aspects of deployment, the first response (P2) provides a comment about the additional deployment pay as a positive. The next five comments do address negative aspects. Then the moderator sums the answers and probes for additional comments about negative aspects. The responses include one negative aspect and then another positive aspect.

The third version of the excerpt identifies and codes subthemes from this same passage. Just as the slides provide the subthemes that had been discerned from the data regarding positive aspects of their occupation, this exercise identifies the subthemes regarding negative aspects of the occupation. The first subtheme is financial gain as a positive aspect, and slides indicate that the code number for that subtheme is 2.3.1. The first negative theme observed in the subsequent comment is the issue of the effect of deployment on children. Thus the first two negative comments (by P3 and P4) are coded at a new code representing this subtheme, 2.4.1, Children’s Issues. The next three comments (by P8, P1, and P4) are comments about the difficulty managing household responsibilities, including chauffeuring children to activities and dealing with childcare issues. These are coded at a subtheme code 2.4.2, Household Responsibilities. The moderator’s probe is followed by a comment about financial issues as a negative aspect of deployment. Thus, these are coded as a code for financial issues as a negative aspect, 2.4.3 Financial. Note that this is a different node than that used for financial issues that are positive aspects of deployment (2.3.1). The final comment, and the note that indicates agreement among other members of the focus group, again pertain to financial issues as a positive aspect, so they are coded at 2.3.1, Financial.

**Excerpt from a Focus Group of 8 Spouses of Deployed Reservists**

- M We've been talking about the positive aspects of deployment, what are the negative aspects of having your service member deployed?
- 2 Well, obviously we miss him when he's gone, but we're doing fine, and the additional pay is really nice.
- 3 I'm concerned about how much the kids miss him. They don't talk about it much, but my younger son has been acting up in school since his dad left.
- 4 I'm concerned about my boys as well. They're not old enough to understand why he's gone, but they're upset that he's not there.
- 8 My kids are teenagers, and so they're old enough to understand. For our house, it's more an issue of logistics. It's just really hard for me to get my three kids to three different sets of activities when I'm the only driver. Their friends' parents help, but sometimes my kids can't do all the things they want to do because I simply can't get them there.
- 1 That's the problem in our family as well. My daughters have soccer practice at the same time in two different locations.
- 4 My kids aren't old enough to have activities like soccer. For me, it's more just the difficulty of being the only parent at home. When one of them gets sick, they can't go to childcare and I'm the only one that can take care of him, so I have to miss work.
- M So I've heard [3 and 4] say that they're concerned about the effect of deployment on their children, and a couple of you are having difficulty with household responsibility issues, especially chauffeuring the kids to activities and handling childcare. Are there other problems?
- 1 Our military pay has been messed up. We didn't get paid for the first two months, and now the amount doesn't seem correct.
- 2 That must be really tough. When it does get fixed, though, you should be happy. The extra pay for my husband being deployed is really nice.
- 3,5,6,7,8 [Agree that the extra pay is helpful.]

## Excerpt from a Focus Group of 8 Spouses of Deployed Reservists—Coding Positive and Negative Responses

M We've been talking about the positive aspects of deployment, what are the negative aspects of having your service member deployed?

**2.3 POSITIVE**

2 Well, obviously we miss him when he's gone, but we're doing fine, and the additional pay is really nice.

3 I'm concerned about how much the kids miss him. They don't talk about it much, but my younger son has been acting up in school since his dad left.

**2.4 NEGATIVE**

4 I'm concerned about my boys as well. They're not old enough to understand why he's gone, but they're upset that he's not there.

8 My kids are teenagers, and so they're old enough to understand. For our house, it's more an issue of logistics. It's just really hard for me to get my three kids to three different sets of activities when I'm the only driver. Their friends' parents help, but sometimes my kids can't do all the things they want to do because I simply can't get them there.

1 That's the problem in our family as well. My daughters have soccer practice at the same time in two different locations.

4 My kids aren't old enough to have activities like soccer. For me, it's more just the difficulty of being the only parent at home. When one of them gets sick, they can't go to childcare and I'm the only one that can take care of him, so I have to miss work.

M So I've heard [3 and 4] say that they're concerned about the effect of deployment on their children, and a couple of you are having difficulty with household responsibility issues, especially chauffeuring the kids to activities and handling childcare. Are there other problems?

1 Our military pay has been messed up. We didn't get paid for the first two months, and now the amount doesn't seem correct.

2 That must be really tough. When it does get fixed, though, you should be happy. The extra pay for my husband being deployed is really nice.

3,5,6,7,8 [Agree that the extra pay is helpful.]

## Excerpt from a Focus Group of 8 Spouses of Deployed Reservists—Coding Subthemes

M We've been talking about the positive aspects of deployment, what are the negative aspects of having your service member deployed?

2 Well, obviously we miss him when he's gone, but we're doing fine, and additional pay is really nice.

**2.3.1 FINANCIAL  
(POSITIVE)**

3 I'm concerned about how much the kids miss him. They don't talk about it much but my younger son has been acting up in school since his dad left.

**2.4.1 CHILDREN'S  
ISSUES**

4 I'm concerned about my boys as well. They're not old enough to understand why he's gone, but they're upset that he's not there.

8 My kids are teenagers, and so they're old enough to understand. For our house, it's more an issue of logistics. It's just really hard for me to get my three kids to three different sets of activities when I'm the only driver. Their friends' parents help, but sometimes my kids can't do all the things they want to do because I simply can't get them there.

**2.4.2 HOUSEHOLD  
RESPONSIBILITIES**

1 That's the problem in our family as well. My daughters have soccer practice at the same time in two different locations.

4 My kids aren't old enough to have activities like soccer. For me, it's more just the difficulty of being the only parent at home. When one of them gets sick, they can't go to childcare and I'm the only one that can take care of him, so I have to miss work.

M So I've heard [3 and 4] say that they're concerned about the effect of deployment on their children, and a couple of you are having difficulty with household responsibility issues, especially chauffeuring the kids to activities and handling childcare. Are there other problems?

1 Our military pay has been messed up. We didn't get paid for the first two months and now the amount doesn't seem correct.

**2.4.3 FINANCIAL  
(NEGATIVE)**

2 That must be really tough. When it does get fixed, though, you should be happy. The extra pay for my husband being deployed is really nice.

**2.3.1 FINANCIAL  
(POSITIVE)**

3,5,6,7,8 [Agree that the extra pay is helpful.]

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